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PIRMSSKOLAS PEDAGOGIJA
Preschool Pedagogy

FORMATION OF INDEPENDENCE OF CHILDREN OF SENIOR PRESCHOOL AGE BY MEANS OF PROBLEM TASKS

Tetiana Pantiuk

Drohobych Ivan Franko State Pedagogical University, Ukraine

Olena Nevmerzhytska

Drohobych Ivan Franko State Pedagogical University, Ukraine

Violeta Horodyska

Drohobych Ivan Franko State Pedagogical University, Ukraine

Oleksandra Sharan

Drohobych Ivan Franko State Pedagogical University, Ukraine

Svitlana Bereza

Drohobych Ivan Franko State Pedagogical University, Ukraine

Abstract. *Considering the current situation in the educational space of Ukraine, the teacher should cultivate in the younger generation the ability to analyze, think critically, find solutions to problems, develop a personality capable of taking responsibility for their own actions and deeds. In this context, the problem of independence education is relevant, significant both in theoretical and practical aspects. We associate perspective ways of research with the study of the implementation of modern scientific approaches to the transformation of the pedagogical process, increasing attention to the personality of the child as an agent of cognitive activity, providing him with freedom of choice of activities and forms of participation in it, democratization of the educational process on the basis of cooperation between teachers and pupils, differentiation of education and training, development of flexible pedagogical technologies that best meet the needs and capabilities of pupils, in their independent mastering of various aspects of life. In this context, problem tasks that put the child in a situation where he/she is encouraged to use various methods of mental activity (comparison, analysis, synthesis, classification) are of undeniable value. This activates independence, the ability to find ways to solve problems, draw conclusions and generalize. Therefore, the aim of the study is the search for effective ways to form independence in children of senior preschool age. Studying the formation of independence as a basic personal quality in children of senior preschool age, we were guided by the fact that the independence of children of this age group is best manifested in new unfamiliar situations. By solving them, children can demonstrate independence of thought, originality of ways to solve the problem. In the light of this, we took into account the children's interest in independent actions in the conditions of choosing between the new and the familiar; independence and autonomy of*

actions in relation to the adult; ways of solving the problem; the result of the activity. As a result of the experimental study, we found that a significant number of children in the experimental group do not realize the possibilities of independence and do not reach the optimal level of its formation. The search for ways to solve this problem made it possible to identify effective means of forming independence in children of senior preschool age, among which a special place is occupied by problem solving tasks. They put children in the conditions of practical search for a solution to the problem, which pushes them to search independently, awakens the child's opinion, forms non-standard thinking. Such tasks encourage children to express their original ideas, to analyze problematic and ambiguous situations, to establish cause-and-effect relationships, to think over the situation, to build hypotheses, which also stimulates independence of thinking, flexibility of mind, develops creative abilities of the child. Thus, problem-based tasks effectively influence the development of preschoolers' independence as an integral quality of personality.

Keywords: *children of senior preschool age, independence, preschool education institution, problem tasks.*

Introduction

In view of the current situation in the educational space of Ukraine, a teacher must educate the younger generation's ability to analyze, think critically, find solutions to problems, and develop a personality capable of taking responsibility for their own actions. In this context, the issue of independence formation is relevant, significant in both theoretical and practical aspects.

Independence is a dynamic personality characteristic that is constantly developing. Existing scientific data indicate that by the end of the senior preschool age, under conditions of optimal upbringing and education, children can gain independence in various types of activities: *through games* (Savchenko, 2014); *work* (Krutii, 2012); *cognition* (Udina, 2008); *in communication* (Kuzmenko, 2001); *in productive activities* (Lisovets, 2018). Certain aspects of independence have not been overlooked by researchers. In particular, there are studies concerning manifestations of the abovementioned basic personality quality *in drawing* (Nosachenko, 2006); *in designing* (Demydova, 2006); *in paper crafts activities* (Halaida, 2004); *in constructive play* (Matviienko, 2019).

Taking into account such a versatile study of the problem of the formation of independence in senior preschoolers, we associate promising ways of research with the study of the implementation of modern scientific approaches to the transformation of the educational process, increasing attention to the personality of the child as an agent of cognitive activity, giving them the freedom to choose types of activities and forms of participation, as well as with democratization of the educational process based on cooperation between educators and children, differentiation of upbringing and education, the development of flexible educational technologies that best meet the needs and capabilities of children, in the independent growing awareness of various spheres of life. In this context, problem tasks that put the child in a situation

where he/she uses different methods of mental activity (comparison, analysis, synthesis, classification) are of undeniable value. This promotes independence, the ability to choose ways to solve problems, draw conclusions and generalize.

The abovementioned determined the choice of the topic of our research, the aim of which is to substantiate the effectiveness of the use of problem tasks in the formation of independence in senior preschool children.

To achieve the defined goal, the following research methods were used: theoretical ones: analysis, systematization and generalization of the theoretical data presented in psychological and pedagogical literature; and empirical methods: designing experimental treatments and parent questionnaires.

Theoretical basis of the research

One of the system-forming qualities of a personality is “independence”, which acquires special importance in conditions of the up-to-date socio-economic situation. The development of this quality leads to the development of the child’s personality as a whole. Therefore, an important task of Ukrainian education in modern society is the formation of free, independent individuals who take responsibility for their own life.

The need for the formation and development of independence is dictated to us by society’s needs for exceptional people who know how to think creatively and make discoveries for the benefit of humanity. And the solution to this issue is reflected in the process of developing independence, which allows a person to pose new challenges and find new solutions.

Attention to the child’s personality and creating conditions for them to receive education and develop moral, intellectual and aesthetic qualities presuppose finding the solution to the important issue of promoting individual independence.

The concept of “independence” covers not only the aspect of direct physical activity: to do or change something, but also mental, intellectual activity that contributes to the achievement of a real goal.

The author of “Ukrainian Pedagogical Dictionary” S. Honcharenko interprets independence as one of the properties of personality, which is “characterized by two factors: firstly, a set of means – knowledge, abilities and skills possessed by the individual; secondly, the individual’s attitude to the process of activity, its results and conditions of implementation, as well as connections with other people established in the process of activity” (Honcharenko, 1997).

In “Modern Explanatory Psychological Dictionary” (Shapar, 2007) it is noted that “independence” of personality is related to active work of thought, feelings and will. On the one hand, this relation is aimed at the development of mental, emotional and volitional processes as a necessary precondition for

independent judgments and actions, and on the other hand, it includes judgments and actions that are formed in the process of independent activity, strengthen and shape the ability not only to perform consciously motivated actions but also to strive for the successful implementation of the adopted decisions despite possible difficulties.

In “Pedagogical Dictionary” (Yarmachenko, 2001), independence is defined as “a generalized quality of personality, which manifests itself in initiative, critical thinking, adequate self-assessment and a sense of personal responsibility for one’s own activities and behavior”.

In view of the given definitions, independence is a volitional quality of personality, it is characterized by a proactive, critical, responsible attitude to one’s own activity, the ability to plan their own activity, set tasks and look for ways to solve them without anybody’s help, while relying on one’s own experience, knowledge, skills and abilities.

Numerous psychological and pedagogical studies (Demydova, 2006; Dudnyk, 2018; Krutii, 2012; Kuzmenko, 2001; Lisovets, 2018; Savchenko, 2014; Udina, 2008) testify to the great importance of a preschool childhood in the formation of personality, basic characteristics of which are independence, initiative and creativity. During this period, children’s independence develops from actions of a reproductive nature to actions with elements of creativity, with a constant, steady increase in the role of consciousness, self-control and self-esteem in the implementation of activities. At the same time, the indicators of independence are as follows: independence of personality’s actions, the ability to implement one’s plans without seeking help in the outside world; the ability to set and solve various tasks of the practical activity.

As Y. Demydova notes, the main psychological mechanisms of independence formation in preschool age are as follows: identification, differentiation, pride, decentration, and the important factors are: emotional and valuable attitude to one’s own success; elements of self-control and self-regulation; development of reflective features of a growing personality; the need for recognition of activity results; a sense of pride in one’s own achievements and motivation (Demydova, 2006).

The manifestation of these factors depends on skillful guidance of the child’s independent activities and behavior, expansion of degrees of their freedom, approval of independent actions; regulation of the amount and form of assistance when a child encounters difficulties; positive emotional support for independent efforts; recognition of the child’s successful achievements.

In this context, it is important to find the means of formation of independence in children of senior preschool age. In our opinion, means are effective not when they motivate the child to get adults’ approval for their achievements, but when they encourage independent active cognition of the

surrounding reality, give children the opportunity to feel the joy of knowledge and inspire further independent discoveries.

Methodology and findings of the research

Taking into account the aim and objectives of our research, we conducted an experiment on the levels of independence formation in senior preschool children. 150 senior preschoolers participated in it, including three preschool education institutions in the city of Drohobych, Lviv region (Nursery School No. 11 “Svitliachok”, Nursery School No. 13 “Kazka”, Nursery School No. 24 “Smerichka”). 75 children were included in the experimental group (EG), and 75 in the control group (CG). The experimental research was conducted during October – December 2021.

At the preparatory stage, a system of criteria and indicators was selected to determine the levels of independence of senior preschoolers. At the same time, we were guided by the fact that the independence of children of this age category is best manifested in new, unfamiliar situations. By solving them, children can show independence of thought, originality of problem solving methods. With this in mind, we singled out the following criteria for the levels of independence of senior preschoolers: interest in independent actions in the conditions of choosing between the new and the familiar; independence and autonomy of actions in relation to an adult; ways to solve the problem; result of activity. These criteria made it possible to identify the levels of independence of senior preschool children.

– *high level* – the child shows interest in independent actions in new situations, shows a desire to solve the situation independently, consistently prefers new choices; demonstrates a desire for independence of the help of an adult, both in a usual and in a new situation, uses new means and combines familiar ones, performs trial actions, orients well in the conditions of the situation; independently reaches an original conclusion, shows interest in it, seeks to perform an action on one’s own (adds details, elements);

– *sufficient level* – the child shows interest in independent participation in the situation with separate elements of something new, which is similar or familiar; gives preference to actions independent of an adult, in a familiar situation, in a new situation; accepts some targeted help, uses familiar means of achieving the task, reaches a traditional conclusion, into which he/she independently introduces separate complementary elements of the new; expresses satisfaction with the achieved result;

– *intermediate level* – the child shows interest in independent actions only in a well-known situation and prefers it, needs guidance in a habitual environment, and shows uncertainty in a new one; actively seeks help,

persistently uses familiar methods, does not try to combine, does not strive for innovation, improvement; is satisfied with the result.

– *low level* – the child has no peculiar interest in independent actions in a new situation with elements of novelty, and in a familiar situation shows apprehension in relation to the new, continually asks for help or passively expects it from the teacher, even in a familiar environment; does not try to solve a new situation without the help of an educator, experiences difficulties while choosing solutions independently, applies ineffective actions without analyzing the conditions, does not achieve a result, does not try to correct a mistake independently and improve the result; the attitude towards the result is generally neutral.

We used such experimental tasks as “Choose a game”, “Tricks”, “Theatre”, “Occupy yourself”, “Toy” to study the levels of independence in senior preschool children. Observing the children, we found out how independent they were in the process of solving these tasks. In the protocols that we kept for each child, it was mentioned whether the child was trying to understand the rules of the game by him/herself or was waiting for help; whether he/she maintained the initiative and persistence till the end or lost interest in the game when faced with difficulties; whether he/she used unconventional or traditional means of activity; we also examined the degree of the child’s awareness of the methods of action, the sequence of actions to achieve the goal, and the ability to express it independently.

According to the generalized data obtained on experimental tasks performance, we were able to determine whether the children can be referred to one or another level of independence. So, we referred 6.7% of the children of the experimental group (EG) and 5.4% of the children of the control group (CG) to a high level of independence, 56.7% of the EG children and 50% of the CG children – to a sufficient level, 24.8% of EG children and 24.8% of CG children – to an intermediate level, 11.8% of EG children and 19.8% of CG children – to a low level.

The results of the ascertainment stage of the experiment showed that a significant number of the children from the experimental and control groups do not realize the possibility of independence and do not reach the optimal level of its formation. Many children do not demonstrate independence in solving new, creative tasks. Thus, we can obviously conclude that the formation of independence as a basic personality quality is not so much related to the development of some special skills of children, but rather to their personality qualities. The latter are prominent in an effort to find a way out of a difficult situation that occurs both in everyday life and in various types of activities, in a positive focus on the result, in experiencing success or failure. In addition, senior preschoolers constantly expect adults to approve the results of their activities, and they show satisfaction with the work done if it is successful.

Usually, children value their achievements highly and get offended if their actions are not approved.

Considering the formation of independence in the family very important, we conducted a survey of senior preschoolers' parents. 150 parents took part in it. Its results proved that all parents understand the importance of the formation of independence as a basic personality quality at preschool age, but most of them (80%) do not have sufficient knowledge of the pedagogical tools (forms, methods, means) of its formation and a significant number (60%) give priority in this process to the teaching staff of the preschool education institution.

Taking into account the results of the ascertainment experiment, we can state that the formation of independence in older preschool children largely depends on the teacher's organization of educational activities. Considering problem tasks as an effective means of the formation of independence in children of senior preschool age, at the stage of the formative experiment, we conducted our work with the children of the experimental group in two directions:

- work with children in the conditions of a preschool education institution which included the development and implementation of a series of problem tasks in the work of a preschool institution to familiarize children with objects and phenomena of the surrounding world;

- work with children's parents. This included: parent meetings on the topic: "Developing children's independence"; development of a reminder for parents; organization of consultations for parents on issues of development and formation of independent behavior in children; introduction of diaries for parent self-observation of their children.

The first direction of work was aimed at determining the content of tasks, methods and forms of educational activities for preschool children, which would be carried out as a system of interaction – a dialogue between the teacher and subgroups of children – depending on the level of independence and based on mutual trust and foreseeing a certain growth of children's independence. A complex of special tasks and situations was created to implement the formation of children's independence. It combined three directions:

1st direction – problem tasks in order to develop divergent thinking in children which is based on imagination and serves as a means of coming up with original ideas and self-expression.

2nd direction – problem tasks that involve the development of cognitive abilities and skills, the main ones of which are processing a large amount of information, analyzing the situation, establishing cause and effect and other relationships, using alternative ways to search for information, as well as the ability to think over the situation, build hypotheses, use their own ideas in practice, etc.

3rd direction – problem tasks that contribute to the development of the child's emotional sphere, shaping respect for others, an emphatic attitude towards people, persistence in completing tasks, independence in thinking and behavior, confidence in one's strength and capabilities, a tendency to introspection, etc.

At first, much attention was paid to the development of children's imagination through analogizing (direct and fantastic analogies). An example of such analogies is the task for children to identify themselves with various objects and phenomena in the game "Who am I?". The children were given the task to come up with endings for sentences or, conversely, beginnings of sentences: "I feel that I am a piece of ice that has melted...", "I am a glass of water...", "I am a wonderful flower...", "I am like a fish...", "I am a song...", "I am like the letter 'O'...", "I can be the wind...", "I am a path..." , "I'm a firefly...", "I feel like I'm a rock...", "I'm like an ant when...", "I'm a light bulb that now...", "I'm an interesting book...".

Children learned about living and non-living nature. The relevant classes included the games "Who Lives Where" and others. These tasks were supplemented by an offer for children to show these objects or phenomena in motion, to invent a fairy tale with them, etc., as well as games "Where does it fit?", "Do the opposite", "Invent a new way", "Who needs what?", "Turners".

We used a number of problem tasks and situations that we carried out during the formative stage of the experiment in classes.

However, we believe that problem tasks can be used not only in classes but also in everyday life. This is an effective means of consolidating and deepening the knowledge gained in classes. In this regard, we conducted effective work with parents of senior preschoolers; it was aimed at revealing the role of problem tasks in the development of visual and logical thinking, intelligence, cognitive interests, and personal qualities: goal orientation in search, practical and mental activity, perseverance, independence, creative abilities of children.

The next stage of the research – the control stage – was aimed at finding out the qualitative and quantitative changes that occurred after our work at the formative stage.

There were 75 senior preschoolers of the experimental group who participated in the control experiment and were involved in three stages of independence formation, and there were 75 senior preschoolers of the control group where the educational process took place in the usual way.

In order to obtain the necessary data to find out the levels of independence of senior preschool children, we used the criteria and diagnostic methods applied during the ascertainment stage. According to the results of the control experiment, we attributed 21.2% of the children of the experimental group (EG) and 6.7% of the children of the control group (CG) to a high level of independence, 37.5% of the children of the EG and 32.8% of the children of the

CG to a sufficient level, 34.6% of EG children and 48.7% of CG children – to an intermediate level, 6.7% of EG children and 11.8% of KG children – to a low level of independence.

The analysis of the results obtained at the control stage of the experiment proves the success of our work with the children of the experimental group at the formative stage. In particular, most of the children in the experimental group can easily express their individual, authentic ideas, analyze problematic ambiguous situations, establish cause-and-effect relationships, reflect on the situation, and build hypotheses.

Conclusion

Summarizing the theoretical and practical aspects of the issue we are analyzing, we can say that senior preschool age is a sensitive period for the formation of cognitive independence. This is explained by the desire of a child of this age to be independent, to demonstrate independent behavior. It is essential that during this period the leading activity is replaced by the learning and object-oriented practical activity; thinking, cognitive and volitional processes prove to be at a significant level of development.

This is facilitated by problem tasks and situations. Unusual in content and form, they arouse interest in children. After all, only when a child is interested, he/she finds the result of an activity on their own, he/she gains firm knowledge, skills and abilities, develops creative search thinking.

When offering children problem tasks, the teacher, on the one hand, should widely vary the material in terms of its use (invent a wide variety of solutions), and on the other hand, should not go beyond the limits dictated by the simplicity of tasks for children of a certain age.

Problem situations put children in the conditions of a practical search for a solution to a task, which prompts them to search for solutions to tasks independently, awakens thought, and fosters original thinking. Search-oriented questions encourage children to explain their answers, their reasoning, and activate the child's mental activity. Logical tasks put the child in the conditions of the need to consider the phenomenon from different angles, to find ways to solve the task, which also stimulates independent thinking, flexibility of the mind, and develops the child's creative abilities.

Thus, problem tasks effectively influence the development of independence in preschoolers as an integral quality of personality. At the same time, the logic of using tasks and situations, focus on personality development, and coordination of work with parents play an important role.

References

- Demydova, Y. (2006). Formuvannia pochatkiv piznavalnoi samostiinosti starshykh doshkilnykiv. *Palitra pedahoha*, 4, 14–19.
- Dudnyk, N. (2018). Vykhovannia samostiinosti u ditei doshkilnogo viku. *Hirska shkola ukrainskykh Karpat*, 19, 118–122.
- Halaida, S. (2004). Konstruiuvannia z paperu. *Palitra pedahoha*, 1, 21–22.
- Honcharenko, S. (1997). *Ukrainskyi pedahohichnyi slovnyk*. Kyiv: Lybid.
- Krutii, K. (2012). Problemy formuvannia samostiinosti ditei tretogo roku zhyttia. *Doshkilna osvita*, 4(38), 30–31.
- Kuzmenko, V. (2001). Samostiinist yak skladova indyvidualnogo rozvytku osobystosti. *Aktualni problemy psykholohii: zb. nauk. statei*. Kyiv: Nora-print, 88–91.
- Lisovets, O. (2018) Osoblyvosti stanovlennia i rozvytku samostiinosti dytyny u doshkilnomu vitsi. *Psykhologo-pedahohichni nauky*, 3, 28–34.
- Matviienko, S. (2019). Vykhovannia samostiinosti v starshykh doshkilnykiv u protsesi zaniat khudozhnim konstruiuvanniam. *Naukovi zapysky NDU imeni Mykoly Hoholia. Serii: Psykhologo-pedahohichni nauky*, 2, 113–116.
- Nosachenko, T. (2006). *Formuvannia v molodshykh shkolariv konstruktynykh umin u protsesi navchannia obrazotvorchoho mystetstva i khudozhnoi pratsi*. [Doctoral dissertation abstract]. National Pedagogical Drahomanov University.
- Savchenko, M. (2014). *Vykhovannia samostiinosti u ditei starshoho doshkilnogo viku v ihrovii diialnosti*. [Unpublished doctoral dissertation]. Donbas state pedagogical university.
- Udina, O. (2008). *Vykhovannia samostiinosti doshkilnykiv v obrazotvorchii diialnosti (na materialy aplikatsii)*. [Unpublished doctoral dissertation]. Institute of problems on education of the National academy of pedagogical sciences of Ukraine.
- Shapar, V. (2007). *Suchasnyi tлумachnyi psykholohichnyi slovnyk*. Kharkiv: Prapor.
- Yarmachenko, M. (2001). *Pedahohichnyi slovnyk*. Kyiv: Pedahohichna dumka.

FORMING OF RESPONSIBILITY IN CHILDREN OF OLDER PRE-SCHOOL AGE BY MEANS OF FICTION LITERATURE

Maria Chepil

Drohobych Ivan Franko State Pedagogical University, Ukraine

Oresta Karpenko

Drohobych Ivan Franko State Pedagogical University, Ukraine

Nadia Dudnyk

Drohobych Ivan Franko State Pedagogical University, Ukraine

Alla Revt

Drohobych Ivan Franko State Pedagogical University, Ukraine

Oleksandra Svyontyk

Drohobych Ivan Franko State Pedagogical University, Ukraine

Abstract. *A civilized society sets requirements for the democratic coexistence of persons who possess moral values, benefit society and develop their own abilities. An important characteristic of a person is responsibility, which is formed as a result of the integration of thought processes, social norms, personal attitude in solving dilemmas in life. Responsibility as a child's conscious behavior in relation to people and nature begins to develop in the period of older preschool age. Independent thinking in judgments acquires logic and a personal attitude to reality. In the pursuit of social activity, children imitate the behavior of significant adults, heroes of their favorite films, cartoons, and works of art. Educators and parents are faced with the task of developing the philosophy of children's worldview through conducting moral and ethical discussions. Our survey of children's parents with special needs showed a low level of parents' and educators' attention to the education of responsibility (4%) compared to other personal qualities (discipline - 18%, ability to adapt to life - 20%, respect to parents - 14%, etc.). This indicates the need to conduct special educational activities that compensate for gaps in value orientations. Emphasis has also been shifted in the education of executive responsibility as opposed to initiative responsibility (75% : 25%), which gives reasons to look for new ways in organizing the interaction of participants in the educational process, to use moral and ethical conversations, to study educational children's literature, in particular, the works of V. Sukhomlynskyi (2018), which became the goal of our scientific exploration. Examples of artistic works and developed problematic questions and tasks for educational work with children of older preschool age in the conditions of a preschool education institution are given.*

Keywords: *education of older preschoolers, fiction, moral and ethical conversation, problematic questions responsibility.*

Introduction

In the modern society, creating conditions for a happy future of the younger generation is a priority. Education, fulfilling the demands of the society, tries to solve tasks of creating favorable conditions for personality development, viz. humane relationships, didactic environment and natural environment in the process of transferring knowledge accumulated by mankind and self-development of the child. In the world of information technology progress, the need for moral development of a person is no less important, where the values of human relationships, the education of noble character traits, the ability to establish harmonious relations between the nature and the man are outlined in pedagogical tasks. Responsibility occupies one of the leading places, because it characterizes a person as active, socially significant, caring and effective in creating relationships in the world of people and nature. Responsibility begins to form in the senior preschool age and requires pedagogical support, because the basis of a personality is psychological reality, that is, subjective experience, according to which the reality is explained: «The main power of personality functioning is the tendency to the self-actualization, namely the need of a person to realize his natural potential possibilities» (Rogers, 2022). The teachers fill the essence of people's relationships with content, verbally outline senses, appeal to the child's feelings in the process of developing their worldview.

The aim of preschool education, as the first stage of comprehensive secondary education, is to solve the problems of organizing the educational environment, diversifying educational programs to meet the development needs of a growing personality. Preschools provide conditions for a child's growth by transferring knowledge and instilling moral, national, and social values, taking into account the psychological, physiological, valeological, mental, and cultural characteristics of each child.

A fairly wide palette of educational syllabi allows the teachers and parents to coordinate their expectations from pedagogical influence that would correspond to the progress of the society and include new achievements of psychological and pedagogical sciences in establishing productive interaction of all participants in the educational process. In particular, we consider educational syllabi that emphasize the education of moral virtues to be important, because the formation of value orientations in the life of an individual is of crucial importance in European integration, where democracy, humanism and civic values prevail. The basic component of preschool education in Ukraine defines specific stages in "mastering the content of preschool education throughout the entire period of preschool childhood, recognizing the value of each age step in personal development when a child fully realizes their potential" (Kononko, 2021).

The contradiction of placing emphasis in education on the priorities of the educational orientation of modern education consists in avoiding an imbalance between the society's need for intellectually developed, independent citizens and morally sensitive individuals responsible for the fate of the country, who care about the fate of the planet and the humankind. The humanities, dealing with the problem of the child's adaptation to the social environment, pay attention to the need for a systemic approach to developing the worldview foundations through moral and ethical discussions on topics that determine the motives of people's actions. Literary fiction is a means of influencing a child's consciousness in developing a philosophy of being. Therefore, the process of balanced personality development with the inherent sense of responsibility of a senior pre-schooler should be oriented in the trajectory of educational influence: from reading special fiction, to discussing problematic questions, expressing opinions and providing real life examples, to making moral choice in real situations. Understanding the teachers' attention to the mental development of a child in preschool years, we want to single out the problem of instilling responsibility as one of the important ones in the modern process of creating a philosophy of being a personality. After all, children getting acquainted with the heroes of literary works, cartoons based on the works of famous writers, strive to imitate their behavior. When discussing the positive or negative actions of the works heroes, their funny or inappropriate reactions, pedagogues and parents can model the behavior of children, make them think about regulating their actions as a manifestation of responsibility.

The purpose of this article is to research the ways of pedagogical influence on the process of forming responsibility in senior pre-schoolers by means of literary fiction; substantiation of the cause-and-effect relationships of family education and the activities of teachers in order to form positive traits of the child's character, in particular, the sense of responsibility.

In order to achieve **the pedagogical goal**, we have used theoretical and empirical research methods: the theoretical ones to determine the basic theoretical provisions and clarify the content of the main concepts; highlighting and specifying the importance of fostering responsibility as the main character trait of a child of senior preschool age; the empirical ones include a questionnaire of parents of preschool children according to the methodology of L. Pisotska (2011) in determining the values that are given priority in family education; research by T. Fasolko (2013) in determining the formation of responsible behavior of senior pre-schoolers; mathematical methods are used for quantitative and qualitative analysis of the empirical data.

The theoretical foundations of the research

Responsibility as a character trait and a component of human morality has been the research subject of psychologists, educators, and philosophers. Thus, the problems of anthroposophy and the formation of world understanding from the position of responsibility in civic being are highlighted in works of I. Bech (2012), O. Vyshnevskyi (2022), I. Ziaziun (2012), E. Manuylov (2014), C. Rogers (2022), etc. Psychological research of the motives of responsibility as a personal choice are considered in scientific studies by S. Zabolotska (2013), O. Kononko (2021), M. Savchyn (2008), T. Fasolko (2013), etc. Pedagogical ways of modeling responsible behavior in personal education are presented in scientific studies by J. Dewey (2001), L. Lokhvytska (2016), L. Pisotska (2011), N. Stadnik (2001), etc. Responsibility is an indicator of morality, a regulator of behavior, social adaptation and a civically active position, a regulator of value orientations in relations with the outer world. Responsibility is a basic trait of a person in a conscious attitude to requirements and social morality, it performs an effective function in solving social tasks with an understanding of the purpose and consequences of one's actions, and it is manifested in readiness for initiative, independence to determine the purpose of one's activity and fulfill the social duties. The scholars reveal the methods of pedagogical influence on the process of forming responsibility as a moral quality in children, starting from preschool age, when the way of critical thinking enables them making independent conclusions, evaluative judgments, modelling their behavior with responsibility in social relationships, in attitudes to the nature, one's work, personal choice in favor of "good deeds". Social responsibility as a feature of conscious behavior originates in the senior preschool childhood period, when social requirements become conscious, judgments become evaluative, and thinking acquires some features of criticality. The author of the personally-oriented theory of human development, I. Bech, singles out "the goal, which consists in creating external and internal conditions for constructing an individual pathway of a meaningful self-determination of an individual, which acts as an indicative basis for their conscious behavior in the natural and sociocultural world" (Bech, 2012). The ways and means of forming preschool children's responsibility have a philosophical, moral and evaluative nature through contemplating the actions of important adults, reading educational fiction, watching videos and cartoons. Responsibility as a moral quality is formed as a result of subjective perception of the environment, willpower, emotional attitude, making judgments about the behavior of the fictional characters and close people in relation to duty, objective requirements of the society, the desire to do good deeds and be useful to the people.

The psychological development of a senior pre-schooler makes it possible to regulate their own behavior in accordance with the social requirements, rules,

and norms. Children already have a rich word stock and critical thinking. The integration of mental functions and subjective perception of the environment give rise to the desire of becoming significant in life. Teachers act as mentors in focusing attention on important moments of human relationships, examples of the behavior of the fictional characters who are emotionally close to the children, in resolving contradictions in situations of moral choice. "An important element of morality as a regulator of human behavior is communication. Being an invariable component of the person's structure, communication acts as a universal means of humanizing the person himself" (Manuylov, 2014). Illustrating the actions of favorite fictional characters facilitates expressing oneself, assuming the motives of their behavior, determining emotional attitudes, and projecting one's own behavior in similar situations. Teachers, in accordance with the schedule and topics of the week, introduce children to literature that raises the issue of moral choice, the motives of the character's actions, polarizes positive and negative models of behavior, where responsibility is of great importance in relationships.

The forms of responsibility in social coexistence are influenced by the national values, historical educational traditions of the society in which the child is raised; teachers convey the essence of moral actions of characters, explain the motives of their good deeds. Children acquire their own independent experience of social relations for active life, develop it in the subsequent periods of growing up. O. Vyshnevskyi wrote: "The purity and harmony of the value system is achieved by observing the law of natural hierarchy, when the interdependence of different groups of values is clearly taken into account. Yes, the personal values should be constantly coordinated with the family, social, national and universal ones" (Vyshnevskyi, 2022). In the philosophical content, the importance of pedagogical influence in the process of awareness and acceptance of moral values in childhood was emphasized by I. Ziaziun, warning against the formation of a one-dimensional person who possesses the knowledge of humanity as models of behavior and does not have the opportunity to self-realize their meaning. "In a broad sense, it is a kind of muster of the cultures in a multinational environment, the correlation of the experience of communicators based on the analogy of aesthetic traditions. The effectiveness of dialogue depends on compatible value-oriented attitudes, the definition of problems that are accessible and personally significant for the subjects of communication, on the level of realization of aesthetic self-cognition" (Ziaziun, 2012). Therefore, in the system of the educational strategy of pedagogy, where the main value is a free, humane, independent and responsible individual, education should be founded on the culture-creating process, in which knowledge about the historical past of the people, its best representatives, will have an educational impact on the development of the child's existential philosophy.

J. Dewey in his book "Moral Principles in Education" notes that the teacher should not prepare the child for life, but here and now "lay the moral foundations of social behavior... present them in concepts accessible to children, convey them through examples of moral actions and through feelings" (Dewey, 2001). The modern educator L. Lokhvytska characterizes the senior preschool age as the possibility of "accumulation of moral concepts and ideas about moral norms, which they produce in their own behavior and attitude towards others" (Lokhvytska, 2016). The children experiment by their actions, expecting an approving reaction from adults, they think critically about their own actions. Development of norms (models) of behavior of senior pre-schoolers enhances the initiative in life, responsibility, caring attitude towards nature and the desire to help those they love.

The ways of shaping the senior pre-schoolers' sense of responsibility are individual and group ethical discussions, as well as game activities filled with the value oriented content. In his writings, the famous practicing educator V. Sukhomlynskyi (Sukhomlynskyi, 2018) draws attention to instilling responsibility as a "culture of feelings", "culture of desires", "culture of behavior", where during the discussion of the content of a literary piece or watching a film (cartoon), children understand the emotional experiences of the characters, who perform noble deeds. The teacher appeals to the child's innate tendency to do good, compares the developed emotional culture and feelings with "absolute musical hearing" in moral education. While M. Montessori noted the inability of preschool children to understand the meaning and behavioral motives of main characters in fiction: "They absorb examples of social behavior like a sponge, without differentiating them as good or bad, they want to imitate them" (Dychkivska, 2006). In moral and ethical conversations, the teacher makes the behavior of the characters the subject of discussion and debate. Children make judgments about the impact of the characters' actions on others, on the nature, and on relationships between people.

In the process of communication and joint activities with close people, peers, or teachers in preschool, children acquire emotional experiences that find understanding with others and the possibility of enriching their feelings appears. Moral and ethical norms become an important way of regulating relationships, the pre-schoolers' attitude to the rules of social coexistence develops. The process of responsibility formation in preschool children was studied by T. Fasolko, who claims that at the senior preschool age children already have "certain levels of formed responsible behavior: proactive, executive, conforming" (Fasolko, 2013). Executive responsibility prevails at this age, and an emotionally positive attitude is a prerequisite for its demonstration, "it encourages the child to properly fulfill tasks, demands, assignments, display appropriate feelings (kindness, mercy, compassion, etc.)" (Stadnik, 2001).

Children at senior preschool age learn to plan their own actions, predict possible outcomes, and coordinate them with the requirements of adults.

It is important to support the child's first manifestations of responsible behavior, their compliance with agreements, rules of coexistence in the group and their initiative. Senior pre-schoolers need support and approval from important adults (teachers, parents), because the spectrum of their values is just forming. A model of behavior with signs of responsibility must be supported using the technology of "education with joy" (Frenet, 1992), when adults support the child in manifestations of willpower and morality with a positive emotional reaction and enthusiasm. An approving assessment of the preschooler's manifestations of responsibility is an incentive for the further development of self-regulation in their relationships and initiative in activities related to good deeds, so that someone approve of their actions, recognize actions achievements, believe in actions possibilities for further moral growth. In preschool, this mission is carried out by teachers, while at home, this remains the responsibility of the parents.

Methodology

Our survey was conducted in preschool education institutions of the Lviv Region (Yalynka Kindergarten, Truskavets, Anheliatko charitable kindergarten, Drohobych, Father Kyril Seletskyi Kindergarten No. 2, Drohobych). 120 children of senior preschool age were involved in the experiment. As the researcher of the morality of preschool children S. Zabolotska notes: "It is necessary to familiarize children with moral forms of behavior so that children perceive with interest and understand the need to observe them" (Zabolotska, 2013). Therefore, we used the method of group discussions based on the educational fiction they have read. Adventure novels for children were selected "The Adventures of Neznayko" by M. Nosov (Nosov, 2016) and problematic questions for discussion were offered (What was Neznayko like? What good deeds did he dream of doing? Why did he fail? How can you help your friends? Why should the nature be protected? How do you feel when they thank you?).

To collect information on the priority of values in the education of preschoolers, we used the methodology of L. Pisotska (Pisotska, 2011), which includes responsibility among important personal qualities. In the questionnaire for parents, a list of characteristics of human morality is provided, from which the respondents chose the ten most important ones and ranked them in order of priority from 1 to 10. The main attention was paid to responsibility in the process of raising children in the family.

Survey results

We conducted a survey among the parents of pre-schoolers according to the methodology of L. Pisotska, where a list of character traits relevant for raising a child of senior preschool age was given ("ability to survive", "ability to adapt to life", "business-like attitude", "ability to cope with difficult life situations", "decency", "competence", "initiative", "commitment", "vigor", "independence", "humaneness", "industriousness", "perseverance", "discipline", "endurance", "honesty", "love to one's neighbor", "friendliness", "benevolence", "love of mankind", "charity", "gratitude", "restraint", "courage", "determination", "will", "purposefulness", "confidence", "adherence to principles", "responsibility", "respect for parents") (Pisotska, 2011). The first to third place was voted by the parents to include "ability to adapt to life" (20%), "discipline" (18%), "respect for parents" (14%), "love of mankind" (12%), "independence" (8%), "benevolence" (6%), "responsibility" (4%), "mercy" (4%). As we can see, the problem of fostering a sense of responsibility, although it has been included in the list of important traits, was not given priority by the parents for the educational process within the family. We came to the conclusion that it was teachers who should compensate for insufficient attention to the problem of fostering a sense of responsibility.

We believe that one of the best means for achieving that is reading educational works of fiction and holding moral and ethical discussions based on the content of the books. H. Belenka notes that reading fiction leads to a desire to imitate the actions of favorite characters and implement their ideas and plans. "A children's hero should have the same troubles and adventures as a child. That's why children are delighted to hear about Pinocchio, Neznaiko, Vereda, Petryk. "The characters are close to them in terms of character and their behavior in various life situations serve as a behavioral model to imitate" (Belenka, 2015). Therefore, a pedagogically competent selection of fiction works and elaboration of their content during ethical discussions enables the child to understand the meaning of the actions of the characters, express their own attitude, and hear the opinions of their friends.

Children actively discuss the actions of their favorite characters of fiction or cartoons, who cause emotional impressions and are heroes (anti-heroes), they have a vivid model of responsible (irresponsible) behavior. Emotional satisfaction is brought by independent activity (following the model of a favorite character), responsible performance of an assigned task, or an activity initiated by a pupil that is related to social activities.

When observing the active participation of pre-schoolers in reading with works of fiction, we came to the conclusion that it is appropriate to use humor. So, in a humorous form, parodying the behavior of characters, who are often funny (according to the contrary rules), arouses the admiration and interest of

pupils. Yes, the irresponsible behavior of Neznayko, who, not knowing how to drive a car, gets down to business and causes a lot of trouble for the children of the Sunny City, can be discussed with great interest, because it presents events emotionally colorful and is an almost true story about the great desire of children to take on tasks beyond them which brings them to failure. Children, discussing the behavior of Neznayko, analyze his good impulses, the reasons for failure, harmful consequences of irresponsible actions, then try on and model their own behavior. Children think critically, predict their actions close to ideal in a similar situation. Thus, pupils (37%) paid attention to a responsible attitude to health, another group of children (20%) identified concern for parents who may be worried, part of preschoolers (18%) showed concern for the property damaged by the main character. Some of the children (15%) did not have any comments on Neznayko's behavior, they did not see the need to show responsibility neither in preserving health, nor in empathizing with parents, nor in careful treatment of the property that the character damaged. 5% of respondents did not take an active part in discussing the stories about Neznayko.

A dialogue between the children and the teacher based on a work of fiction they read, where events occur to the characters that are familiar to the children, cause empathy, the children try to feel the problems of the protagonists, become emotionally sensitive in the climactic moments of the plot, offer their own ways of solving the dilemma. The discussion of what has been read and problematic questions encourage a free exchange of thoughts and impressions, which both fulfils a direct educational task in the formation of moral concepts and develops communication skills, fosters a careful attitude to the opinions of other participants.

Conclusion

Responsibility characterizes the independence of moral decisions in specific situations of choice and, in general, the direction of the child's behavior and activity. The moral norm, if it is comprehended, is fixed as a motive for behavior at the stage of preschool childhood. Therefore, the desired moral quality can be started to be formed through familiarization with the corresponding moral norm, which demonstrates specific ways of acting in a certain situation.

The use of a humorous children's work in a moral and ethical conversation activates perception, awakens children's emotions, the desire to conduct a dialogue, and determine responsible behavior. Neznayko in many episodes is close to children in his irresponsible actions and the desire to help him finds a response in children's judgments. Emotional manifestations of sympathy for a humorous character always cause affection in children, and the teacher observes positive changes in the actions of pupils, their responsible behavior. When

someone behaves irresponsibly, it is appropriate to recall the episode from the play about Neznayko and the children then realize their mistake, recall with a smile the mistakes of the fictional character and discipline themselves. Volitional efforts, awareness of the act, the desire to be "more mature", "more reasonable" than Neznayko, an emotionally positive attitude to the impressions of what they have read encourage senior pre-schooler to demonstrate responsible behavior. Actions acquire meaning, and responsible actions acquire an initiative character, which is a positive trend of self-development. Educators recommend a selection of children's literature to the parents, where the problem of instilling the best character traits is raised, where a responsible attitude towards people, nature, social relations, and one's own health takes a leading place. Such works are stories for children by such Ukrainian writers for children as V. Sukhomlynskyi (2018), V. Nestayko (2019), I. Malkovych (2017), S. Dermanskyi (2022), and others. Their works raise the themes of coexistence that are relevant for children, talk about children's pranks with humor, raise the issues of moral choice in actions, and encourage reflection in modeling responsible behavior. Reflecting together with an adult on the behavior of literary characters, children can evaluate responsible and irresponsible actions, model their own actions in similar situations, and later transfer them to real life conditions.

References

- Bech, I. (2012). *Osobystist u prostori duchovного rozvytku*. Kyiv: Akademydav.
- Belenka, H. (2015). *Eksperymental'ne doslidzhennya osoblyvostey rozvytku ta formuvannya vidpovidal'nosti u ditey starshoho doshkil'noho viku v umovakh DNZ*. Formuvannya bazovykh yakostey osobystosti ditey starshoho doshkil'noho viku v DNZ. Kharkiv: Madryd Printing House.
- Dermanskyi, S. (2022). *Stonadtsiat chalep Ostapa Kvitochky*. Kyiv: A-BA-BA-GA-LA-MA-GA
- Dewey, J. (2001). *Moral'ni pryntsyppy v osviti*. Lviv: Litopys.
- Dychkivska, I. (2006). *Mariya Montessori: teoriya i tekhnolohiya*. Kyiv: Slovo Publishing House.
- Fasolko, T. (2013). Teoretyko-metodologichni zasady formuvannya moralnoi kompetentsii doshkilnyka kriz pryzmu zagalnodudskych duchovnykh zinnostei. *Bulletin of the Institute of development of a child, Issue 29*, 115–119.
- Frenet, S. (1992). Pedagogichni invarianty: Pro metodyku Novoi Shkoly S.Frene. *Nitive school, Issue 11-12*, 41–49.
- Kononko, O. L. (2021). Basic program of preschool child development "My place in the world": Ministry of Education and Science of Ukraine, Pedagogical Academy. *Sciences of Ukraine*; ed. by O. L. Kononko. Kyiv: Svitych.
- Lokhvytska, L. (2016). *Skarbnytsia morali*. Ternopil: Mandrivets.
- Malkovych, I. (2017). *Uliubleni virshi*. Kyiv: A-BA-BA-GA-LA-MA-GA
- Manuylov, E. (2014). Problemy vidpovidalnosti osobystosti v konteksti. *Bulletin of the National University " Yaroslav the Wise Law Academy of Ukraine", Issue 1 (20)*.

- Nestayko, V. (2019). *Nainovishi pryhody Kolka Koluichky ta Kosi Vuchania*. Kyiv: A-BA-BA-GA-LA-MA-GA.
- Nosov, M. (2016). *Pryhody Neznayka ta yoho tovaryshiv*. Kyiv: Ranok Publishing House.
- Pisotska, L. (2011). Trudove vykhovannya doshkil'nykiv: tsinnisni oriyentyry rodyny. *Scientific bulletin of M. Gogol NSU Psychological and pedagogical sciences*, 10, 166–169.
- Rogers, K. (2022). *Humanisticheskaya psikhologiya*. Retrieved from: https://spravochnick.ru/psihologiya/gumanisticheskaya_psihologiya_karl_rodzhers/
- Savchyn, M. (2008). *Psykholohiya vidpovidal'noyi povedinky: monograph*. Ivano-Frankivsk: Misto Publishers.
- Stadnik, N. (2001). *Rol simyi u vykhovanni pochuttia vidpovidalnosti u ditey starshoho doshkilnoho viku*. Retrieved from: https://elibrary.kubg.edu.ua/id/eprint/907/1/Stadnik_mater.kon_2001.pdf
- Sukhomlynskyi, V. (2018). *Ia rozpovim vam kazku...*Kharkiv: Shkola.
- Vyshnevskyi, O. (2022). *Teoretychni osnovy suchasnoi ukrainskoi pedahohiky*. Drohobych: Red.vyd. vid. Drohobyt'skoho derzavnogo pedagogichnogo universytetu.
- Zabolotska, S. (2013). *Psykhologichni umovy rozvytku moralnykh form povedinky u navchalno-ihroviy diyalnosti doshkilnykiv*. PhD (Ed.) thesis. Drohobych: Ivan Franko State Pedagogical University. 19.00.07. "Age and pedagogical psychology".
- Ziaziun, I. (2012). Estetychni rehulyatyvy pedahohichnoyi maysternosti. *Estetychne vykhovannya ditey ta molodi: teoriya, praktyka, perspektyvy rozvytku*. Zhytomyr: Publication of the I. Franko State University.

PEDAGOGICAL CONDITIONS OF SOCIALIZATION OF CHILDREN OF SENIOR PRESCHOOL AGE IN THE INTERACTION OF PRESCHOOL EDUCATION INSTITUTION AND FAMILY

Svitlana Ivakh

Drohobych Ivan Franko State Pedagogical University, Ukraine

Anna Fedorovych

Drohobych Ivan Franko State Pedagogical University, Ukraine

Svitlana Tytarenko

Oleksandr Dovzhenko Hlukhiv National Pedagogical University, Ukraine

Iryna Palasevych

Drohobych Ivan Franko State Pedagogical University, Ukraine

Yuriy Kalichak

Drohobych Ivan Franko State Pedagogical University, Ukraine

***Abstract.** Rapid socio-political changes in the life of modern society make it necessary to prepare children for the development of social relations and various types of behavior in society from an early age. Such qualities as the ability to manage their behavior and ways of communication, the ability to choose appropriate behavior, orientation in new circumstances, a sense of their place among other people is the sphere of social development of the child, which contributes to their social well-being. The effectiveness of the implementation of the outlined tasks of social development of preschoolers is largely determined by the establishment of interaction between preschool education institutions and families of pupils. Only close relations of the preschool education institution on the basis of cooperation with the family provide conditions for the full process of socialization of the preschool child. Our research allowed us to find out the existing problems in socialization of the majority of children of senior preschool age, in particular: unformed ideas about "approved", "acceptable" and "unacceptable" forms of behavior; inability to establish and maintain positive relationships with others; short-term and unstable relationships with peers; unformed positive attitude to society and themselves; inability to solve problem situations. Purpose of article is to substantiate the psychological and pedagogical conditions for the socialization of the personality of a child of senior preschool age in the process of interaction between the family and the institution of preschool education. To achieve this goal, a number of theoretical and empirical methods were used: theoretical: analysis, systematization, and generalization of theoretical data presented in the psychological and pedagogical literature; empirical: a survey of educators using the method of T. Repina (2004), sociometric*

study "Birthday", observation of children's behavior in joint activities and games. In the process of organizing the work, the following methods and techniques have proved their effectiveness: organization of positive communication between parents, educators and children; involvement of parents in assessing the child's progress, forecasting the prospects for the child's development; encouraging parents to participate in joint work with the child and the teacher, the staff of the preschool institution; active listening to parents, trying to understand their problems, to help make a well-grounded pedagogical decision; building friendly, optimistic, cordial relations with parents.

Keywords: *family, interaction, partnership, preschool education institution, senior preschoolers, social development, socialization.*

Introduction

The relevance of the topic of our research is determined by the priority directions of the Laws of Ukraine "On Education" (Minister of Education and Science of Ukraine, 2017), "On Preschool Education" (Verhovna Rada of Ukraine, 2001), regarding the modernization of preschool education, the tasks of the Basic component of preschool education in Ukraine regarding the leading role of the formation of the mechanism of self-development of a preschooler based on the expansion of the child's social competence, the development of basic qualities and feelings of the individual.

After all, rapid socio-political changes in the life of modern society predetermine the need to prepare children for the development of social relations and various types of behavior in society from an early age. Such qualities as the ability to manage one's behavior and ways of communication, the ability to choose adequate behavior, orientation in new circumstances, a sense of one's place among other people are the sphere of social development of the child, which contributes to his social well-being.

The adaptation of the individual to the social environment begins from birth. The closest environment is her parents, family, with whom she establishes relationships, establishes contacts, perceives the world around her, gets acquainted with traditions, Christian and national holidays, as a result of that she forms her own vision of the world. Afterwards, in the life of a child, social institutions and factors of education are important. This is primarily an institution of preschool education, which in the early stages of life occupies a special role in forming the model of behavior of a preschooler, establishing interpersonal relationships, instilling a system of values.

The content of the activities of the preschool educational institution should be aimed at solving urgent problems, in particular, preparing the child for life, the ability to find himself in a social environment, feel comfortable in the community, gain experience in various relationships, master cultural values, adapt to normalized life among people.

The effectiveness of the implementation of defined tasks of social development of preschoolers is largely determined by the establishment of interaction between the institution of preschool education and the families of pupils. Only the close relations of the preschool education institution based on cooperation with the family provides the conditions for the full process of socialization of the preschooler child.

A number of publications by Ukrainian scientists are devoted to this problem (Karnaukh, 2008, Kravchenko, 2006, Melnyk, 2010, Tarabasova, 2015), which partially cover these issues.

So, the choice of the topic of our scientific research determined, first of all, the relevance of the problem, its theoretical and practical significance for the implementation of social needs and, above all, the needs of the family and the child.

Its purpose is to substantiate the psychological and pedagogical conditions for the socialization of the personality of a child of senior preschool age in the process of interaction between the family and the institution of preschool education.

To achieve this goal, a number of theoretical and empirical methods were used: theoretical: analysis, systematization, and generalization of theoretical data presented in the psychological and pedagogical literature; empirical: a survey of educators using the method of T. Repina (2004), sociometric study "Birthday", observation of children's behavior in joint activities and games.

Theoretical basis of the study

During the first six to seven years of life, the baby, with the help of adults, masters the science and art of integration into society. This process is called social adaptation and is associated with the formation of the child's self-awareness, his mastery of role-playing behavior, mastering self-service skills, elementary forms of self-control and self-regulation. The social environment is quite diverse, complex, multicomponent. For a child of preschool age, this is a family, a preschool educational institution, the media, and the environment.

R. Pavelkiv defines the social environment as a unity of components: macro-, meso-, microenvironment. The macroenvironment is a society as a certain socio-political, socio-economic and ideological system. Mesoenvironment – national, cultural, social features of the region. The microenvironment is "the immediate environment of a child's life: family, neighbors, peer groups, cultural, educational institutions. At different periods of childhood, these components of the social environment have a significant impact on the social development of the child" (Pavelkiv, 2008).

To gain social experience, the child must learn to live by observing and using the facts of daily life (actions, events), navigate in social space, master

new social roles, values, ways, etc. The content of the social development of a child of preschool age unfolds in three areas – activity, communication, self-awareness.

Socialization of the individual coincides with the stages of development of the individual. Each stage (birth, early age, preschool age, school childhood, adolescence, adolescence, maturity, old age) is characterized by its inherent type of activity. For preschool age – a game, for school and mature – educational activity. All periods are characterized by the establishment of relations with social institutions. Each individual in one way or another enters into family, industrial, ethnic and professional relations.

Scientists identify a number of semantic dominants in the social development of personality: "1) homonymy – joining of an individual to a genus; 2) social adaptation – standardization of language, gestures, perception, moral and psychological stereotypes, formation of a social character, assimilation of common values, meanings, symbols; 3) inculturation – assimilation of classical cultural heritage, enrichment of the spiritual world of the individual; 4) integration of personality – development of a specific hierarchy of motives, values, interests, the formation of a sense of personal identity, correspondence between different processes and states; 5) internationalization of social experience, assimilation of experience and its mechanisms, adaptation; 6) social construction – the activity of the individual in various social spheres, which is manifested in attachment to certain values, the choice of roles, the methods of conflict resolution used, the choice of methods of self-presentation" (Melnyk, 2010).

We can single out external and internal factors of social development of the individual. External factors are quite diverse. These are family, preschool educational institution, centers and houses of children's creativity, children's team, family environment. The child learns life experience and the first lessons of morality in the family. Given this, modern parents should implement the pedagogy of cooperation in the family, a person-centered approach, build interaction on the principles of respect for each adult and child, respect their dignity, and tolerate everyone. In the family, the child must have emotional and physical security. Depending on the age of the child, external factors have different influences on its formation. At each stage, each of them plays a paramount role. In general, external factors determine the content and directions of personality formation.

Internal factors take into account the individuality of the child, contribute to the establishment of relations with the environment, the world, etc. A preschool child seeks to know the world around him, wants to learn everything about the things that surround him, he has ideas about himself. This, in turn, contributes to the formation of the desire to learn, provides conditions for moral awareness, the formation of social competence.

The level of social development of a child directly depends on his age and individual characteristics. Being in contact with adults and children, the child forms different types of interpersonal interaction in different social environments. So, in the family (family), she establishes relationships with parents, grandfathers, grandmothers, brothers, sisters. For her, they are the closest, with them she learns the world around her, "tries on" herself to society. This helps the child to learn the moral norms, norms of human relationships. L. Karnaukh notes that "social experience, which is transmitted in the family, gradually becomes an integral part of the personality. With this approach, socialization can be considered as a process and result of the assimilation and subsequent reproduction by an individual of social experience in a social environment" (Karnaukh, 2008).

According to T. Kravchenko, the family can both contribute to and restrain the process of social development of the child. If the family surrounding the child is immoral, then the personality does not develop in a socially positive direction. The low moral level of the family creates significant obstacles to the full social development of the child (Kravchenko, 2006).

The next institute of social development is a preschool educational institution, which the child begins to attend at the age of two or three years. The admission of a child to a preschool educational institution requires adaptation to the environment, the children's team, the development of norms of life in the group. As L. Karnaukh notes, under the influence of a preschool educational institution, "a child develops a conscious attitude towards himself as an independent person, equal to other people, the formation of a positive image of the "I", the formation of a sense of dignity and self-importance among other people takes place. A preschooler forms an adequate self-esteem, preserving his "personal space". Behavior is realized taking into account the possible reactions of other people, the ability to adapt to life in new social conditions and also the ability to withstand the negative influences of society, to stop correctly unpleasant communication " (Karnaukh, 2008).

As L. Tarabasova notes, the structure of the socialization process coincides with the age periodization of the development of the individual: birth, age of the infant, early childhood, preschool age, primary school age, adolescence, adolescence, maturity, old age. Each of them has "its own leading way of socialization, which finds its expression in the leading types of activities – playing, learning, entering the system of family, group, professional, ethnic, industrial and other relations" (Tarabasova, 2015). Each of them has already pre-drawn up peculiar relations between the preschooler and social reality. According to L. Vygotsky, such relations are a "social situation of development", which is characterized by taking into account the age group and the individual characteristics of the child, specific changes, forms that create

opportunities for the development and acquisition of social experience (Vygotsky, 2006).

The teacher must find out first of all the initial social situation of development for each period, the state of relations between the preschooler and the classmates, familiarize with the unknown things of a child of one age or another.

The development of the child, the new things that he acquires over a certain period, cause a chain of transformations that usually form personality traits moving from one stage to another. And such a process is cyclical: new things, structure of consciousness, changes, restructuring of being and vice versa. The success of this process is largely determined by the establishment of interaction between the institution of preschool education and the families of pupils regarding the implementation of the tasks of social development of children. Therefore, we set ourselves the goal of justifying the psychological and pedagogical conditions of this interaction.

Methodology and research results

Taking into account the purpose and tasks of the research, we conducted an experimental study of levels of socialization of children of senior preschool age on the basis of three institutions of preschool education in Drohobych, Lviv region (№ 11 "Svitlyachok", № 13 "Kazka", № 24 "Smerichka"). The experiment involved 150 children of senior preschool age. 75 children were included in the experimental group (EG), and 75 – in the control group (CG). The experimental study took place during October-December 2021.

At the preparatory stage, a system of criteria and indicators was selected to determine the levels of socialization of children of senior preschool age:

– *emotional and value criterion (indicators: predominance of positive mood, the presence of readiness to solve problem situations, adequate self-esteem; attitude to positive perception, awareness of one's place in society; possession of socially accepted ways of expressing emotions);*

– *socio-cognitive criterion (indicators: the ability to use the acquired knowledge about "approved", "acceptable", and "unacceptable" forms of behavior; the ability to analyze and solve problem problems; the development of imagination and thinking, the presence of elementary knowledge about oneself);*

– *communicative criterion (indicators: ability to communicate adequately, apply speech clichés in communication; ability to establish conflict-free relationships, control your emotions and mood; ability to use apt figurative expressions).*

According to the defined criteria and indicators, we developed a diagnostic program for the study of older preschoolers, which provided for the use of such methods – a survey of educators using the T method. Repina, sociometric study

"Birthday", observation of children's behavior in joint activities and games. As a result, the peculiarities of socialization of older preschoolers were revealed, which manifested themselves in the presence of ideas about "approved", "acceptable", and "unacceptable" forms of behavior, the ability to build relationships with people around them, attitude to society and themselves, in the attitude of children to problem situations, readiness for their optimal solution.

The generalization of all criteria and their indicators according to the algorithm described above gave grounds to determine the levels of socialization of older preschoolers of the experimental (EG) and control (CG) groups, which are included in the table 1.

A balanced approach to qualitative data analysis, interpretation of life and experimental facts, the use of mathematical methods for processing the information received gave us the opportunity to assert that a significant number of children of both (experimental and control) groups do not know how to establish and maintain positive relationships with others. Their contacts are characterized by short duration and instability. The desire for joint games (this is a natural social need) has not yet been properly developed. The reasons for this, in our opinion, are – insufficient desire of educators and parents to delve into the essence of conflicts between children, unwillingness to find out their causes. Moreover, adults do not pay much attention to the development of personal sympathies between children, do not teach them the rules of interaction; do not always use the educational opportunities of children's play activities.

In view of this, the next stage of the experiment provided for the organization of joint work of the preschool education institution and the family, assistance to parents in organizing communication and joint activities with the child, consolidation of their pedagogical position.

The educational work of the preschool educational institution and the family on the socialization of children of senior preschool age at this stage was aimed at: creating a favorable psychological atmosphere in the group and at home; establishing friendly emotional communication between children and people around them; fostering the ability to treat the child favorably so that he/she feels love, care and security; directing children to joint activities, cultivating partnership; creating situations to identify the capabilities and abilities of the child; providing a variety of activities; providing a variety of activities; and providing a variety of activities.

Table 1 Indicators of socialization of older preschool children according to the results of the ascertainment stage of the experiment (made by the authors)

Criteria	Indicators	Level	EG, %	CG, %
<i>Emotional value</i>	positive attitude, readiness to solve problem situations, adequate self-esteem	high	6,7	10
		sufficient	23,3	24,8
		medium	60	50
low		10	15,2	
	positive perception, awareness of the place in society	high	5,4	6,7
		sufficient	18	21,2
		medium	53,3	53,3
low		23,3	18,8	
	possession of socially accepted ways of expressing emotions	high	4	5,4
		sufficient	21,2	24,8
		medium	50	50
low		24,8	19,8	
<i>Socio-cognitive</i>	use of acquired knowledge about "approved", "acceptable", and "unacceptable" behaviors	high	4	6,7
		sufficient	6,7	4
		medium	50	50
		low	39,3	39,3
	analysis of situations and solving problem problems	high	4	5,4
		sufficient	10	11,8
medium		53,3	50	
	low	32,7	32,8	
	levels of development of imagination and thinking, elementary knowledge about oneself	high	6,7	5,4
		sufficient	11,8	24,8
medium		56,7	50	
low		24,8	19,8	
<i>Communicative</i>	adequate ways of communication, the use of speech clichés	high	5,4	5,4
		sufficient	8,6	10
		medium	53,3	50
		low	32,7	34,6
	conflict-free relationships, control of emotions and mood	high	–	–
		sufficient	6,7	5,4
		medium	60	60
		low	33,3	34,6
		the ability to use apt figurative expressions	high	–
sufficient			20	20
medium	56,7		56,7	
low	23,3		23,3	

We have developed and conducted consultations for parents on the following topics: "How to arrange a family holiday", "Working together", "My child's favorite games", "Playing together", "Family leisure"; environmental holidays "Let's plant a tree together", "Let's save the Earth together".

In the process of organizing the work, we used such techniques as: organization of positive communication between parents, educators and children; active listening to parents, trying to understand their problems, to help make a balanced pedagogical decision; involving parents in joint activities with children and pedagogical staff of preschool education; encouraging parents to objectively assess the progress of their children, forecasting the prospects of their development; establishing friendly, optimistic, hospitable relations with parents.

The next stage of the study – the control one was aimed at clarifying the qualitative and quantitative changes that have occurred. Thus, we were able to synthesize information about the following indicators of socialization of preschool children: the advantage of a positive attitude, readiness to solve problem situations, adequate self-esteem, positive perception of oneself and others, awareness of one's place in society, the ability to understand one's own emotions and adequately respond to the emotional manifestations of the people around them; familiarity with social norms, laws of society, the presence of elementary knowledge about oneself, the ability to analyze situations and multivariate solution of problems; the formation of children's skills to choose adequate ways of communicating with peers and adults, mastering ways to build conflict-free relationships, to show their individuality in speech communication. It is their complex that forms the minimum mandatory basis for the formation of a socially aware person.

In the control experiment, 75 older preschoolers of the experimental group participated, who were involved in three stages of the formation of socialization within the children's subculture, and older preschoolers of the control group, in which the educational process took place in the usual way.

In order to obtain the necessary data regarding the clarification of the levels of socialization of older preschool children, we used the criteria and diagnostic methodology that we developed during the ascertainment stage.

The 1st line of work was subordinated to the establishment of the effectiveness of educational work aimed at the formation of socially acceptable behavior. We envisioned modeling experimental situations and tasks similar to those used at the ascertainment stage.

The II direction was aimed at clarifying qualitative and quantitative changes in the knowledge and skills of benevolent behavior of children in the team. For this purpose, an individual conversation with children was organized, classes that made it possible to obtain information about children's self-awareness, and a situation was modeled that placed demands on the ability of preschoolers

under the pressure of disorienting influences to show knowledge of basic emotions and the ability to show a positive attitude in practice.

Table 2 Indicators of socialization children of senior preschool age according to the results of the control stage of the experiment (made by the authors)

Criteria	Indicators	Level	EG, %	CG, %
<i>Emotional value</i>	positive attitude, readiness to solve problem situations, adequate self-esteem	high	21,2	15,2
		sufficient	50	24,8
		medium	22,1	50
		low	6,7	10
	positive perception, awareness of the place in society	high	23,3	6,7
		sufficient	53,3	24,8
		medium	18	53,3
	possession of socially accepted ways of expressing emotions	low	5,4	15,2
		high	21,2	6,7
sufficient		50	24,8	
medium		24,8	50	
<i>Socio-cognitive</i>	use of acquired knowledge about "approved", "acceptable", and "unacceptable" behaviors	low	4	18,5
		high	21,8	6,7
		sufficient	47,3	15,2
		medium	24,2	47,3
	analysis of situations and solving problem problems	low	6,7	30,8
		high	24,8	6,7
		sufficient	32,7	11,8
		medium	19,8	48,7
	levels of development of imagination and thinking, elementary knowledge about oneself	low	22,7	32,8
		high	24,8	8,6
		sufficient	47,3	24,8
		medium	21,2	46,8
<i>Communicative</i>	adequate ways of communication, the use of speech clichés	low	6,7	19,8
		high	21,2	6,7
		sufficient	34,6	11,8
		medium	37,5	48,7
	conflict-free relationships, control of emotions and mood	low	6,7	32,8
		high	24,8	5,4
		sufficient	32,7	15,2
		medium	35,8	53,3
	the ability to use apt figurative expressions	low	6,7	26,1
high		21,2	4	
sufficient		34,6	21,2	
medium		32,4	50	
	low	11,8	24,8	

Thus, in the control experiment, the verbal and practical reactions of older preschoolers were observed, which together allowed us to come to a conclusion about changes in the nature of their value attitude towards peers, parents and themselves; the ability to understand one's actions and the actions of others, to be understanding and humane, to learn the concept that there are no bad people, but there are bad actions. The generalized results of the control stage of the experiment are presented in Table 2.

The analysis of the results obtained at the control stage of the experiment proves the effectiveness of our work with the children of the experimental group at the formative stage. In particular, individual components of the children's subculture were meaningfully enriched in them, which was manifested in the increase in the amount of knowledge about society, the expansion of the experience of building relationships among peers, the diversification of game themes, the expression of speech in forms of folklore, phraseology. Also, the children of the experimental group significantly increased their ability to understand their own emotions and the emotions of other people, to distinguish between good and evil, to be able to feel good and bad, to evaluate the actions of others from a position of tolerance.

As for the relations of the children of the experimental group with their parents, after the joint activities we conducted, we noticed that the parents began to listen to their children, tried not to criticize their point of view, and showed them respect. Accordingly, the children's behavior also changed: aggression disappeared in many, shy dates began to take part in the game, children began to trust their parents more, express pleasure from communicating with them.

Conclusions

Summarizing the theoretical and applied aspects of the problem we are investigating, we can state that the institution of preschool education together with the family has a special task – to provide social and pedagogical support of the preschool child's personality. In the course of the experimental study, we have identified the psychological and pedagogical conditions of interaction between these two institutions to address the issues of social development of children of senior preschool age: providing a developmental environment for the personal growth of the child in social and family relationships; formation of social and communication skills, instilling basic social communication skills (the ability to listen to a friend, support, discuss a topic together, give self-esteem of their own activities and actions); creating an atmosphere of joy from joint activities, the emergence of feelings of sympathy for each other on this basis, development of friendly competition.

References

- Karnaukh, L. (2008). Sotsialne seredovyshe iak chynnyk sotsializatsii ditei doshkilnoho viku v realiiakh sohodennia. *Sotsialna pedahohika: teoriia i praktyka*, 1, 4-9.
- Kravchenko, T. (2006). Sotsializatsiia osobystosti i sotsialne seredovyshe. *Teoretyko-metodychni problemy ditei ta uchnivskoi molodi*, 9, 23-29.
- Minister of Education and Science of Ukraine. (2017). *On education*. Law of Ukraine. Retrieved from: <https://mon.gov.ua/ua/npa/law-education>
- Melnyk, Z. H. (2010). Teoretychnyi aspekt problemy sotsializatsii osobystosti doshkilnyka. *Zbirnyk naukovykh prats Kamianets-Podilskoho natsionalnoho universytetu imeni Ivana Ohiiienka. Serii: Sotsialno-pedahohichna robota*, 14, 63-69.
- Pavelkiv, R. (2008). *Dytiacha psykholohiia: navch. posib*. Kuiv: Akademvydav.
- Repina, T. (2004). *Problema polorolevoi sotsializatsii detei*. M.: Izd-vo Mosk. psykhol.-sotsyaln. un-ta.
- Tarabasova, L. (2015). Sotsializatsiia osobystosti dytyny v konteksti doshkilnoi osvity. *Hileia: naukovyi visnyk*, 100, 217-219.
- Verhovna Rada of Ukraine. (2001). *On preschool education*. Law of Ukraine. Retrieved from: https://mon.gov.ua/storage/app/media/regulatorna_dijalnist/2020/05/13/zu-pro-do.docx
- Vygotsky, L. (2006). *Voprosy detskoi psikhologii*. SPb, Soiuz.

IMPLEMENTATION OF AXIOLOGICAL NORMS THROUGH STORIES IN PRESCHOOL

Luiza Enachi-Vasluianu

University of Bucharest, Faculty of Psychology and Educational Sciences, Romania

Flavia Mălureanu

University of Bucharest, Faculty of Psychology and Educational Sciences, Romania

Abstract. *The strategic goal of axiological education is the development of human personality through and for authentic values such as altruism, respect, tolerance, truth, cooperation, uprightness etc. This goal is achieved throughout the whole educational levels, either through specific or related disciplines.*

Axiological education must begin from preschool level (with age ranges from 3 to 6 years). At this age level, the implementation of values is efficiently done through stories which kindergarten teachers include periodically in their didactic activities. In Romania, the curriculum for preschool contains directions of action expressed through experiential domains and disciplines of study, but does not contain compulsory content. As such, kindergarten teachers can choose, according to the theme of study, the content that suits the best and include it in their activities with the preschoolers.

Our research focuses on the axiological norms the kindergarten teachers consider relevant for contouring children's personality profile. The specificity of this implementation is the use of stories, selected in accordance to children's interests, age peculiarities, and moral values promoted. The study collected the opinions of 100 preschool teachers regarding the most often focussed on moral and behavioural values implemented through stories in the didactic activities. The research methods were the investigation based on questionnaire, the conversation and the systematic observation. The data collected were interpreted using the SPSS analysis. The results of the research could be used to increase teachers' awareness on the necessity of imprinting a nucleus of values on preschoolers which will guide them in thought and action.

Keywords: *axiological education, moral values, stories in preschool.*

Introduction

The concerns for the development of axiological traits in children's personality are consequences of the nowadays emphasis on the material, physical and professional development of the society. It is well known that a society that does not promote true values and does too little to disapprove immoral behaviour will eventually deform and destroy itself. That is why the promotion of axiological norms should be a matter of priority for any society. School is one of the best means to promote authentic values, through specific or related disciplines. The

strategic goal of axiological education is the development of human personality through and for authentic values such as altruism, respect, tolerance, truth, cooperation, uprightness etc. This goal is achieved throughout the whole educational levels, through a judicious organization of the didactic activities which should ensure a correct understanding of the social phenomena, the formation of prosocial behaviours, the education of high moral feelings etc.

Values such as altruism, respect, tolerance, truth, cooperation, uprightness, cooperation, politeness, perseverance, friendship etc. are formed from kindergarten through systematic and organized activities. There are various researches related to the specifics of axiological education at preschool age (Băbuș, 2020; Cuceș, 2022; Fielding, 2000; Florea, 2019; Nicu, 2016), and we have chosen to contextualise its implementation through story-telling. Since preschoolers have potential for decoding the literary texts and the emotional content involved, teachers use stories to familiarize children with a nucleus of values adequate to their ages in activities of language education or education for society or in extracurricular activities which lay emphasis on axiological education, on prosocial behaviour, on the socio-emotional development of children. The stories used have various ethical content and moral messages children can easily identify. The moral issues met in the stories are analysed, dwelt upon. By means of discussion, children understand the consequences of characters' actions. They can be solicited to describe how they would react or behave if they were in character's place, they also have to motivate their choice. As they reflect on the facts and events described in the stories, children learn certain norms of conduct, positive examples which, in turn, will contribute to the formation of correct attitudes and behaviour (Rădulescu, 2019). They also understand that one's behaviour can be adjusted by will.

Starting from the idea that axiological education, as an essential component of education, contributes to the formation and the development of harmonious personality, we consider it is necessary to identify the main values promoted through stories in preschool. The series of values used in our study was put together based on the specific literature from fields such as axiological education, philosophy of education and on the discussions in focus-groups with the kindergarten teachers involved in our study. The specificity of this implementation is the use of stories, selected in accordance to children's interests, age peculiarities, and moral values promoted. The study collected the opinions of preschool teachers regarding the most often focussed on moral and behavioural values implemented through stories in the didactic activities.

Literature review

Friendship is based on mutual affection and involves attitudes of mutual good will, loyalty, trust and support without waiting for a reward (Bocoș, 2016).

Friendship leads to developing skills of cooperation and conflict management. Friendship at preschool age is, most of the times, contextual and unstable (Neacșu, 2010). Children understand the value of friendship from the examples met in stories. They learn that among friends there are displayed wise attitudes based on tolerance, negotiation and renunciation in order to find a solution that all parties may benefit (Boca, Bucinski, & Dulman, 2008).

Cooperation is a form of action by means of which convergent efforts are made in order to fulfil common goals. Cooperation results into mutual influences of the agents involved. Research in pedagogy, psychology and educational sociology have shown that cooperation forms a network of social interaction, a space of communication governed by rules of democratic functioning, a space where various opinions and attitudes confront in terms of acceptance, tolerance, mutual respect, help and solidarity (Bocoș, 2013). For preschoolers, cooperation does not come naturally, so they must be taught to join their efforts to accomplish a common task.

Tolerance is the ability to accept diversity. Tolerance means embracing differences, learning from them, creating bridges over cultures, rejecting unjust stereotypes. From many points of view, tolerance is opposed to prejudice (Andruszkiewicz & Prenton, 2007). Tolerance means acknowledging people as they are, but not accepting negative behaviour. Preschoolers will understand better the concept of tolerance through stories as it essentially means treating others as one would like to be treated.

Perseverance is defined as tenacity, effort made voluntarily in order to successfully fulfil an objective. School perseverance involves trying hard and not giving up easily when performing school tasks. Children need to learn to perform school tasks even if they are difficult or boring. As such, they need to learn to focus on the task, to disregard the physical or intellectual barriers, to check if the solutions proposed are correct (Bernard, 2004).

Politeness is generally defined as respectful behaviour and kindness displayed in relation with people around. It is one of the essential social values that must be imprinted to children from kindergarten. Exercising politeness in daily activities leads to the formations of positive social habits which will become inherent traits of character throughout life (Nicola, 2003). Stories set positive examples through characters' behaviour and guide children's behaviour in everyday life.

Respect is an attitude based on consideration, esteem and appreciation towards somebody. As a moral value, it manifests in several ways: politeness and kindness in communication and relationships, display of understanding, punctuality, correctitude, concern for others' feelings and behaviour. Verbally, respect means formal language, favourable face expressions, visual contact with the interlocutor, warm tone of voice etc. (Ruben, 1979; Butnaru, 2008).

Uprightness, as moral value, refers to the ability of behaving according to rules. It implies respect for truth, honesty in relationships, self-respect, rigour in behaviour (Cucoş, 2022). Children learn from stories that characters that lack this value suffer consequences. This opposition of right and wrong teaches them that moral values transposed into behaviour ensure others' respect and is at the basis of civilized relationships.

Altruism is a moral attitude that implies support, help for the other without any personal gain. Altruism provides the opportunity to interact with other people, to develop friendly relationships and is learned from observing models, through guidance and through exercising such behaviour in different circumstances (Catrinel & Callay, 2010). As for children, altruism is learned from examples set by grown-ups. In preschool, children learn and practice this behaviour through small gestures: sharing toys, offering help, comforting emotionally another colleague etc. The value of altruism, its superiority over selfishness, its positive effects on people around are best illustrated through stories.

Methodology of research

Objectives

The research objectives are a) to identify the axiological norms implemented through stories the kindergarten teachers consider relevant for contouring children's personality profile, b) to realize descriptive analyses of the selected elements in order to determine a hierarchy based on teachers' opinions.

Participants

The sample used for research was made of 100 preschool teachers from different kindergartens from Vrancea County Romania. The participation in the research was done based on volunteering. Teachers' experience in the educational system ranges from 7 to 30 years. This amount of experience allowed the systematic observation of the values rendered through stories with great impact on children's personalities. It also allows them to make an adequate choice of the stories to include in the didactic activities since in Romania, the curriculum for preschool contains directions of action expressed through experiential domains and disciplines of study, but does not contain compulsory content. As such, kindergarten teachers can choose, according to the theme of study, the content that suits the best and include it in their activities with the preschoolers.

Research methods and instruments

The systematic observation done through the years of working experiences with children allowed teachers to remark children's preferences for stories with themes/ topics on certain values. The observations were analysed and debated in focus-group discussions, which, in turn, led to a careful selection of the axiological norms implemented through stories in kindergarten axiological education.

The research was continued with an investigation based on a questionnaire submitted to the sample described above. The questionnaire included eight items: altruism, cooperation, friendship, perseverance, politeness, respect, tolerance, uprightness. The answers were variants of a five-step scale: (1) to a very low extent, (2) to a low extent, (3) to an average extent, (4) to a large extent, (5) to a very large extent. Teachers' choices showed each item's importance for the development of the axiological or moral dimensions of children's personalities.

Results and discussion

The SPSS software was used for the descriptive analyses, the t-test for the independent samples.

Table 1 Means and standard deviation of the axiological norms implemented through stories in preschool (made by authors)

Items of the axiological norms implemented through stories	Kindergarten/Preschool Mean (std. dev.)
Friendship	4.58 (0.667)
Cooperation	4.82 (0.412)
Tolerance	4.42 (1.220)
Perseverance	4.36 (0.724)
Politeness	4.70 (0.914)
Respect	4.60 (0.542)
Uprightness	4.64 (0.904)
Altruism	4.80 (0.846)

With the means included in Table 1 we realised a hierarchy of axiological norms implemented through stories as presented in Table 2. As such, the indicator that ranked the 1st was considered of highly importance for the development of the axiological or moral dimensions of children's personalities, whereas the item in the 8th rank was perceived as less efficient for the same purpose.

Table 2 Descriptive of hierarchy of the axiological norms implemented through stories in preschool (made by authors)

Rank	Preschool
1.	Cooperation
2.	Altruism
3.	Politeness
4.	Uprightness
5.	Respect
6.	Friendship
7.	Tolerance
8.	Perseverance

According to Table 1, the means obtained in our research vary between 4.82 and 4.36. Their high values demonstrate that teachers consider them all relevant for the development of the axiological or moral dimensions of children's personalities. As shown in Table 2, the first two ranks in the hierarchy, with close means, belong to cooperation ($m = 4.82$) and altruism ($m = 4.80$). Cooperation is regarded as collaboration of children in performing some activities. Altruism manifests when the child shares objects/toys with group peers and accepts and offers support when needed. Teachers believe that these values are extremely important for founding children's personalities as, at this age, they need to socialize, to interact in order to form and exercise socio-relational abilities. The emphasis on imprinting them in children's behaviour is determined by the fact that their manifestation influences their popularity among peers (Catrinel & Callay, 2010) and increases the probability of making friends (Botiș & Mihalca, 2007).

Politeness ($m = 4.70$) ranks third in the hierarchy, which places this value among the most relevant for the intended purpose, in teachers' opinions. Politeness means saying "please" and "thank you", when asking for and receiving things, or greeting people one gets in contact with. Teachers believe it is one of most important values for the axiological development and social integration of children, because polite children are favoured by peers and develop more easily positive relationships within the group.

Uprightness, regarded as honesty, integrity, responsibility, abidance by rules of socializing ranks fourth ($m = 4.64$) in the hierarchy. This is supported by teachers' opinions who consider that being upright ensures good relationships within the group and brings forth the others' respect. Promoting uprightness in children's behaviour, in all its forms of manifestation, leads to understanding that there is a relationship between a situation and the behaviour one must adopt and that the respective behaviour triggers consequences. This can be easily understood by children if the content of the chosen literary texts promote models of correct behaviour.

Respect ($m = 4.60$), as a form of consideration approached from multiple perspectives: for people, for others' work and for others' objects, ranks fifth in the hierarchy. In nowadays society respect, as value, seems to have lost relevance. That is why measures to correct these situations must be taken from an early age. Children must learn that respect is at the basis of positive relationships, it is necessary to understand the other one, to cherish their interests and needs.

Friendship ($m = 4.58$) ranks sixth. This is not placed high in the hierarchy as teachers consider that preschoolers are at the age when they befriend easily and naturally as a result of integration in the group classroom. Generally, friendships allow positive social comparisons ("There are more people who think as I do.") and ensure emotional security, a sense of intimacy, of being helped when in need. At preschool age, children vacillate in their friendships so, through stories based

on this theme, children understand that establishing harmonious relationships based on friendship has multiple benefits in the long term.

Tolerance, ranked seventh ($m = 4.42$), is perceived in this study as displaying understanding and acceptance of physical, ethnic diversity, of diversity of opinions and attitudes. This value is important as society confronts with major issues regarding prejudice and discrimination. At preschool age, children are less tempted to compare and display negative attitudes in this respect. Their acceptance comes naturally. On the other hand, their behaviour is greatly influenced by grown-ups. In this case, if the teacher promotes correctly the messages of tolerance derived from stories, then children are likely to accept diversity of any kind easily at preschool age and later, in the future.

Perseverance ranks eighth ($m = 4.36$) in the hierarchy. At preschool age, this trait is still in formation. All through kindergarten this trait of behaviour is mostly insisted upon through different didactic activities. Through stories, the children understand that they need to act systematically in order to reach one's goals in real life.

Conclusions

At preschool age, children's value system is borrowed from adults (Călineci, Păcurari, & Stoicescu, 2009), that is why it becomes extremely important that they should be transmitted a set of values which would ground their moral and axiological profile. Stories are one of the most useful means of transmitting messages with moral depth and, as such, of familiarizing children with values. Although story-telling is mostly a passive activity, it ensures profound personal involvement through the emotions they stir in children. Most of the time, characters' deeds have emotional impact through the antithesis between good and evil. Finding out about characters in different stories provides children with models of behaviour, either positive or negative.

Concepts of value and morality must be formed since preschool because they reflect in the future interaction of children with the people around them. The activities of story-telling with stories based on an axiological nucleus adequate to preschool age support the formation of positive behaviour, the understanding of truth, of uprightness, of beauty as fundamental values, the respect for the ones around, manifesting tolerance and acceptance for the physical diversity, for opinions and attitudes. Internalizing these values leads to a better development of intrapersonal and interpersonal abilities of behaviour adjustment.

At the same time, becoming familiar with moral values and behaviours appropriate from a social point of view is not enough to support the formation of a personality profile with strong axiological principles. It needs to be doubled with close observation of children's behaviour and daily application of different actions with moral character during the didactic activities. The results of the

research could be used to increase teachers' awareness on the necessity of imprinting a nucleus of values on preschoolers which will guide them in thought and action.

References

- Andruszkiewicz, M., & Prenton, K. (2007). *Educația incluzivă: concepte, politici și activități în școala incluzivă*. București: Editura Didactică și Pedagogică.
- Băbuț, T. M. (2020). Axiological and normative aspects regarding moral behavior in preschool students. In D. Opriș, I. Scheau, & O. Moșin (Ed.), *Education in the perspective of values* (99-103). București: Eikon.
- Bernard, M. E. (2004). *The You Can Do It! Early Childhood Education Program: Developing Social-Emotional-Motivational Competencies (4-6 Year Olds)*. Telford: Time Marque.
- Boca, C., Bucinski, M., & Dulman, A. (2008). *Educația timpurie și specificul dezvoltării copilului preșcolar*. București: Educația 2000+.
- Bocoș, M. D. (2013). *Instruirea interactivă: repere axiologice și metodologice*. Iași: Polirom.
- Bocoș, M. D. (2016). *Dicționar praxiologic de pedagogie*. Pitești: Paralela 45.
- Botiș, A., & Mihalca, L. (2007). *Despre dezvoltarea abilităților emotionale și sociale ale copiilor, fete și baieti, cu vârsta pâna la 7 ani*. Buzău: Alpha MDN.
- Butnaru, S. (2008). Educația pentru diversitate culturală. In Cucuș C. (Ed.), *Psihopedagogie* (569-590). Iași: Polirom.
- Catrinel, Ș., & Callay, E. (2010). *Dezvoltarea competențelor emoționale și sociale la preșcolari: ghid practic pentru părinți*. Cluj-Napoca: ASCR.
- Călineci, M. C., Păcurari, O. Ș., & Stoicescu, D. (2009). *Valori comportamentale și reducerea violenței în școală*. București: Educația 2000+.
- Cucuș, C. (2022). *Filosofia educației*. Iași: Polirom.
- Fielding, M. (2000). Education policy and the challenge of living philosophy. *Journal of Education Policy*, 15, 377-381.
- Florea, A. (2019). Imperativul axiologic: Fundamentul paradigmatelor educaționale. O abordare din perspectiva filosofiei educației. *Cercetări filosofico-psihologice*, 2, 123-134.
- Neacșu, I. (2010). *Introducere în psihologia educației*. Iași: Polirom.
- Nicola, I. (2003). *Tratat de pedagogie școlară*. București: Aramis.
- Nicu, A. (2016). Particularități ale educației axiologice la vârsta preșcolară. *Revista de pedagogie*, 2, 59-69.
- Rădulescu, C. (2019). Didactica limbii și literaturii române. In I. O. Pânișoară, & M. Manolescu (Ed.), *Pedagogia învățământului primar și preșcolar* (137-245). Iași: Polirom.

TEACHERS' PERSPECTIVES ON PROMOTING CHILDREN'S PARTICIPATION IN EARLY CHILDHOOD EDUCATION

Gunita Delijeva

Liepaja University, Latvia

Aija Ozola

Rezekne Academy of Technologies, Latvia

Abstract. *In democratic society, participation is child's right from an early age. Within early childhood educational practice, teachers should create diverse and meaningful situations in which children can get experience of how to be part of a group or community. The aim of the study was to examine teachers' perspectives on promoting children's participation in early childhood education. A survey of teachers involved in 5- and 6-year old children's preparation for school was conducted. 2419 teachers representing 741 educational institutions of Latvia participated in the survey. Using a 6-point Likert scale, respondents assessed different statements regarding children's participation in early childhood education. Teachers' preparedness to carry out the children's participation in their educational practice was self-assessed as well. Data were analyzed using descriptive statistics. The analysis of the survey data shows that teachers consider children's participation a significant component of the educational process. The involvement of children in the discussion of important group issues and their influence on decision-making as well as teachers' respect of children's questions during the play-based lesson time was ambiguously assessed. Most teachers declare appropriate self-assessed competences to promote children's participation in their educational practice.*

Keywords: *children's participation, early childhood education, Latvia, teachers' perspectives.*

Introduction

In democratic society, participation is child's right from an early age. Thus, active children's participation in learning is central in modern early childhood education.

Since 2018, competence-based learning content is being introduced in educational institutions of Latvia. The project "Competency-based Approach in the Curriculum" implemented by the National Centre for Education, well-known in Latvia by its brand "School 2030", envisages the development, approbation and

successive implementation of competence-based learning content (Delijeva & Ozola, 2021). Children's participation is an important part of the educational process.

The State Guidelines for Pre-school Education (Ministru kabinets, 2018) emphasize the transversal skill of participation. It requires that the child participates in the development and discussion of the order and safety rules, understands, accepts, and follows them, learns to observe and respect the needs and rights of others, learns to act in an environmentally friendly manner by choosing resources which correspond to work and handling them with care. In order to promote children's participation, teachers' attitudes and competences should be changed in order to create a different teaching and educational process to promote children's participation (Crowley et al., 2020; Oliņa, et al., 2018; Svence, 2020). The learning process shall ensure a relation with his or her [child's] experience and daily life and involvement in the taking of decisions on his or her life (Ministru kabinets, 2018).

According to Recommendation on the participation of children and young people under the age of 18, participation is about individuals and groups of individuals having the right, the means, the space, the opportunity and, where necessary, the support to freely express their views, to be heard and to contribute to decision making on matters affecting them, their views being given due weight in accordance with their age and maturity" (Council of Europe, 2012).

The aim of the study was to examine teachers' perspectives on promoting children's participation in early childhood education. The following research questions were posed: (1) what is the participation of children pre-school educational institutions of Latvia; (2) what is the self-assessment of pre-school teachers about their readiness to promote children's participation in their practice.

Theoretical framework

Although the concept of children's participation is not new researchers acknowledge that there is a range of meanings assigned to the phrase (Percy-Smith & Thomas, 2010). The concept of "participation" is linked to a number of related concepts including "active agency", "participation", "involvement" and "empowerment", "active life position" (Lysgaard & Simovska, 2015; Simovska, 2007).

In general, the following key features of the concept can be identified in the literature:

- participation, active working together, which is at the same time an active attitude towards oneself, other people, work and nature, towards the society and the world in general (Lysgaard & Simovska, 2015; Špona, 2022);

- the opportunity and right to be part of something, also referring to the feeling of being taken seriously and of being able to influence the processes and events in which one participates or in which one can participate (Simovska, 2007);
- in an educational context, the integration of community activities into learning courses, which can have two purposes: to benefit the society (in the narrow and broad sense) and to achieve academic learning goals (Bringle, Brown, Hahn, & Studer, 2019);
- a process of shared decision-making that affects the life of the individual and the community in which they live and work; it is active, conscious and voluntary involvement in decision-making (Hart, 1992);
- civic participation, which is seen as a sense of belonging to one's country, community, family, educational institution, and is expressed as an internal position (attitude, willingness to engage), activity (action) and responsibility (Bringle, Brown, Hahn, & Studer, 2019; Miķelsone & Ozols, 2018).

The concept of participation as an educational ideal is mainly linked to three different understandings of the benefits of engaging in educational activities.

Firstly, participation as a child's right to express his or her opinion, to be heard and to be taken seriously. This argument depends on the relationship between educational institutions (other formal and non-formal institutions for children's education) and communities, which creates space for democratic learning processes that are inclusive in meaningful ways (Hart, 1992; Lysgaard & Simovska, 2015).

Secondly, participation as beneficial for the social and psychological development of the child and thus contributing to better educational outcomes. Children's empowerment and competence to act have been discussed among important potential personal development outcomes of participation (Schnack, 2008).

Thirdly, high expectations are also placed on participation as beneficial for society as a whole, as it potentially strengthens democratic processes and perceptions of sustainability (Lysgaard & Simovska, 2015).

The Latvian education standards use the concept of "civic participation", which is seen both in terms of a child's ability to engage in the processes of managing the activities of education and the surrounding community, making responsible decisions and demonstrating actions that are directed towards the public interest, but also to make decisions related to the learning process that ensure meaningful learning and self-development of the child according to his or her maturity and mental capacity. Three elements are distinguished in the structure of this concept: holistic understanding (the child's knowledge and skills that enable participation, i.e. access to the environment and information), involvement itself (active action, agency and the possibility of receiving the

necessary support) and personal significance (the meaningfulness of the process, conformity to cultural understanding) (Oliņa et al., 2018; Svence, 2020).

To a large extent, the content of this concept is in line with and explicit in the aspects of child participation included in the Convention on the Rights of the Child:

- children have the right to express their opinions and thoughts freely;
- the right of children, in accordance with their level of maturity, to receive information that is relevant to them personally and to the society around them;
- the right of children, in accordance with their level of maturity, to make decisions about their own activities (to participate in decision-making);
- the right of the child to participate, to be involved in the culture of society (United Nations General Assembly, 1989).

Thus, in line with Hart (1992), it can be argued that the child's participation allows him to be meaningfully included in the surrounding society, in his personal learning process. Such participation depends on the environment and the teacher's actions, as well as on the child's level of maturity. It can be assumed that in the first three years of life the child is only acquiring the skills necessary for participation, so that the child's participation is illusory. The next levels of the participation ladder involve the child becoming more and more deeply involved, according to the maturity of the child.

The authors of the article, using a part of R. Hart's (1992) ladder of participation as a basis, adapted this model to the early childhood education, defining the roles of the child and the teacher in the process of participation (see Table 1).

Table 1 The roles of the child and the teacher at specific stages of participation (Hart, 1992; Kārklīņa, Lauka un Lazdiņa, 2020)

Level of participation	Child's activity	Teacher's role
Assigned but informed	Children (1) understand the intentions of the project, (2) know who made the decisions about their involvement and why (3) have a meaningful role and (4) volunteer for the project after being told clearly why and what to do.	Teacher ensures that all children understand the meaning of the project, supports children's independent work and possible initiative.
Consulted and informed	Understands the nature of the project, draws on knowledge and experience, expresses opinions, ideas. Consciously and meaningfully engages in consultation and action. Independently chooses from what is offered by an adult.	Teacher guides conversations, offers different versions for discussion. Takes children's opinions into account in the project implementation, offers own ideas. Makes final decision, provides explanations.

Adult-initiated, shared decisions with children	Children are not offered ready-made ideas, they discuss them themselves, also identifying everything needed to implement the ideas.	Takes up the initiative, initiates the idea, discussion, consequently plays the role of observer and consultant, if necessary – partner.
Child- initiated and directed	Projects are initiated by children. It is important for children to demonstrate their independence; they are usually reluctant to accept adult help. Equality in decision-making.	The teacher creates an environment suitable for children's activities. The teacher is a supporter and advisor.
Child-initiated shared decisions with adults	The basic idea of the projects is that the initiative belongs to the children, being aware of the problems of the environment. Make joint decisions with adults, divide roles and responsibilities.	Teacher creates situations in which children can become aware of problems and needs. Participates equally in decision-making, takes on certain responsibilities along with children.

Looking at the data in the table, it should be stressed that the teacher's role in the participation process is gradually changing. In assessing changes in the teaching process and content in Latvia and Europe, Svence (2020) identifies three important conditions: the learning environment, teacher's self-efficacy and appropriate methods.

The choice of methods has to take the willingness of children and teachers to participate into account. The following factors are mentioned:

- understanding of the application (meaning);
- self-confidence (attitude towards oneself);
- a positive attitude towards the subject (the social environment in general);
- an environment conducive to learning (in this case, an environment in which the child can actively participate);
- positive emotions – for both teacher and child;
- availability of resources: the educational establishment must provide resources and an environment that enable children to participate actively in projects that are meaningful to them;
- the child's participation does not conflict with the protection of rights (the teacher must have a good understanding of children's rights and the deeper meaning of rights protection in a democratic society);
- child participation is different from adult participation: the teacher and the child always have different roles and responsibilities, in terms of experience, knowledge, maturity;
- empowerment: participation promotes children's rights and increases civic engagement; to remove barriers to children's empowerment, adult attitudes need to change and resources need to be controlled;

- participation is a right, not an obligation: both the child and the teacher participate in projects voluntarily (Ročane, 2019; Lysgaard & Simovska, 2015).

The degree of teacher control varies in different types of educational activities, depending on the maturity level of the pre-school children. Research shows that too much control can limit children's participation, but that too little control can only encourage children to participate on their own terms if they have access to sufficient information, skills and experience. Accordingly, an important issue for children's participation is the teacher who creates meaningful contexts where teacher control is emotionally present, supportive and responsive (Emilson & Folkesson, 2007).

Using teacher self-assessment sheets, the following aspects of teachers' roles were identified (Wysłowska et al., 2021):

- teacher's activity in finding new ways of interacting with children;
- creating a positive emotional environment;
- involving children and parents in a common exchange of experience and knowledge;
- supporting children in long-term projects;
- helping children to understand their rights;
- supporting children in expressing their views and participating in decision-making;
- using different strategies to ensure that the interests and needs of different children are met, etc.

Overall, based on the analysis of the literature, a number of problematic areas can be identified (see Table 2) which are mentioned by researchers, but which still require further research (Bae, 2009; Batistič Zorec, 2015; Crowley, Larkins, & Pinto; 2020; Einarsdottir, Purola, et al., 2015; Ghirotto & Mazzoni, 2013; Kangas, Venninen, & Ojala, 2016; Stavropoulos, Karachristos, et al., 2021; Sommer, Pramling Samuelsson, & Hundeide, 2013; Turnšek, 2016).

Table 2 Research areas of children's participation in early childhood education (authors' development)

children's day-to-day cooperation in early childhood education	participation in the documentation of early childhood education practices	preschool teachers' use of language to promote children's participation	children's participation in infancy	children's participation in early literacy learning	children's participation as a democratic value in the early childhood education program	teachers' views on children's participation
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These areas of research should be identified as the basis for empirical research. The above study areas are defined as a basis for empirical research.

Research methodology

To monitor the implementation of children's participation in early childhood education a survey was conducted by the Ministry of Education and Science of the Republic of Latvia in April 2021. The current study is based on analysis of the data from the survey.

Based on the theoretical knowledge on children's participation and its specificities in the pre-school environment, a questionnaire was developed, including 24 statements on children's participation. Each statement corresponded to one of the identified areas of children's participation, namely children's right to information, children's right to express their views or children's involvement in decision-making. Teachers were also asked to self-assess their competence, i.e. knowledge, skills and implementation in practice, in the area of children's participation.

The questions can be divided into four groups according to the theoretical framework:

- the child's right to information: access to information for the child's own use; access to information for the child through the teacher;
- the right of the child to express his/her opinion: listening to the child's opinion; encouraging the child to express his/her opinion;
- involving children in decision-making: discussing relevant issues with children; taking children's views into account in decision-making; encouraging children to make their own decisions;
- self-assessment of teachers' competence in child participation, teachers' views.

The survey also included socio-demographic questions on respondents' gender, age, level of education, work experience in early childhood education and the implemented curriculum as well as questions on the educational institution represented, its type, founder and region of location.

The survey questions were structured as follows: main section, statements contained therein. The choice of statement formats: strongly agree, agree, rather agree, rather disagree, disagree, strongly disagree. In order to avoid routine responses, the reverse statement form was chosen for some statements, where the preferred response option is "disagree" or "strongly disagree".

The invitation to participate in the survey together with a link to the online questionnaire was sent to the official e-mail addresses of educational institutions implementing pre-school curricula. The institutions were asked to involve all teachers working with children aged from five to six.

2419 preschool teachers participated in the survey representing 741 (82.89%) out of 894 educational institutions that implemented preschool curricula in the school year 2020-2021.

The data revealed that the main part of the respondents were municipal educational institutions (691 institution of 788). 563 preschool educational institutions, 225 other educational institutions (elementary, primary and secondary schools and 1 institution for interest-related education) were among the respondents. The most of institutions were located in cities.

Descriptive statistics such as absolute and relative frequencies and graphic analysis were used. The data were processed and analyzed using the statistical software IBM SPSS Statistics 27.0.

Findings

Prior to data analysis the internal reliability of the scale was measured. Cronbach's α ($\alpha = 0.738$) indicates acceptable internal reliability.

The first section includes statements about the children's right to information. The first group includes statements on the availability of information for children to use independently – this is based on visual information such as visual reminders, talking wall, pictograms. Most teachers answer "agree" or "strongly agree", with up to 95% of responses being affirmative, as in the statement "I change the visual information in the group according to the topic" (see Fig. 1).

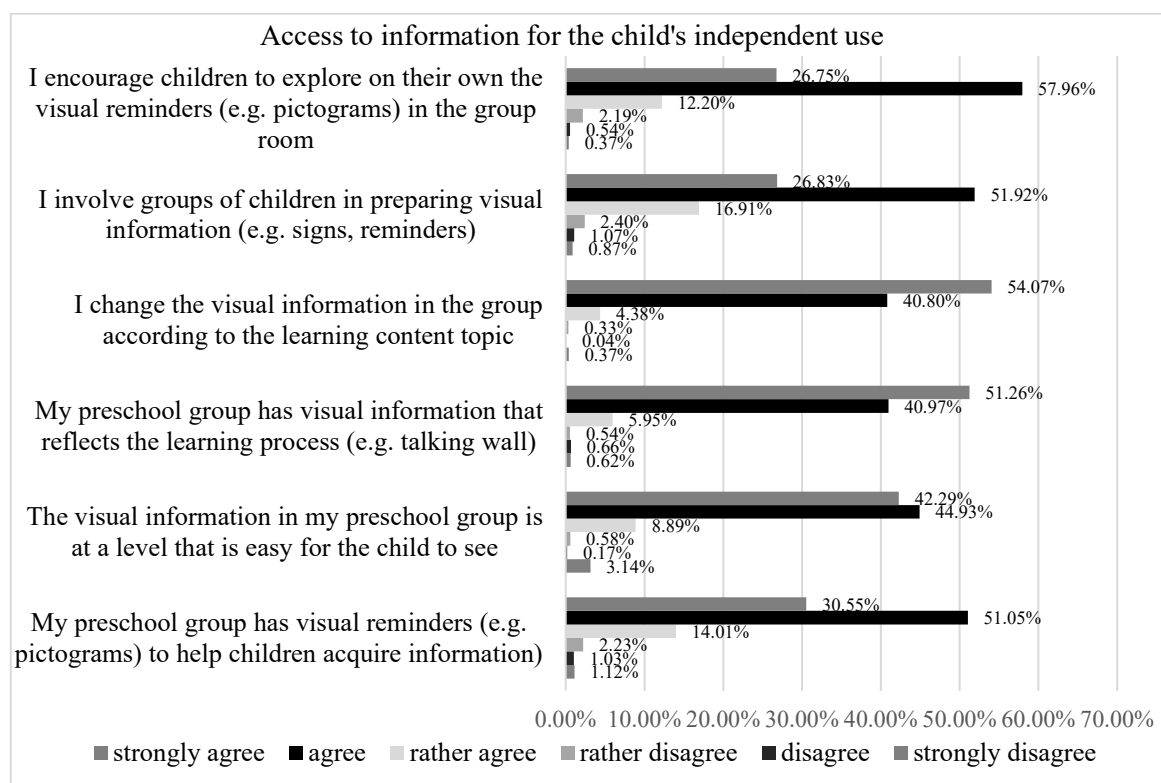


Figure 1 Access to information for the child's independent use (authors' development)

The second group includes statements about the information the child receives through the teacher, including statements about reciprocal questioning: child-to-child, child-to-teacher.

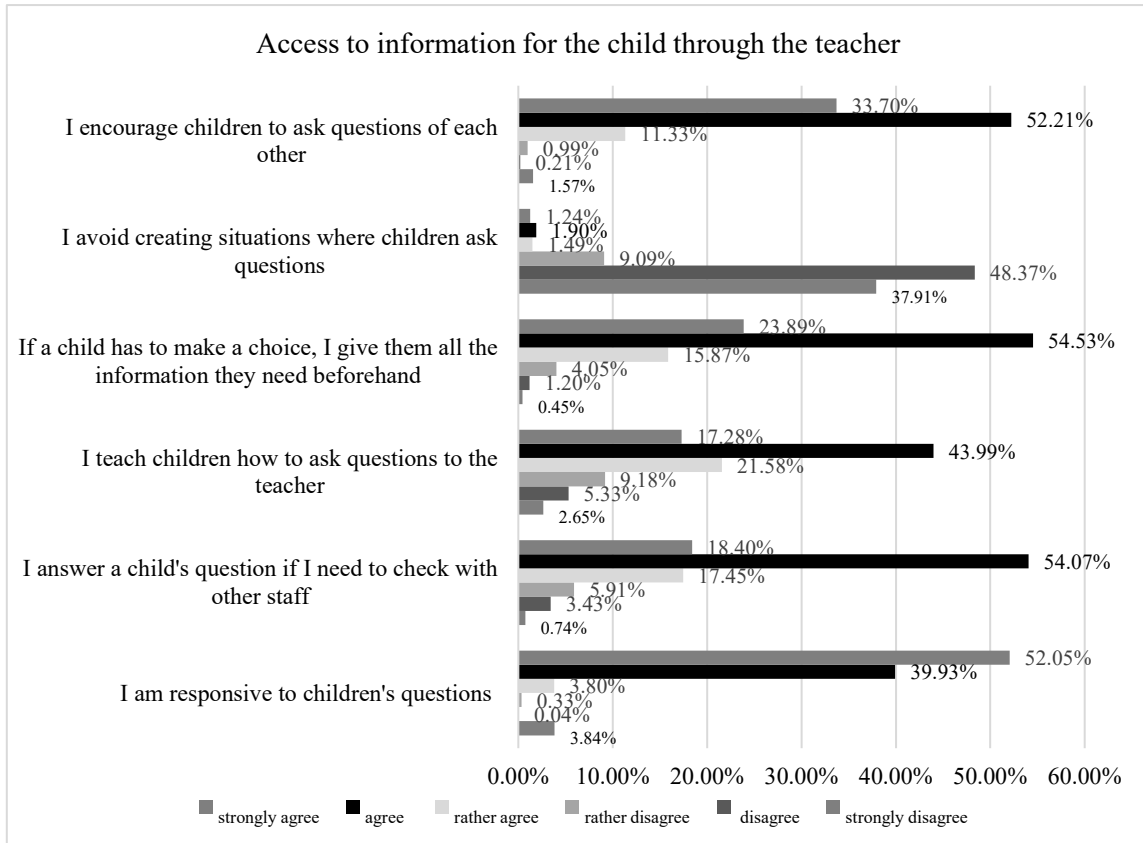


Figure 2 Access to information for the child through the teacher (authors' development)

For example, in the statement “I am responsive to children’s questions”, 92% of teachers answer “agree” or “strongly agree”, while in the statement “I teach children how to ask questions to the teacher”, 61% of teachers “agree” or “strongly agree”. This suggests a focus on promoting this skill in children on a daily basis (see Figure 2).

The second part of the questions – the right of the child to express his or her views. The first group of statements includes statements on listening to the views of the child. For example, 96% of teachers “agree” or “strongly agree” with the statement “I teach children to listen carefully to other children’s ideas”, while 96% “agree” or “strongly agree” with the statement “I respond empathetically to information expressed by a child through facial expressions or body posture”. 64% of teachers. Similar results, at 65%, are found in the reverse statement, indicating “disagree” or “strongly disagree” with the statement “I correct the creative work produced by the child”.

The second group includes statements about encouraging children to express their opinions. For example, 95% of teachers “agree” or “strongly agree” with the statement “I encourage children to express their thoughts in creative works”. On

the other hand, the statements “There is a designated place in the premises of the educational establishment or group for children to submit suggestions and complaints” and “I have informed children about the possibility of submitting written information to the educational establishment” are the least likely to be answered “agree” or “strongly agree” by teachers. 21% and 27% respectively. This leads to the conclusion that this area of participation is not sufficiently addressed.

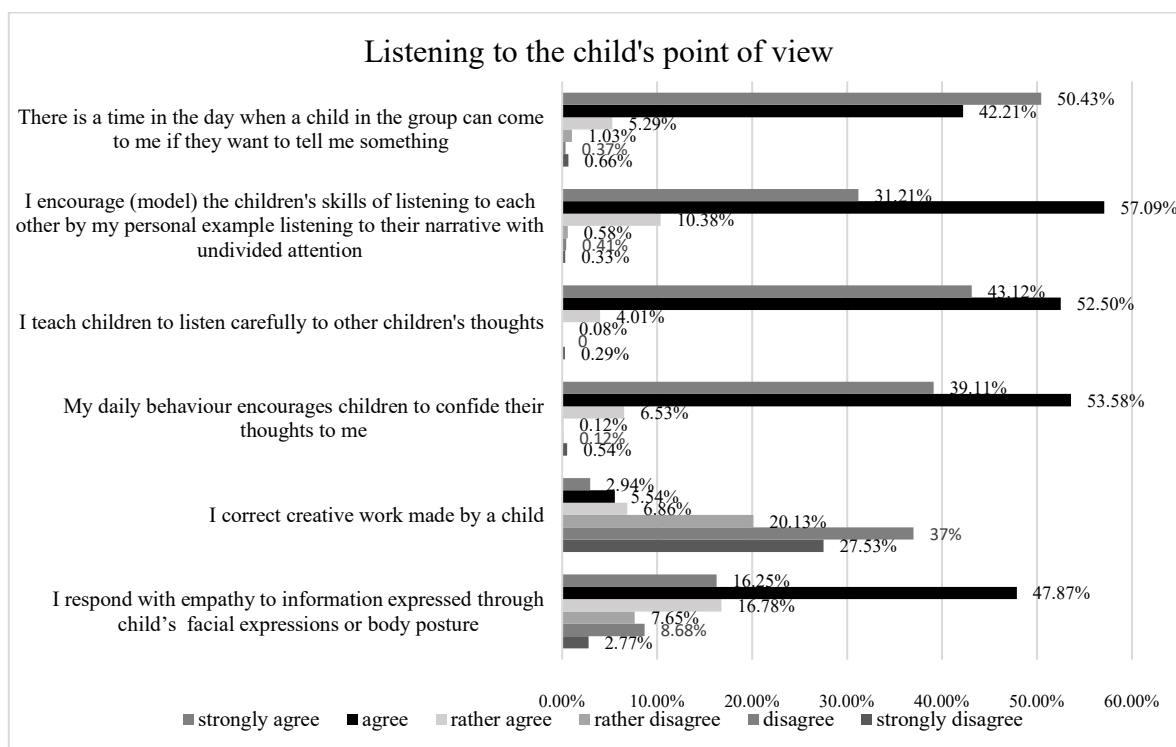


Figure 3 *Listening to the child's point of view* (authors' development)

There may be confusion about how to submit the application if a child cannot write independently (see Figure 3).

Third section – Involving children in decision-making. The first set of questions includes statements about discussing issues with children. For example, for the statement "I teach children to be respectful of other children's suggestions", the answers "agree" or "strongly agree" are given by almost all, 97% of the teachers surveyed. The statement "I teach children to wait their turn to speak and not to interrupt each other" is also "agreed" or "strongly agreed" by 94% of teachers.

The second group includes statements about taking children's views into account in decision-making. For example, for the statement "when we discuss children's suggestions in group, I teach children to justify their thoughts", 92% of teachers answered "agree" or "strongly agree", while the reverse statement, "disagree" or "strongly disagree" for the statement "if a child's suggestion cannot

be implemented in the near future, I do not try to remember it" was given by 64% of teachers.

The third group includes statements about encouraging children to make independent decisions. The statements "I teach children to work together to make a joint decision"; "I provide the necessary support to enable children to carry out an activity they devise independently in the group" and "I set aside time in the daily group time for children to plan activities on their own initiative" are answered "agree" or "strongly agree" by 93% and 91% of teachers respectively.

The fourth section of questions – teachers' perceptions of children's participation and self-assessment (see Fig.4).

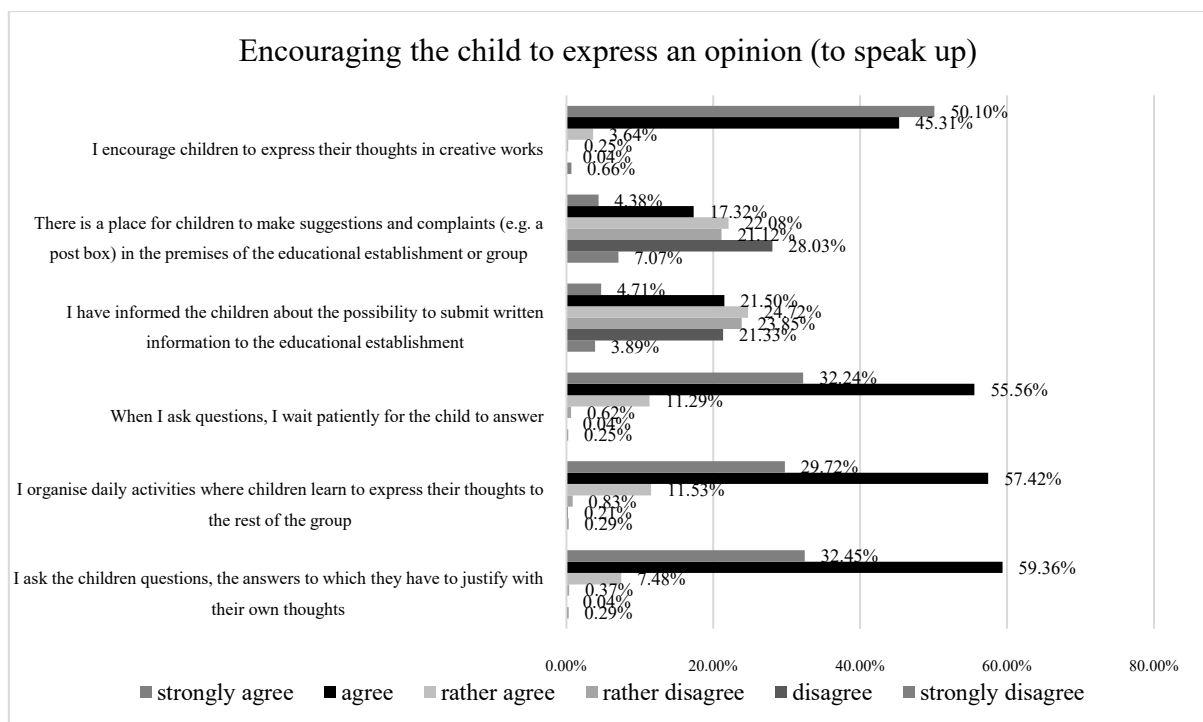


Figure 4 Encouraging child to express opinion (authors' development)

96% of teachers answer "agree" or "strongly agree" to the statements "the teacher's role is to encourage children to express their thoughts" and "what the child says helps the teacher to understand the child", while 59% of teachers answer "disagree" or "strongly disagree" to the reverse statement "children's questions get in the way of the lesson".

For the statements "taking children's suggestions into account builds children's self-confidence" and "teacher's encouragement helps children express their ideas", 93% and 95% of teachers answer "agree" or "strongly agree" respectively, while 68% of teachers answer "agree" or "strongly agree" for the statement "time should be set aside to discuss children's suggestions".

Similar results are found in the two reversed statements. 62% of teachers give the answer "disagree" or "strongly disagree" to the statement "only the

teacher makes decisions in the group" and 67% to the statement "discussing important issues with the children is a formality".

82%-85% of teachers "agree" or "strongly agree" that they have knowledge of children's participation rights, that they have the skills to implement them in early childhood education and that children's participation rights are respected in education. Thus, about 15% of teachers rate their knowledge and skills in this area as insufficient.

Conclusions

The results of the study allow to draw the following conclusions.

Children's participation requires a broad perspective and a flexible approach on the part of the adult, allowing children not only to express their views but also to have a real impact on their daily lives. There is a risk that the adult, motivated by positive intentions, assumes the role of interpreting the child's needs without consulting the children themselves.

The results of the monitoring show that children's participation in pre-school education is implemented in accordance with the guidelines for children's participation in educational policy of Latvia.

In line with the results of the survey:

- there is a need for increased focus on promoting children's questioning skills, which would increase children's participation;
- there are teachers who correct children's creative work and there are teachers who do not show enough empathy to children; this creates a need to create greater awareness among teachers of the child's right to express his or her views, this area of children's rights is insufficiently addressed;
- although teachers indicate that children mostly have the opportunity to be involved in decision-making, there are also signs of formal involvement;
- the results of the teachers' self-evaluation suggest that children's views are not always given sufficient consideration in the educational process; some teachers do not pay enough attention to discussing children's suggestions.

The teacher plays an important role in facilitating children's participation. According to the results of the study, the teacher should pay more attention to children's suggestions and complaints, and to empathy with children's non-verbal expressions, including in creative work. Teachers need to improve their skills in involving children in group decision-making and giving children choices.

References

- Bae, B. (2009). Children's right to participate: Challenges in everyday interactions. *European Early Childhood Education Research Journal*, 17(3), 391-406. DOI: <https://doi.org/10.1080/13502930903101594>
- Batistič Zorec, M. (2015). Children's participation in Slovene preschools: The teachers' viewpoints and practice. *Journal of European Education*, 47(2), 154 - 168. DOI: <https://doi.org/10.1080/10564934.2015.1039878>
- Bringle, R. G., Brown, L. A., Hahn, T. W., & Studer, M. (2019). Pedagogies and civic programs to develop competencies for democratic culture and civic learning outcomes. *Journal of Bordón. Revista De Pedagogía*, 71(3), 27 – 43. DOI: <https://doi.org/10.13042/Bordon.2019.72003>
- Council of Europe. (2012). *Recommendation CM/Rec(2012)2 of the Committee of Ministers to member States on the participation of children and young people under the age of 18*. Retrieved from: https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=09000016805cb0ca
- Council of Europe. (2021). *Child participation*. Retrieved from: <https://www.coe.int/en/web/children/participation>
- Crowley, A., Larkins, C., & Pinto, L. M. (2020). *Listen – Act – Change: Council of Europe Handbook on children's participation*. Retrieved from: <https://edoc.coe.int/en/childrens-rights/9288-listen-act-change-council-of-europe-handbook-on-childrens-participation.html>
- Delijeva, G., & Ozola, A. (2021). Actualization of values in pre-school education by implementing competence-based learning content. *Society. Integration. Education. Proceedings of the International Scientific Conference, II*, 715-728. DOI: <https://doi.org/10.17770/sie2021vol2.6404>
- Einarsdottir, J., Purola, A.-M., Johansson, E. M., Broström, S., & Emilson, A. (2015). Democracy, caring and competence: Values perspectives in ECEC curricula in the Nordic countries. *International Journal of Early Years Education*, 23(1), 97 - 114. DOI: <https://doi.org/10.1080/09669760.2014.970521>
- Emilsson, A., & Folkesson, A. M. (2007). Children's participation and teacher control. *Journal of Early Child Development and Care*, 176(3-4), 219 - 238. DOI: <https://doi.org/10.1080/03004430500039846>
- Ghirotto, L., & Mazzoni, V. (2013). Being part, being involved: The adult's role and child participation in an early childhood learning context. *International Journal of Early Years Education*, 21(4), 300 - 308. DOI: <https://doi.org/10.1080/09669760.2013.867166>
- Hart, R. A. (1992). *Children's participation: From tokenism to citizenship*. UNICEF International Child Development Centre. Retrieved from: https://www.unicef-irc.org/publications/pdf/childrens_participation.pdf
- Kangas, J., Venninen, T., & Ojala, M. (2016). Educators' perceptions of facilitating children's participation in early childhood education. *Australasian Journal of Early Childhood*, 41(2), 85 – 94. DOI: <https://doi.org/10.1177/183693911604100212>
- Kārklīņa, G., Lauka, A., & Lazdiņa, S. (2020). *Caurviju prasmes pirmsskolā. Metodiskais līdzeklis pirmsskolas skolotājam*. Valsts izglītības satura centrs. Pieejams: <https://mape.skola2030.lv/resources/357>
- Lysgaard, J. A., & Simovska, V. (2016). The significance of 'participation' as an educational ideal in education for sustainable development and health education in schools. *Journal of Environmental Education Research*, 22(5), 613 – 630. DOI: <https://doi.org/10.1080/13504622.2015.1029875>

- Miķelšone, L., & Ozols, R. (2018). Pilsoniskā audzināšana izglītības iestādē. *Atbalsta materiāli pilsoniskās audzināšanas un pilsoniskās līdzdalības sekmēšanai*. Valsts izglītības satura centrs. Pieejams: https://kulturaskanons.lv/wp-content/uploads/2018/04/atbalsta_materiāli_pilsoniskas_audzinasanas_un_pilsoniskas_līdzdalības_sekmesanai_2018.pdf
- Ministru kabinets. (2018). Noteikumi par valsts pirmsskolas izglītības vadlīnijām un pirmsskolas izglītības programmu paraugiem. Ministru kabineta 2018. gada 21. novembra noteikumi Nr. 716. *Latvijas Vēstnesis*, 236, 30.11.2018. Pieejams: <https://www.vestnesis.lv/op/2018/236.3>
- Oliņa, Z., Namsone, D., France, I., Čakāne, L., Pestovs, P., Bērtule, D., Volkinšteine, J., Lāce, G., Dudareva, I., Logins, J., & Butkēviča, A. (2018). *Mācīšanās lietpratībai*. Latvijas Universitātes Akadēmiskais apgāds. Pieejams: https://www.siic.lu.lv/fileadmin/user_upload/lu_portal/projekti/siic/Kolektiva_monografija/Macisanas_Lietpratibai.pdf
- Percy-Smith, B., & Thomas, N. (2010). *A handbook of children and young people's participation: Perspectives from theory and practice*. Routledge.
- Ročāne, M. (2019). *Skolēnu pašvadītās mācīšanās veicināšana debašu procesā*. Promocijas darbs. Pieejams: https://www.liepu.lv/uploads/dokumenti/prom/Promocijas%20darbs_Maija%20Rocane_24.11.2019.pdf
- Schnack, K. (2008). Participation, education and Democracy: Implications for environmental Education, health education, and education for sustainable development. In *Participation and learning: Perspectives on education and the environment, health and sustainability* (pp.181 – 196). Springer. DOI: https://doi.org/10.1007/978-1-4020-6416-6_11
- Simovska, V. (2007). The changing meanings of participation in school-based health education and health promotion: The participants' voices. *Journal of Health Education Research*, 22(6), 864 - 878. DOI: <https://doi.org/10.1093/her/cym023>
- Sommer, D., Pramling Samuelsson, I., & Hundeide, K. (2013). Early childhood care and education: A child perspective paradigm. *European Early Childhood Education Research Journal*, 21(4), 459 - 475. DOI: <https://doi.org/10.1080/1350293X.2013.845436>
- Stavropoulos, E., Karachristos, C., Petrogiannis, K., Aguiar, C., Correia, N., Wysłowska, O., Taelman, H., & Penderi, E. (2021). *Children's right to participate in early childhood care and education settings and relative innovatory supportive digital tools for ECCE professionals' development*.
- Svence, G. (2020). *Psiholoģija jaunajam skolotājam*. LU Akadēmiskais apgāds.
- Špona, A. (2022). *Pedagoģija. Pārdomas. Atziņas*. Raka.
- Turnšek, N. (2016). Teachers' implicit theories on child participation in preschool. *Athens Journal of Education*, 3(1), 7-18.
- United Nations General Assembly. (1989). *Convention on the Rights of the Child*. Retrieved from <https://www.ohchr.org/en/professionalinterest/pages/crc.aspx>

ZĪMĒJUMA PEDAGOĢISKAIS POTENCIĀLS BĒRNAM AR VALODAS TRAUČĒJUMIEM RUNAS SEKMĒŠANAI

Pedagogical Potential of a Picture to Enhance Speech for Children with Language Disorders

Jekaterīna Kerevica

PII "Ābelīte", Latvija

Abstract. *The scientist A. Leontyev assures that the language competence is the result of development of continuous use of each language. Only through active communication and active speech activity an understanding about language emerges for the child (Leontyev, 1977). The scientist Glukhov (2005) outlines the skill to improve the language abilities by performing the speech activity in the process of communication. Whereas, one of the most significant factors in the process of mastering the language is a positive emotional background, where the child is encouraged to perceive visible, apparent things, living beings, natural phenomena, to listen and pronounce words which designate them. This also inspires to investigate the pedagogical potential of a picture to enhance speech for children with language disorders.*

The picture is a significant visual aid for a child not only to be taught but also to have fun for improving the language skills. Therefore, it is worked out a set of pictures as a help for the parents to work with a child at home. In a such way a speech therapist is involving the parents in a teaching process to prolong an educational process with a child. As a result, the parents get a pedagogic experience and the efficient development for a child language.

Keywords: *language, language disorders, picture as method, speech.*

Ievads

Introduction

Sabiedrībā pārliecinoši un nepārtraukti tiek runāts par bērniem ar dažādiem un pat smagiem valodas un runas traucējumiem, par to, ka bērnudārzā un arī skolā gandrīz katrā grupā / klasē ir bērni ar valodas un runas attīstības traucējumiem. Labklājības Ministrijas datu bāzē tiek uzrādīti 139 bērni ar valodas attīstības traucējumiem (Labklājības ministrija, 2023). Latvijas statistikas datu bāzē ir atklāts, ka Latvijā ir 28 speciālas pirmsskolas izglītības iestādes un sociālā aprūpe 1305 bērniem (Oficiālais statistikas portāls, 2019). Iespējami precīzāku ziņu par logopēdiskās palīdzības sniegšanas apjomu bērniem netiek uzrādīts, bet tas nemazina bērnu valodas korekciju nepieciešamību.

Bērns, mācoties runāt, vispirms iegaumē un izrunā vārdus. Vārdi ir valodas būvmateriāls, kas kļūst par valodu, tas ir, runu, kad tos sakārto teikumos.

Minētie statistikas dati Latvijā aktualizē bērnu valodas korekcijas problēmu, akūtu problēmu.

Dabiskajai cilvēku valodai ir neiroloģiska bāze, kuras centrs atrodas smadzeņu kreisajā puslodē, un gandrīz visās mūsdienu sabiedrībās dabisko valodu realizē, izmantojot divus dažādus starpniekorgānu pārus muti un ausis (skaņas starpniecība jeb foniskā starpniecība) un roku un aci (raksta starpniecība jeb grafiskā starpniecība). Acīmredzot, normālos apstākļos visiem bērniem valoda (kā vienas valodas vai daudzvalodības prasme) pamatvilcienos izveidojas divu līdz piecu gadu vecumā, turklāt noteikti kā iedzimtības un vides kopsakarības rezultāts (Eden, 1994).

Diemžēl, sabiedrībā bieži dzirdam vecāku (arī izglītotu) viedokli, ka bērna valodas un runas nepilnības vai pat neesamība izzudīs pašas par sevi. Tas liecina, ka ne visi vecāki izprot bērna attīstības procesu, valodas un runas nozīmi personības attīstībā.

Zinātniece A. Fomina raksturojot bērnu pamatkustību attīstības procesu aktualizē, ka veiksmīgi tās apgūt var tikai tad, ja bērns izpilda vingrinājumus regulāri, katru dienu, atkārtojot dažādās situācijās. Autore uzsver domu, ka izvirzot prasības jāorientējas uz bērna attīstības likumsakarībām un individuālajām spējām (Fomina, 1984).

Arī valodas attīstībā nozīmīga ir regulāra vingrināšanās, sarežģītības līmeņa variēšana pakāpeniski palielinot apjomu. Joprojām logopēdi un bērnu vecāki uzdod sev jautājumu: "Kā veicināt bērna valodas attīstību?". Tas arī noteica raksta mērķi — pētīt zīmējuma pedagoģisko potenciālu bērna valodas attīstībā.

Teorētisks ieskats bērna valodas un runas attīstībā *Theoretical view about child language and speech development*

Rakstā analizētas zinātnieku J. A. Studenta (1935), K. Dēķena (1919), J. Puškareva, A. Golubevas (2000), R. Geskes (2005) teorijas par bērna attīstības īpatnībām.

Pamatojoties uz S. Tūbeles un A. Šteinbergas atziņām, tika aktualizēti klīniski pedagoģiski valodas traucējumi, kas balstās uz tradicionālo logopēdijas un medicīnas sadarbību, kura ir orientēta uz runas traucējumu korekciju, uz diferencētas pieejas izstrādāšanu runas traucējumu pārvarēšanai (Tūbele & Šteinberga, 2004). Zinātniece S. Liepiņa akcentē, ka runas attīstības traucējumus var radīt gan organiskas dabas centrāli bojājumi (traumas, asinsizplūdumi, audzēji noteiktās smadzeņu daļā), gan funkcionāli nervu darbības traucējumi (logoneiroze u.c.), gan perifēras izcelsmes organiska rakstura (mēles, žokļu, zobu, cieto un mīksto aukslēju) bojājumi (Liepiņa, 2008). Tas ļauj apgalvot, ka runas traucējumi visbiežāk rodas tieši bērnībā, īpaši tad, kad bērns mācās runāt.

Visiem runas traucējumiem ir transformējošs raksturs, tos var koriģēt.

Ja runas traucējumus nekoriģē, ar laiku tiem ir tendence pasliktināties un kļūt par ieradumu.

Pat visvienkāršākajiem runas traucējumiem ir negatīva ietekme uz cilvēka personību, ar laiku cilvēks savu runas problēmu var uztvert ar bailēm un frustrāciju. Logopēdijas mērķis: izveidot zinātniski pamatotu mācību un audzināšanas sistēmu tiem cilvēkiem, kam ir runas traucējumi, kā arī runas traucējumu profilakses sistēmu. Runas traucējumu atklāšanu, profilaksi, novēršanu īsteno logopēds (Liepiņa, 2008).

Saistoša arī K. Dēķena atziņa, ka ikkatrā kopdarbā sekmējas pūles pašas no sevis; tīkamā darbā citu līdzdalība prieku un veiksmi vairo. Skolotājam vajag spēt pazīt katra sava skolēna spējas, kopējā mācību gaitā ievērot vislielāko individualizāciju (Dēķens, 1919).

Visos laikos svarīga ir ģimenes - vecāku loma bērna attīstībā un audzināšanā. Tāpat šis process nav iedomājams bez pedagoga. Kā notiek šī sadarbība? Pedagogu atzinumi par šo jautājumu tika apkopoti jau izsenis. Piemēram, J. Pestalocijs būdams cieši pārliecināts par ģimenes mīlestības lielo spēku cilvēces attīstībā, atzīst, ka šis gaišais spēks jāliek ne tikai mājās, bet arī skolas audzināšanas un mācīšanas darba pamatā. Zinātnieks uzsver, ka Tēva māja ir cilvēces audzināšanas pamats, ka izglītības pamats jāliek mājā, ģimenē. Sabiedrības atdzimšana panākama ar spēcīgu un cildenu mātes darbību (Pestalocijs, 1996). Tas ļauj apgalvot, bērns sekmīgāk apgūst valodu un runu, kas ir zinātniski pierādīts, ja ar viņu nodarbojas ne tikai bērnudārzā, bet, ja šis pedagoģiskais process, kā arī logopēda darbība rod turpinājumu ģimenē.

M. Montessori par skolotāja un vecāku sadarbību saka, ka viņi kopā veido bērnam "iespēju vidi". Sadarbojas bērna pašattīstībai, kas nepārprotami atklājas teicienā: "Palīdzi man pašam izdarīt manu darbu!" (Montessori, 1965). Latviešu zinātnieces Špona un Jermolajeva arī atgādina, ka bērnība kreditē un tāldarbīgi iestrādā visus galvenos mūsu turpmākās dzīves virzienus, ietekmē tajos gūtos panākumus, garām palaisto un zaudēto (Špona & Jermolajeva, 2015).

Apgūstot un analizējot tikai minēto zinātnieku darbus var pārliecināties apgalvot, ka bērna valodas apgūšanas viens no sekmētāja nosacījumiem ir logopēda prasme zināt katra sava audzēkņa spējas un viņa valodas apguvei paplašināt "iespēju vidi" (Montessori, 1965), cieši sadarbojoties ar vecākiem.

Zīmējums bērna valodas attīstībai *Drawing for child language development*

Latviešu izcilais pedagogs J. A. Students (1935) raksturojot bērna fantāzijas akcentē, ka iluzionārās fantāzijas tiešs turpinājums ir ilustrētāja fantāzija. Tā vērojama laikā, kad bērns klausās un dzirdēto viņš sava gara darbībā ilustrē tēlos.

Ilustrētāja fantāzijai radniecīga ir klīstošā fantāzija, kas mētājas, svārstās. Bērns savā garā it kā pilnīgi nejauši kaut ko veido, ko sākumā nemaz nav domājis. Fantāzija klīst no viena tēla uz otru (Students, 1935).

Savukārt, Ļ. Vigotskis atzīmē, ka bērnam ir tieksme uz jaunradi. Par jaunradi mēs saucam tāda cilvēka darbību, kas rada kaut ko jaunu, vienalga, vai tā būtu kāda reāla lieta vai prāta konstrukcija (Vigotskis, 1997, 2002).

Latviešu zinātniece V. Hibnere parādīja, kā no vienkāršām, pat elementārām formām var izstrādāt interesantus un saistošus uzdevumus, kas atsedz bērna radošās darbības iekšējās rezerves. Zinātniece izstrādāja ieteikumus mākslinieciski radošām aktivitātēm vidē (Hibnere, 2000).

Zīmēšana ir viena no svarīgām nodarbēm, kur bērns attēlo savas radošas domas un iztēli. Zīmēšana ir bērna pirmā, vismīļākā un aizraujošākā nodarbe. Pēc tā, kad bērns iepazīna zīmuļa īpašības, vecākiem jāļauj bērnam vilkt svītras ar zīmuli uz papīra tik cik viņš vēlas. Tas palīdz bērnam attīstīt sīko pirkstu muskulatūru, kas, savukārt, ir viens no priekšnosacījumiem bērna valodas un runas attīstībā. Tas rosināja zīmējumu mērķtiecīgi iekļaut bērna valodas veicināšanā.

Informācija zīmējumā izsauc interesi. Bērns brīvi iesaistās dialogā ar sevi un izsaka savas domas "savā nodabā darbojoties, bērnam ir pilnīgi dabiski risināt sarunas pašam ar sevi, atkārtot apgūtās skaņas un vārdus vienīgi runāšanas prieka pēc" (Svence, 2011). Zīmējums tā ir neverbāla komunikācija bērnam ar pasauli.

D. Loks (1977) darbā "Eseja par cilvēka sapratni" runā par zināšanām gūtām ar juteklisko pieredzi, t.i., redzi, dzirdi, tausti u.c.. Tā jau ir valodiska darbība, jo to veido ne tikai jutekliskā pieredze, bet gan prāts un jutekļi kopā. Mūsu gadījumā darbošanās ar zīmējumu dot iespēju katram bērnam strādāt savā tempā, nesteidzoties. Savukārt, zinātniece D. Lieģeniece raksta, ka laiks ir vajadzīgs, lai atkārtotu, lai īslaicīgā atmiņā esošais pārietu ilgstošajā atmiņā, konsolidētos (Lieģeniece, 1999).

A. Randoha (2015) uzsver, ka viena no bērna svarīgākajām nodarbēm ir zīmētdarbība, kur bērna pasīvās zināšanas kļūst par aktīvām. Autore rakstā "Pirmsskolēna pašizteikšanās zīmētdarbībā" aktualizē, ka ar zīmējuma palīdzību bērns attīsta runu un prasmi izteikties, kad pedagogs rosina bērnus pastāstīt par uzzīmēto, uzdod jautājumus, kas mēdz paplašināt bērna spēju koncentrēties, domāt. Tā ir saruna starp pieaugušo un bērnu izmantojot zīmējumu.

Bērna runas darbības aktivizēšanas paņēmieni ir dažādi, piem., dinamiskās roku kustību rotaļas, pirkstu rotaļpasakas u.c. (Miltiņa, 2005).

Latvijā pēdējo gadu laikā ir veikti daudzi bērnu valodas attīstības pētījumi bērniem ar valodas attīstības traucējumiem, bet zīmējums kā pedagogiskās iedarbības paņemiens nerod plašu izmantošanu, kas, manuprāt, ir skumji, nepamatoti, jo zīmējums tā ir neverbāla komunikācija bērnam ar pieaugušo. To apgalvo zinātnieki Yermakova T. S. un Podolski A. (2019).

Savukārt, sarunāties ar sevi, sarunāties ar zīmējumu ir nozīmīga bērna darbība runas attīstībā, sākumā atkārtojot, pēc tam apzināti izrunājot un vairākkārt nosaucot zīmējumā redzamos augus, dzīvas būtnes u.c.

Apgūtās zinātniskās atziņas par tēlotājdarbības nozīmi pastiprināja interesi pētīt kā ar zīmējuma palīdzību praksē var bagātināt bērna prasmi nosaukt redzamo, pareizi izrunāt skaņas, paplašināt vārdu krājumu, paaugstināt mācīšanās motivāciju.

Pētījuma metodoloģija un rezultāti *The methods and results*

Pētījums tika veikts vienu mācību pusgadu no 2022. gada septembra līdz 2023. gada 20. janvārim ar 24 pirmsskolas izglītības iestādes bērniem, kuriem ir traucējumi vairākās skaņu grupās, fonemātiskas uztveres traucējumi (skaņas vietas noteikšana vārda sākumā, vidū, beigās, skaņu secība un to skaitu noteikšana vārdā, vārda sintēze), gramatiskie traucējumi (prieveidulietojumu lietošana, vārda saskaņošana dzimtē, skaitlī, locījumā, gramatiski pareiza teikuma uzbūve, vārdu darināšana), aktīva vārdu krājuma izmantošanā, burtu apgūvē, lasīšanas iemaņu attīstīšanā, saistītās runas veidošanā (stāstījums pēc pieredzes, aprakstošais stāstījums, stāstījums pēc sižeta attēliem vai sēriju attēliem).

Pētījumā veikta:

- zinātniskās literatūras analīze, lai iedziļinātos atziņās par zīmējuma lietderību bērnu ar valodas traucējumiem valodas attīstībai;
- empīriskā pētījuma veikšanai kā rezultātu ieguves un atspoguļojuma mērinstruments tika izmantota Latvijas pirmsskolas izglītības iestādēs aprobētā un pieņemtā metode "Bērnu runas un valodas vērtēšanas kritēriji";
- balstoties uz zinātnisko atziņu padziļināto apguvi un izklāstu raksta teorētiskajā daļā kā bērna valodas attīstību veicinoša, dominējoša metode izvēlēts zīmējums.

Zīmējumi tika izstrādāti pamatojoties uz katra bērna individuālajām valodas attīstības īpatnībām. Izstrādājot pielāgotus autorzīmējumus katra bērna valodas attīstības īpatnībām tika paredzēts, ka tas radīs iespēju bērnu vecākiem atklāt, ieraudzīt logopēda ieinteresētību katra bērna sasniegumos. Tas arī motivēs vecākus un ļaus noticēt viņiem sava bērna izaugsmei. Audzēknis, savukārt, kāri tvers viņam saprotamu, vizualizētu informāciju, jo te darbojas netīšā uzmanība, bērns koncentrējas uz spilgtiem, precīziem, bērnam ātri uztveramiem un saprotamiem zīmējuma elementiem.

Piemēram, zīmējums "Puķuzirnīši ar piestiprinātām detaļām — lapiņām" (1. attēls), zem kurām ir paslēpušies "Kukaiņi — detaļas, kuras paslēptas zem lapiņām" (2. attēls). Bērns mēģina lapiņas nopūst (elpošanas vingrinājums) un ieraudzīt, kas ir paslēpies zem tām (mārīte, tārpiņš, taurenis u.c.).



1. attēls. Puķuzirnīši ar piestiprinātām detaļām — lapiņām (autores veidots)
Figure 1 Sweet peas with attached details — leaves (made by author)



2. attēls. Kukaiņi — detaļas, kuras paslēptas zem lapiņām (autores veidots)
Figure 2 Insects — details that are hidden under the leaves (made by author)

Šādi zīmējumi tika iedoti arī bērna vecākam, lai mājas apstākļos varētu nostiprināt nodarbības laikā apgūto.

Strādājot ar audzēkņiem pirmo pusgadu novēroti sasniegumi bērna valodas attīstībā (skat. 1. tabulu).

1. tabula **Bērnu runas un valodas vērtēšanas kritēriji** (autores veidota)
Table 1 **Evaluation criteria for children language and speech** (made by author)

Rādītāji	Skaņu izruna					Fonemātiskie procesi			Gramatika			Leksika		Lasītprasme			Saistītā runa		
	Izrunā pareizi "V" skaņu	Pareiza izrunā svēlpeņus un šņāceņus	Pareizi izrunā skaņu "L"	Pareizi izrunā skaņu "R"	Izrunā svēlpeņus, sāk atsevišķi izrunāt šņāceņus	Skaņu diferencē izolēti	Nosaka skaņas vietu vārdā	Nosaka skaņu skaitu, un to secību vārdā	Prievārdu lietošana	Gramatiski pareiza teikuma uzbūve	Vārdu darināšana	Pasīvs vārdu krājums	Aktīvs vārdu krājums	Burtu apguve (daļēji)	Burtu apguve (pilnībā)	Lasa zilbes	Lasa vārdus	Stāsta par lasīto	Stāsta pēc pieredzes un pēc sižeta attēla
Septembris	4	10	10	3	3	14	9	4	10	11	11	14	8	3	6	3	3	5	15
Janvāris	6	12	12	4	6	16	15	7	18	15	15	18	14	5	7	6	4	7	21

Šāda tabula ļauj noteikt sasniegumus bērna valodas attīstībā pēc kritēriju grupām: skaņu izruna, fonētiskie procesi, gramatika, leksika, lasītprasme, saistītā runa un to rādītājiem. Šādā valodas vērtēšanas kritēriju tabulā nodarbību laikā tikai jāatzīmē bērna sasniegumu līmenis: augsts — uzdevumu veic patstāvīgi, vidējs — daļēji patstāvīgi, zems — uzdevumu veic tikai ar logopēda palīdzību.

Septembra sākumā tika veikta runas sākotnējā vērtēšana. No 24 audzēkņiem 2 nemaz nerunāja, pārējiem bērniem bija vajadzīga logopēda palīdzība. Uz logopēda rosinājumu, piemēram, pareizi izrunāt skaņas, audzēkņi reaģēja ar fizisku aktivitāti, sevišķi, kad pirkstu kustību veicināšanai tika piedāvāts izmantot detaļas: to aptaustīšana, noņemšana no zīmējuma vai uzlikšana. Tas sekmē sīkās pirkstu muskulatūras vingrināšanu. Zīmējuma detaļas bērnu motivē darbībai. Viņš arī gūst pozitīvas emocijas.

Katrā no pozīcijām pēc mērķtiecīgi un sistemātiski lietotas zīmējuma metodes redzam, ka katrā no bērna valodas vērtēšanas kritērijiem līmenis, kas bija noteikts septembra pirmajā pusē, ir paaugstinājies. Piemēram, audzēkņim X aktīvais un pasīvais vārdu krājums ir paplašinājies, par ko liecina plašāks lietvārdu, īpašības un darbības vārdu lietojums saistītajā runā. Nozīmīgs rādītājs ir tas, ka visos valodas vērtēšanas kritērijos audzēkņu skaits ir pieaudzis, piemēram, rādītājā fonemātiskie procesi, sadaļā noteikt skaņas vietu vārdā septembrī spēja noteikt deviņi audzēkņi, bet janvārī piecpadsmit no divdesmit četriem audzēkņiem.

Tā kā katram bērnam ir atšķirīgi valodas traucējumi, nebija iespējams veidot kontrolgrupu, lai veiktu zīmējuma pedagoģiskā potenciāla bērnu valodas attīstībā padziļinātu salīdzinošo analīzi.

Nozīmīgi ir tas, ka vērtēts tiek viss valodas attīstības process, ne tikai gala produkts, un tajā klātesošs ir zīmējums — dominējošais didaktiskais līdzeklis.

Tie bērni, kuru vecāki izprot zīmējuma vērtību, mājās regulāri izmanto to, lai atkārtotu un nostiprinātu bērnudārzā apgūto, ir drošāki, pārliecinoši izrunā vārdus, demonstrē sasniegto katrā kritērijā. Zīmējuma pedagoģiskais potenciāls valodas apguvē bērniem ar valodas traucējumiem ir acīmredzams. Par to liecina, kaut vai bērnu sagatavotie un skandētie dzejoļi bērnudārza darbiniekiem.

Secinājumi **Conclusions**

Vērtējot zīmējuma pedagoģisko potenciālu bērna valodas attīstībā, balstoties uz zinātniski teorētiskajām atziņām, pārbaudīto pieredzi, autore apgalvo, ka zīmējums bērna ar valodas traucējumiem valodas attīstībā ir līdzvērtīgs citām nozīmīgām bērna valodas attīstību veicinošām metodēm, piemēram, rotaļai, spēlei, vingrinājumiem u.c.

Izmantojot zīmējumu nozīmīgi ir pareizi noteikt didaktisko uzdevumu,

izziņas saturu un ar zīmējuma starpniecību vingrināties patskaņu, līdzskaņu, divskaņu izrunā.

Svarīgi ir, lai vecāki izprot zīmējuma vērtību, mājās regulāri izmanto to, lai atkārtotu un nostiprinātu bērnudārzā apgūto, kā rezultātā bērni ir drošāki un pārliecinoši izrunā vārdus.

Veiktais pētījums ļauj apgalvot, ka logopēda un vecāku sadarbība kļūst mērķtiecīgāka, saturiski piemērotāka katra bērna individuālajām īpatnībām, speciālajām valodas attīstības vajadzībām, ja tajā tiek izmantots zīmējums, kura pedagoģiskais potenciāls ir pārliecinošs.

Summary

A speech-language pathologist uses a drawing as the main method in the development of students' language and close cooperation with parents. Learning language and speech is more successful for a child, which has been scientifically proven, if it is not only a preschool educational institution that deals with him/her, but this pedagogical process, as well as the speech-language pathologist's activities continue in the family.

The conducted research allows us to claim that the cooperation between the speech-language pathologist and the parents becomes more targeted and more appropriate in terms of content for the individual, special language development needs of each child if a drawing is used.

Evaluating the pedagogical potential of a drawing in the development of a child's language, based on scientific theoretical knowledge and personal experience the author claims that a drawing in the development of a child's language is equivalent to other important methods promoting the development of a child's language, such as play, games, exercises, etc. Using a drawing means correctly determining the didactic task, cognitive content, and practicing the pronunciation of vowels, consonants, diphthongs through the drawing.

Literatūras saraksts

References

- Dēķens, K. (1919). *Rokas grāmata pedagoģijā*. Rīga, 238 lpp.
- Eden, R. (1994). *The Hutchinson Dictionary of Ideas*. Anne – Lucie Norton: Helicon Publishing Ltd., 583 p.
- Fomina, A. (1984). *Fizkul'turnye zanjatija i sportivnye igry v detskom sadu*. Moskva: Prosveshhenie, Str. 158
- Geske, R. (2005). *Bērna bioloģiskā attīstība*. Rīga: RaKa, 314 lpp.
- Hibnere, V. (2000). *Bērna vizuālā darbība*. I daļa. Rīga: RaKa, 198 lpp.
- Labklājības ministrija. (2023). *Gada dati*. Pieejams: <https://www.lm.gov.lv/lv/gada-dati>
- Lieģeniece, D. (1999). *Kopveseluma pieeja audzināšanā*. Rīga: RaKa, 400 lpp.
- Liepiņa, S. (2008). *Speciālā psiholoģija*. Rīga: RaKa, 397 lpp.

- Loks, D. (1977). *Eseja par cilvēka sapratni*. Rīga: Zvaigzne.
- Miltiņa, I. (2005). *Skaņu izrunas traucējumi*. Rīga: RaKa.
- Montessori, M. (1965). *The Advanced Montessori Method*. India, Madras: Kalakshetra Publications, 294 p.
- Oficiālais statistikas portāls. (2019). *Pirmsskolas*. Pieejams: <https://stat.gov.lv/lv/statistikas-temas/izglitiba-kultura-zinatne/pirmsskolas-izglitiba/cits/5592-pirmsskolas?themeCode=IN>
- Pestalocijs, J. H. (1996). *Darbu izlase: Veltīta pedagoga 250. gadu atcerei*. Izd. Klauss Altermans un Anita Čaure: No vācu val. tulkojusi A.Čaure. Rīga: Latvijas Universitāte, Pedagoģijas studijas 2. grāmata. 140 lpp.
- Puškarevs, J., & Golubeva, A. (2000). *Bērna attīstība*. Lielvārde: Lielvārds, 119 lpp.
- Randoha, A. (2015). Pirmsskolēna pašizteikšanās zīmētdarbībā. *Bērna sasniegumu veicināšana pirmsskolā* (150.-186. lpp.). Rīga: RaKa.
- Students, J. A. (1935). *Bērna, pusaudža un jaunieša psiholoģija*. Rīga: Autora izdevumā, 735 lpp.
- Svence, G. (2011). *Bērna valodas un runas attīstība pirmsskolas un jaunākās skolas vecumā. Tagad* (25.-30. lpp.). LVA zinātniski metodisks izdevums Nr. 1.
- Špona A., & Jermolajeva J. (2015) Bērns, Bērība. Sasniegumu pētīšana. *Bērna sasniegumu veicināšana pirmsskolā* (8.-24. lpp.). Rīga: RaKa.
- Tūbele, S., & Šteinberga, A. (2004). *Ievads speciālajā pedagoģijā*. Rīga: RaKa, 112 lpp.
- Vigotskis, L. (2002). *Domāšana un runa*. Rīga: Eve, 392 lpp.
- Vigotskis, L. (1997). *Voobrazhenie i tvorcestvo v detskom vozraste*. Sankt-Peterburg: Sojuz, Str. 91
- Yermakova, T. S., & Podolski, A. (2019). *Pedagogical approach to the development of art therapy*. International Scientific Information, Inc., pp. 171-179.

21. GADSIMTA PIRMSSKOLAS IZGLĪTĪBAS REFORMAS TERMINOLOĢIJAS ZINĀTNISKĀ ANALĪZE

Scientific Analysis of 21st Century Preschool Education Reform Terminology

Anna Līduma

University of Latvia, Latvia

Abstract. *The scientific article contains a pedagogical-psychological explanation of the concepts of the pedagogical process used in Preschool education documents. It evaluates the concepts in the regulations of the Cabinet of Ministers and in the methodological materials of the School 2030 reform of the Ministry of Education and Science: collaboration, attitudes, virtues, values, civic participation, customs.*

Objective of the study. To explain the concepts introduced in the pedagogical process of preschool education from a scientific viewpoint. Research materials and methods: Theoretical: analysis of pedagogical and psychological literature and the regulations of the Cabinet of Ministers and methodological materials of School 2030. Empirical: observations of the pedagogical process in 50 years of continuous work as a teacher are analysed.

Research results: The study explains the concepts used in the reform School 2030. It has been found that the child's independent activity in interaction with the competent support of the teacher would be a guarantee for the implementation of the content recommended in the School 2030 methodological documents in practice.

Keywords: *child, collaboration, education reform, pedagogical process, preschool, School 2030 concepts.*

Ievads

Introduction

Mūsdienu 21. gs. izglītības reformā skolotājam tiek prasīts mainīt autoritāru iedarbības stilu uz demokrātisku sadarbības stilu. Praksē izglītības iestādēs to realizēt ir sarežģīti. Pat tad, kad skolotājs teorētiski zina demokrātiska stila nosacījumus, to īstenot skolotājus ierobežo autoritārs izglītības iestāžu vadības stils. Ir sarežģīti strādāt radoši, ja kāds to liek darīt ar pavēlēm, neuzklausot izpildītāja viedokli par notiekošajiem procesiem.

Notiekošo pārmaiņu situācijā ir svarīgi izskaidrot terminoloģiju, kas reformu Skola 2030 laikā tika ieviesta pirmsskolas izglītības dokumentos. Šajā rakstā tiks analizēti jēdzieni, kurus skolotājs lieto pirmsskolā, veicot savus darba

pieņākumus ar prieku un gandarījumu par pozitīvām attiecībām ar bērniem, bērnu vecākiem, kolēģiem, vadību un atbalstošo personālu (VISC, b.g.).

Raksta mērķis: no zinātniskā viedokļa pamatot un skaidrot pirmsskolas izglītības pedagoģiskajā procesā ieviestos jēdzienus.

Pētījuma metodes: Teorētiskā: pedagoģiskās un psiholoģiskās literatūras analīze. Ministru Kabineta noteikumu [MKN] un Izglītības un Zinātnes ministrijas [IZM] Skola 2030 metodisko materiālu analīze. Empīriskā: pedagoģiskā procesa (mācīšana/mācīšanās un audzināšana/pašaudzināšana) novērojumi nepārtrauktā pedagoga darbā (50 gadi) un 35 gadu pedagoga darbā pirmsskolā.

Rakstā tiks lietotas trīs metodoloģiskās pieejas: kultūrvēsturiskā, darbības, teorijas un prakses vienības metodoloģiskā pieeja.

Pētījuma teorētiskais pamats: Sadarbības būtība *The theoretical basis of the study: The essence of collaboration*

Sadarbības jēdziena interpretācijas ir dažādas. Tajās ir ietverti: kopīgi mērķi visiem sadarbības procesā iesaistītajiem partneriem; kopīga darbība šo mērķu sasniegšanā; atbildības apzināšanās un līdztiesīga sadale starp subjektiem. Pasaules pedagoģiskajā (Froebel, 1885) un psiholoģiskajā (Vygotskij, 1997) literatūrā, ASV Hārvardas Universitātes Bērnu centra [HUBC] materiālos (HUCDC, 2022), Latvijā (Špona, 2022) tiek skaidrots, ka bērnu attīstību veicina sadarbībā. Aplūkosim psiholoģisko un pedagoģisko jēdziena *sadarbība* skaidrojumus.

Psiholoģiskajā formulējumā: “Sadarbība, kooperācija (*lat. cooperatio*) ir tāda cilvēku mijiedarbība, kurā notiek apvienošanās, izvirzot kopīgo mērķi, vai savstarpēja darbības saskaņošana. Salīdzinājumā ar konkurenci, sadarbības princips ir daudz universālāks, jo tajā iespējamas visas cilvēku attiecības, ieskaitot arī vienošanos starp konkurentiem” (Psiholoģijas vārdnīca, 1999).

Ausmas Šponas pedagoģiskajā skatījumā “sadarbība ir divu vai vairāku cilvēku darbība, lai sasniegtu kopīgu mērķi, saskaņoti mērķa sasniegšanas līdzekļi un darbības process, lai tuvinātu novērtējumu un pašnovērtējumu par sasniegtajiem rezultātiem. Sadarbība ir pieredzes pārņemšanas forma, iespēja atdarināt labākos paraugus un bagātināt pašpieredzi ar jaunām zināšanām, prasmēm un attieksmēm” (Špona, 2022). Sadarbība ir definēta kā sociālā vērtība un organizēts audzināšanas darbības process, kā personīgi nozīmīga vērtība un patstāvības sekmēšanas līdzeklis (Liduma, 2017).

Pirmsskolas periodā notiek kvalitatīvas pārmaiņas bērna biopsihosocio (bioloģiskā, mentālā/psihiskā (intelektuālā, emocionālā, griba) un sociālā) attīstībā (Špona, 2022). Sociālajā jomā pakāpeniski veidojas gan saskarsmes (verbālās un neverbālās), gan sadarbības prasmes. IZM Skola 2030 Pirmsskolas mācību saturā norādītajās sadarbības prasmēs ir ietvertas abas sociālās prasmes:

“Bērns izsaka savas domas un jūtas, mācās uzklaut citus un izteikt savu viedokli, sāk saprast, kā paša emocijas un uzvedība ietekmē citus, mācās risināt konfliktsituācijas, saskaņot darbības ar citiem, izturas pieklājīgi un rīkojas iejūtīgi, mācās veidot noturīgas attiecības un savu izpratni par draudzību, palīdz un pieņem palīdzību, mācās strādāt, izvirzot kopīgu mērķi, uzņemties un dalīt atbildību” (VISC, b.g.). Precizēsim, ka 21.gs. “saskarsme ir cilvēku sociālās dzīves forma, kas ietver vērtējošu līmeni (sociālā percepcija), informatīvi komunikatīvo (komunikācija) un interaktīvi mijiedarbojošos (attiecības) līmeni” (Špona, 2022). MKN ir aktualizēts A. Šponas apgalvojums, ka sadarbība skolā un ģimenē ir audzināšanas būtisks līdzeklis: “Viens no Pirmsskolas izglītības pedagoģiskā procesa nosacījumiem ir nodrošināt bērna, pedagogu un vecāku vai bērna likumisko pārstāvju sadarbību (Ministru kabinets, 2018, IV. 11.7.).

Aplūkojot MNK Pirmsskolas izglītības vadlīnijas (Ministru kabinets, 2018) un bērnam sasniedzamos rezultātus caurviju prasmēs IZM Skola 2030 metodiskajos materiālos izstrādāto kompetenču pieejā, ir jāatgādina A. Šponas skatījums par audzināšanas metodēm. Tā kā audzināšanas metodes ir definētas kā audzinātāja un audzēkņa sadarbības veidi, kuru laikā atbilstoši audzināšanas procesa gaitai (mērķis–līdzekļi–rezultāts) tiek veidotas audzēkņu pašregulācijas attieksmes (Špona, 2006), ir nepieciešams pieaugušā pozitīvs kontakts sadarbībā ar bērniem. Zīmīgi, ka šo atziņu 2022. gadā akcentē ASV HUBC pētnieki (HUCDC, 2022).

Sadarbības kā mācību metodes būtība ir sadarbības attiecību un prasmju veidošana, nevis sacensības starp grupām vai grupā. Šo metodi lieto mazās grupās bērniem ar dažādām spējām un zināšanām (Balsons, 1996, 81; Lakkala, & Óskarsdóttir, 2021). Sadarbība paredz mijiedarbību kā grupā, tā arī starp grupām. Mijiedarbība tiek raksturota kā noteiktu attiecību izstrādes process, cilvēku savstarpējā ietekme. A. Šponas (2022) skatījumā mijiedarbībā notiek savstarpēja uztveršana, vērtēšana un ietekmēšanās. Sociālā mijiedarbība ir interaktīva - savstarpēji saistīta ietekme, kad vienas puses izturēšanās ir stimulē otrs puses reakcijai un otrādi (piemēram, joks un smiekli vai pārmetums un taisnošanās), kas notiek divējādi: verbālā līmenī (mutiski); neverbālā līmenī (mīmika, skatiens, žesti, poza u. c.). To ir akcentējis gan M. Balsons (1996), gan R. Garleja (2006), gan I. Brūveris rakstā par iekļaujošo izglītību (Brūveris, 2017), gan Somijas un Īslandes pētījuma autori (Lakkala, & Óskarsdóttir, 2021), gan A. Špona (2022).

Tātad sadarbībā subjektu mijiedarbībā katrs partneris – bērns un skolotājs – bagātina savu pašpieredzi. Tā pakāpeniski pedagoģiskais process kļūst dialogisks, kurā tiek ievēroti vairāki nosacījumi: sadarbības centrā ir bērna vajadzības, sadarbība balstās uz savstarpēju cieņu. Skolotājs koordinē, konsultē, atbalsta, precizē uzdevumus, maina grupu sastāvu pēc bērniem zināmiem noteikumiem. Tā tiek nodrošinātas katra bērna aktuālas individuālas vajadzības pirmsskolā, bet skolotājs, atbilstīgi IZM Skola 2030 nostādņēm, no bērna vadītāja pozīcijas pāriet uz bērna attīstības virzītāja pozīciju (VISC, b.g.).

Jāpiezīmē, ka personāla uzdevums ir nodrošināt drošu bērnu darbību pirmsskolas izglītības iestādes drošā pedagoģiskā vidē visā dienas ritā, tomēr pedagoģiskā procesa novērojumi atsedz trūkumus pirmsskolas skolotāju darbā: vājas zināšanas par sadarbību ar bērniem, neiecietība pret bērnu darba lēnu tempu un neprasme atbalstīt bērnu patstāvīgu darbību. Tas prasa skaidrot vairākus pirmsskolas izglītības pedagoģiskajā procesā lietotos jēdzienus.

Jēdzienu: attieksmes, paradumi, ieradumi, tikumi, patstāvība skaidrojums
Explanation of concepts: attitudes, habits, customs, virtues, independence

Aplūkojot Skola 2030 formulējumus (VISC, b.g.) un MKN (Ministru kabinets, 2018) norādījumus par ‘vērtībām’ un ‘tikumiem’, ir svarīgi aktualizēt A. Šponas (2022) 21.gs. prasībām precizēto triju attieksmju veidu būtību un izpaušmi. Situatīvās attieksmes (1) veidošanās pamatā ir bērna emociju izraisīts īslaicīgs, epizodisks pārdzīvojums, kas rodas jebkurā pirmsskolas izglītības iestādes dienas rita situācijā. Tas izraisa pozitīvas, negatīvas vai neitrālas emocijas un izpaužas bērna situatīvā uzvedībā. Svarīgs ir bērnu pozitīvs pārdzīvojums, jo cilvēka fizioloģijā pozitīvas emocijas veicina attīstību un saudzē psihi, bet negatīvas emocijas bremzē attīstību un grauj psihi (Valtneris, 1996). Paradumu attieksmes (2) ir noturīgākas, to veidošanās pamatā ir sistemātiskos vingrinājumos nostiprinājušies paradumi. Paradumu attieksme bērnam veidojas pakāpeniski pirmsskolas izglītības pedagoģiskajā procesā. Jāpiezīmē, ka gan Eiropas izglītības, gan ASV HUBC pirmsskolas zinātniski metodiskajos materiālos ir uzsvērts fakts, ka bērni sākotnējo pieredzi iegūst, novērojot un atdarinot (*imitation*) pieaugušo paraugu (HUCDC, 2022). Pašregulācijas attieksmes (3) veidojas pakāpeniski un pēctecīgi jau no pirmsskolas vecuma. Pašregulācijas attieksmēs izpaužas refleksija (atspoguļošana apziņā), darbības pašanalīze un vērtējums. Tas ir pamats bērna pašvadītas mācīšanās prasmju izveidei pārejā no rotaļas pirmsskolā uz mācīšanos sākumskolā un pašattīstības sekmēšanā. Pašregulēta mācīšanās ir svarīgs komponents cilvēka lēmumu pieņemšanā, kas ir akcentēts gan IZM Skola 2030 metodiskajos materiālos (VISC, b.g.), gan MK dokumentos (Ministru kabinets, 2018, IV. 9.3.). Pedagoģiskajā skatījumā attieksmes izpaušmes uzvedībā tiek pašregulētas ar gribu. Tas nozīmē, ka bērniem ir nepieciešams apgūt prasmi abas (kā pozitīvas, tā negatīvas) izjūtas apvaldīt ar gribaspēku. Griba kā attieksmju veidošanās regulators ir pamatots A. Šponas audzināšanas/pašaudzināšanas teorijā (2022) un D. Vigules (2014) promocijas darbā. Kaut gan tagad IZM Skola 2030 metodiskajos materiālos un MKN tiek akcentēta mācīšanās prioritāte pirmsskolas izglītības procesā (galvenā mācību organizācijas forma ir rotaļnodarbība) (Ministru kabinets, 2018, IV. 11.2.), ir svarīgi atgādināt, ka pedagoģisko procesu veido divi savstarpēji saistīti un ietekmējoši komponenti 1) netiešas mācības (mācīšana/ mācīšanās)

rotaļnodarbībā un 2) audzināšana/pašaudzināšana visā dienas ritā, kas palīdz veidot bērna attieksmes pret sevi un citiem bērniem (Liduma, 2017).

Pedagoģiskajā un psiholoģiskajā literatūrā visā pasaulē ir norādīts, ka bērna vadošā darbība ir rotaļa (Froebel, 1885; Špona, 2022; HUCDC, 2022). Rotaļa ir darbības veids (Špona, 2022), tāpēc, no jēdzienu precizitātes viedokļa raugoties, dokumentos ieviesies jēdziens ‘rotaļdarbība’ ir diskutabls: “ietverot bērna brīvu un patstāvīgu rotaļāšanos un pedagoga mērķtiecīgi organizētu un netieši vadītu mācīšanos rotaļdarbībā” (Ministru kabinets, 2018, IV. 11.2.3.).

Jēdziena ‘ieradumi’ sakarā ir jāatgādina, ka pirms praksē lietojamu terminu aizstāšanas ar citiem, ir jābūt zināšanām par pedagoģijā izstrādātām teorijām. V. Zelmenis (2000) ir izskaidrojis jēdzienu paradumi (*habits*). Paradumu veidošanās pamatā ir cilvēka vajadzības izpildīt attiecīgas darbības noteiktā veidā, laikā un apstākļos. Ir derīgi paradumi (vajadzība ievērot kārtību, tīrību, precizitāti un laika terminus, izpildīt solīto) atvieglo cilvēka darbu un ikdienišķo dzīvi, jo dod iespēju veikt jaunus, sarežģītus uzdevumus; nevēlamie paradumi (piem., nekārtība) traucē darbu un rada sarežģījumus; kaitīgie paradumi grauj cilvēka veselību un mazina darbaspējas (Zelmenis, 2000).

Šī teorija dod iespēju kritiski izvērtēt IZM Skola 2030 metodiskos materiālus un MKN (Ministru kabinets, 2018) par jēdziena ‘paradumi’ aizstāšanas ar jēdzienu ‘ieradumi’ lietderību. Tāpēc salīdzināsim abu jēdzienu formulējumus. „Ieradums ir tas, kas sākotnēji ārēju apstākļu noteikts, balstoties uz individuālām sliekšmēm un gaumi, vairākkārt atkārtojoties, kļuvis ierasts, bieži nevēlams (ieradums ilgi gulēt, ieradums mānīties). Ieraža (ieradums) – ilgā laika posmā izveidojusies darbības, rīcības kārtība sadzīvē, darbā (*custom*)” (Skujiņa, et al., 2000, 64). Ieradums. Ierasts rīcības, izturēšanās veids; paradums; arī ieraža. Ilgi gulēt. Melot. Ieraduma spēks. Rīkoties pēc veca ieraduma (Gudļevska, 2013).

Jēdziena paradums formulējums ir: “Rīcības, darbības, izturēšanās veids, kas (kādam) kļuvis ierasts, arī automātisks: ieradums, pieradums. Labs paradums. Kaitīgs paradums. Darīt ko aiz paraduma, pa (vecam) paradumam, paraduma pēc. Rīkoties pretēji paradumam. Pastaigas kļuvušas par paradumu. Paradums celties agri” (Gudļevska, 2013).

Izvērtējot abu jēdzienu formulējumus, ir jāatzīst, ka tie gan ir skaidroti līdzīgi, bet tomēr pastāv atšķirības. Ieradumu veidošanos sākotnēji nosaka ārējie apstākļi, ietekmē iekšējie: sliekšmes un gaume. Tie reizēm ir stihiski izraisīti. Paradumu veidošanos nosaka cilvēka sistemātiski vingrinājumi un apzināti atkārtota mērķtiecīga darbība, kas pakāpeniski automatizējas un kļūst par vērtību. Tātad bērna mērķtiecīgā patstāvīgā darbībā pirmsskolā nostiprinās paradumi.

Audzinašanas/pašaudzināšanas teorijā ir pamatots, ka “attieksmes izpaužas personības vērtībās, ideālos, mērķos, sabiedrības uzvedības normu apguvē un ievērošanā” (Špona, 2022). Cilvēkam nozīmīgas vērtības ir akcentētas arī Eiropas parlamenta pētījumā par izglītības kopīgām vērtībām Eiropā (Veugelers, de Groot, & Stolk, 2017). MKN aktualizētās pirmsskolas izglītības saturā un procesā

iekļaujamās vērtības ir: dzīvība, cilvēka cieņa, brīvība, ģimene, darbs, daba, latviešu valoda un Latvijas valsts (Ministru kabinets, 2018, III. 5.). Audzināšanas un mācīšanās procesa vienotībā bērnam tiek veicināti tikumi: atbildība, drosmība, uzņēmība, mērķtiecība, centība, savaldība, mērenība, tolerance, laipnība, līdzietība, taisnīgums, solidaritāte (Ministru kabinets, 2018, III. 6.).

MKN ir norādīts, ka izglītības iestāde: veicina bērna izpratni par ģimeni kā īpaši aizsargājamu vērtību; vecāku lomu un savstarpējām attiecībām ģimenē; organizē pasākumus, kas sekmē šo vērtību nostiprināšanu, piemēram, Ģimenes diena, Mātes diena, Tēva diena (Ministru kabinets, 2016, III. 10.4.); stiprina izglītojamā (bērna) valstiskuma apziņu, veicina pilsonisko līdzdalību un iniciatīvu, lojalitāti un patriotismu, tajā skaitā organizējot valsts svētku un latviešu tautas tradicionālo svētku svinēšanu (Ministru kabinets, 2016, III. 10.5.). Pirmsskolas un ģimenes sadarbībā savijas tradicionālie svētki ar jauniem, piemēram, Valentīna dienai veido rotājumus, Sveču dienā kopā lej sveces, Lieldienās veido dekoru, Ziemassvētkos ievēro senās tradīcijas. Tā pirmsskolas izglītībā ar skolotāja atbalstu mērķtiecīgi organizētā rotaļnodarbībā netieši virzītā mācīšanās/mācīšanās procesā bērns iegūst zināšanas un veido prasmes, bet audzināšanā/pašaudzināšanā sekmē attieksmes. Tikai tāda abu pedagoģiskā procesa komponentu sabalansēta kārtība veicina bērna vērtību līdzsvaru.

Bērnu novērojumi pedagoga darbā (1986-2020) pirmsskolas izglītībā rāda, ka visas prasmes veidojas darbībā. Tas attiecināms arī uz sadarbības prasmēm, ko ir nepieciešams vingrināt, līdz tās kļūst par automatizētu darbību.

Prasmi mērķtiecīgi darboties un veicināt bērna pašvadītu (*self-guided*) un pašregulētu (*self-regulated*) mācīšanos ir nepieciešams no mazotnes, uzticot uzdevumu, kopīgi noskaidrot, kādam nolūkam domāts uzdevums, precīzi izvirzīt mērķi, prognozēt sasniedzamo rezultātu, veicināt prasmi brīvi izvēlēties darbības līdzekļus mērķa sasniegšanai, nodrošināt iespēju bērnam būt gan līderim, gan strādāt komandā; pozitīvi izvērtēt paveikto un atbalstīt centienus apgūt darbības pašvērtējuma prasmes.

Patstāvības būtība pirmsskolas pedagoģijā *The essence of independence in preschool pedagogy*

Pirmsskolas pedagoģijas vēstures izpēte atklāj, ka tas, ko IZM reformā Skola2030 cenšas ieviest kā jaunu un iepriekš nebijušu, ir izsenis pēctecīgi veidojies. Tas ir jēdziens 'patstāvība'. Vajadzību veicināt bērnu patstāvību par pamatprasību pirmsskolai izvirzīja pirmsskolas pedagoģijas pamatlicējs F. Frēbels (1782–1852), dibinot pirmo bērnudārzu Bādblankenburgā (Šveicē 1837). Tad tika norādīts, ka bērnudārzs ir sociāla mikrovide, kur bērnam augt un attīstīt savas spējas (Froebel, 1885). Bērna patstāvības ideju turpināja Marija Montesori (1870-1952), norādot, ka patstāvīgā darbībā bērnam ir svarīgi atrast un labot pieļautās kļūdas (Montesori, 1997). Šādu bērnu patstāvīgu darbību novēroju

Comenius projektā “Me and My Europe” Itālijā 2012. gadā (Liduma, 2014). 20.gs. bērnu patstāvību ir akcentējis Ž. Piažē, uzsverot faktu, ka bērna kognitīvā attīstība notiek individuālā patstāvīgā darbībā (Piaget, 1964).

Latvijā par bērna patstāvīgu darbību rakstīja A. Dauge 20.gs. sākumā, norādot, ka ir svarīgi ievērot 3 audzināšanas (humanitātes, aktivitātes jeb pašdarbības un individualizēšanas) principus (Dauge, 1928). A. Dauges atziņa tika aktualizēta audzināšanas/pašaudzināšanas (Špona, 2022) teorijā kā audzināšanas mērķa (brīvība, patstāvība, atbildība) komponents, bet 21. gs. skolas reformā tas tiek akcentēts vēlreiz (Ministru kabinets, 2018, III. 9.3.). Jāpiezīmē, ka Latvijā bērna patstāvīga darbība MKN bija akcentēta jau 2012. gadā (Ministru kabinets, 2012, III.10.) un padziļināta MK 2018. gada noteikumu redakcijā (Ministru kabinets, 2018, IV. 9.3.).

ASV bērnu patstāvības veicināšanu sociālā interakcijā 20. gs. akcentēja Dž. Djuijs (Dewey, 2007). Tagad to turpina HUBC (HUCDC, 2022), uzsverot, ka bērniem ir svarīga labvēlīga saskarsme ar pieaugušajiem. Bērna patstāvība ir aktuāla visur pasaulē. Ļ. Vigotska (Vygotskij, 1997) kognitīvās attīstības teorijā ir norādīts, ka bērna patstāvīgu darbību ir nepieciešams atbalstīt sociālā vidē pieaugušā un bērna sadarbībā. Abu (Ž.Piažē (1964) un Ļ.Vigotska (1997)) kognitīvisma un konstruktīvisma teorijas pārstāvju idejas ir aktualizētas 21. gadsimtā, ieviešot bērncentrēto pieeju pirmsskolas izglītībā.

Novērojumi pirmsskolas pedagoga praksē rāda, ka kvalitatīvam darbam skolotājam ir nepieciešamas: teorijas un prakses vienībā apgūtas kompetences (attieksme, zināšanas, prasmes, pašpieredze), lai sabalansētu zinātniskās atziņas ar bērnu aktuālām vajadzībām katrā pirmsskolas vecuma (1,5-3, 3-5, 5-6 gadi) grupā; zināšanas par teorijām bērna biopsihosocio attīstības sekmēšanai un bērncentrētās pieejas īstenošanu pirmsskolas izglītībā, līdztiesīgi sadalot uzdevumus starp subjektiem. Vidē, kur skolotājs un bērni darbojas saskaņoti, tiek sekmēta radoša sadarbība, bet skolotājs no vadītāja pakāpeniski kļūst par bērna attīstības virzītāju un atbalstītāju. Jāpiezīmē, ka šī raksta autore pati īstenoja sadarbību ar pirmsskolas vecuma bērniem (uz līdztiesības pamatiem) interešu izglītībā pirmsskolā (1986-2020), skaidroja pirmsskolas izglītības skolotājiem semināros no 20. gs. 90. gadiem un no 2002./2003. līdz 2021./2022. studiju gadam lekcijās studentiem, bet objektīvie (ārējie) apstākļi un subjektīvie (iekšējie) nosacījumi interesentiem traucēja sadarbību īstenot praksē.

Piederības izjūtas veicināšanai mūsdienu izglītībā aktuālas ir IZM Skola 2030 saturā ietvertās ‘pilsoniskās līdzdalības’ prasmes: “Bērns piedalās kārtības un drošības noteikumu izveidē un apspriešanā, saprot, pieņem un ievēro tos, mācās ievērot un cienīt citu vajadzības un tiesības, mācās darboties videi draudzīgi, izvēloties darbam atbilstošus resursus un saudzīgi tos lietojot” (VISC, b.g.). MKN (Ministru kabinets, 2016; 2018) ir akcentēta arī iesaistīšanās Latvijai nozīmīgos notikumos, kur bērns iegūst pilsoniskās piederības pieredzi. Saistoši pasākumi un svētki, tradīciju iepazīšana, sarunas par aktuāliem tematiem sekmēs

pozitīvas savstarpējās attiecības. Pirmsskolas skolotājam ir nepieciešamas zinātniskā, organizatoriskā, komunikatīvā, pedagoģiskā, konstruktīvā un metodiskā kompetences (Garleja, 2006; Šteinberga, 2013; Liduma, 2017), lai praksē varētu īstenot IZM reformas Skola 2030 prasības sekmēt pilsonisko līdzdalību.

Cilvēka attīstība notiek pēctecīgi, tāpēc īpaši nozīmīga ir divu mācīšanās motīvu veidu stimulēšana. Tie ir: izzinošie - skolēna aktivitāte ir vērsta uz izpētes objektu; sociālie - aktivitāte ir vērsta uz saziņu un sadarbību ar citiem cilvēkiem (Špona, 2006). Psihologu skatījumā motīvi ir paša cilvēka noteikti, tie ir dinamiska parādība, kas veidojas un pilnveidojas. Tos rosina darbības intereses, mērķi, emocijas, jēga (Šteinberga, 2013). Motivācijas pamatā ir piederības izjūta. Bērnam ir vajadzība būt pieņemtam ģimenē, skolā, sabiedrībā, piederēt references grupai, justies nozīmīgam sev un citiem. Vajadzība tikt atzītam bērnam veidojas jau no triju gadu vecuma (HUCDC, 2022).

MK noteikumos, Pirmsskolas izglītības vadlīnijās un IZM reformas Skola 2030 materiālos Latvijas izglītībā ir aktualizēts Eiropas asociācijas Children's Identity & Citizenship European Association [CiCea] izstrādātais saturs (Adam, Michalek, Ruibute, & Whitehouse, 2017) par pilsoniskuma izpratnes un pilsoniskās līdzdalības vērtību izglītībā un pieaugušo tālākizglītībā.

Secinājumi **Conclusion**

Jebkurai jaunai kategorijai ir konkrēta veidošanās vēsture, tāpēc, ieviešot citus jēdzienus, ir svarīgi Latvijas pedagoģijā iestrādāto jēdzienu zinātniskie pamati. Aktuāls ir jēdzienu sadarbība, paradumi, ieradumi, vērtības, tikumi, patstāvība, pilsoniskā līdzdalība korekts lietojums pirmsskolas izglītības iestādes pedagoģiskajā procesā.

Sadarbība 21.gs. ir gan kompetence, gan bērna patstāvības sekmēšanas līdzeklis. Pirmsskolas izglītības iestādē patstāvīgā rotaļā mērķtiecīgi organizētā rotaļnodarbībā bērns iegūst zināšanas, apgūst sadarbības un saskarsmes prasmes un veido attieksmes.

Skolotājam ir svarīgi ievērot teorijas un prakses vienības metodoloģisko pieeju, lai prasmīgi lietotu kompetences (attieksme, zināšanas, prasmes un pašpieredze) un pārietu no vadītāja pozīcijas uz bērna attīstības virzītāja un atbalstītāja pozīciju darbā ar pirmsskolas vecuma (1,5-3, 3-5, 5-6 gadi) bērniem.

MKN noteikumi ir obligāti, bet IZM reformas Skola 2030 metodiskie materiāli ir ieteicami katram, kas strādā pirmsskolas izglītībā. Aktuālas ir prasības pirmsskolā sekmēt bērnu sadarbības un pilsoniskās līdzdalības kompetences un organizēt skolotāju, vecāku un bērnu sadarbību pirmsskolā.

Kopsavilkums *Summary*

Any new category has a specific history of formation, therefore, when introducing other concepts, the scientific foundations of the concepts incorporated in Latvian pedagogy are important. The correct use of the concepts customs, habits, values, civic participation in the pedagogical process of the preschool educational institution is relevant. Collaboration in the 21st century is both a competence and a means of promoting the development of the child's independence. During independent play, a child learns collaboration and communication skills and develops attitudes in a purposefully organized play lesson. It is important for the teacher to follow the methodological approach of the theory and practice unit in working with children, in order to move from the position of leader to the position of promoter and supporter of the child's development. The regulations developed by the Cabinet of Ministers are mandatory for every employee working in a preschool educational institution. The requirements for teachers to promote children's collaboration and civic participation competences and to organize the collaboration of teachers, parents and children are essential.

References

- Adam, S., Michalek, J., Ruibute, L., & Whitehouse, S. (2017). *Guidelines for Citizenship Education in School Identities and European Citizenship*. UK: London Metropolitan University. Retrieved from: <https://ec.europa.eu/programmes/erasmus-plus/project-result-content/8a912e94-4676-4068-8ad5-b3e1b186379d/GUIDELINES%20FOR%20SCHOOLS%20Identities%20and%20European%20Citizenship.pdf>
- Balsons, M. (1996). *Kā izprast klases uzvedību*. Lielvārde: Lievārds.
- Breslavs, G. (red.). (1999). *Psiholoģijas vārdnīca*. Rīga: Mācību grāmata.
- Brūveris, I. (2017). Students with behaviour difficulties and Latvian teacher beliefs about them: Globalisation or glocalisation in action? *Society. Integration. Education. Proceedings of the International Scientific Conference*. (3). Rezekne: RTA, 17-28. Retrieved from: <http://journals.ru.lv/index.php/SIE/article/view/2242/2362>
- Dauge, A. (1928). *Audzinašanas ideāls un īstenība*. Cēsis, Rīga: O. Jēpe.
- Dewey, J. (2007). *Experience and Education*. New York: A Touchstone book. Retrieved from: <https://www.simonandschuster.com/c/free-ebook-offer>
- Froebel, F. (1885). *The education of Man*. Transl. by. J. Jarvis. New York: A. Lovell & Co. Retrieved from: <https://www.froebelweb.org/web7000.html>
- Garleja, R. (2006). *Cilvēkpotenciāls sociālā vidē*. Rīga: Raka.
- Gudļevska, D. (red.) (2013). *Latviešu valodas vārdnīca*. Rīga: Avots.
- HUCDC. (2022). *Stress and Resilience: How Toxic Stress Affects Us, and What We Can Do About It*. Retrieved from: <http://www.developingchild.net/>
- Lakkala, S., & Óskarsdóttir, E. (2021). Enhancing Sustainable Inclusive Education. *Sustainability*, 13(14). DOI: <https://doi.org/10.3390/su13147798>

- Liduma, A. (2014). Citizenship promotion opportunities: reflections on the Comenius project 'Me and My Europe: International challenges of Modern Pre-primary Education', in P. Cunningham & N. Fretwell (Ed.). *Innovative practice and Research trends in Identity, Citizenship and Education* (280-285). London: LMU.
- Liduma, A. (2017). Collaboration in the kindergarten as pedagogical means for developing positive attitudes. In O. Beuchling, R. Golz & E. Hasebe-Ludt (Ed.). *International Dialogues on Education*, 4(1). 100-106. Retrieved from: <https://idejournal.org/index.php/ide/article/download/118/116/233>
- Ministru kabinets. (2018). *Noteikumi par valsts pirmsskolas izglītības vadlīnijām un pirmsskolas izglītības programmu paraugiem*. Ministru kabineta noteikumi [MKN] Nr. 716, pieņemti 21.11.2018. Latvijas Vēstnesis, 30.11.2018. Nr. 236. Pieejams: <https://likumi.lv/ta/id/303371-noteikumi-par-valsts-pirmsskolas-izglitibas-vadlinijam-un-pirmsskolas-izglitibas-programmu-paraugiem>
- Ministru kabinets. (2016). *Izglītojamo audzināšanas vadlīnijas un informācijas, mācību līdzekļu, materiālu un mācību un audzināšanas metožu izvērtēšanas kārtība*. Ministru kabineta noteikumi Nr. 480, pieņemti 15.07.2016. Latvijas Vēstnesis, 25.07.2016. Nr. 141. Pieejams: <https://likumi.lv/ta/id/283735-izglitojamo-audzinasanas-vadlinijas-un-informacijas-macibu-lidzeklu-materialu-un-macibu-un-audzinasanas-metozu-izvertesanas>
- Ministru kabinets. (2012). *Noteikumi par valsts pirmsskolas izglītības vadlīnijām*. Ministru kabineta noteikumi Nr. 533, pieņemti 31.07.2012. Latvijas Vēstnesis, 16.08.2012. Nr. 129. Pieejams: <https://likumi.lv/ta/id/250854-noteikumi-par-valsts-pirmsskolas-izglitibas-vadlinijam>
- Montessori, M. (1997). *Razum rebenka*. Moskva: Graal.
- Piaget, J. (1964). Cognitive development in children: Piaget development and learning. *Journal of research in Science Teaching*, 2, 176-186. DOI: <https://doi.org/10.1002/tea.3660020306>
- Skujņa, V., Beļickis, I., Blūma, D., Koķe, T., & Blonkena, A. (2000). *Pedagoģijas terminu skaidrojošā vārdnīca*. Rīga: Zvaigzne.
- Špona, A. (2006). *Audzinasanas process teorijā un praksē*. Rīga: Raka.
- Špona, A. (2022). *Pedagoģija. Pārdomas. Atziņas*. Rīga: RaKa.
- Šteinberga, A. (2013). *Pedagoģiskā psiholoģija*. Rīga: RaKa.
- Valtneris, A. (1996). *Cilvēka fizioloģija. Rokasgrāmata*. Rīga: Zvaigzne ABC.
- Veugelers, W., de Groot, I., & Stolk, V. (2017). *Research for CULT Committee – Teaching Common Values in Europe*. European Parliament, Policy Department for Structural and Cohesion Policies, Brussels. Retrieved from: <https://www.nemo.org/news/article/nemo/research-for-cult-committee-teaching-common-values-in-europe.html>
- Vigule, D. (2014). *Pirmsskolēna gribas īpašību veidošanās darbībā ar rotaļlietām*. Promocijas darbs. Rīga: RPIVA.
- VISC. (b.g.). *Pirmsskolas mācību programma. Skola 2030*. Pieejams: <https://mape.skola2030.lv/materials/D94tbasDR8wfsgapbtPhFQ>
- Vygotskij, L. S. (1997). *Lekcii po psihologii*. Sojuz. Sankt-Peterburg.
- Zelmenis, V. (2000). *Pedagoģijas pamati*. Rīga: RaKa.

PĀRMAIŅU LĪDERĪBAS AKTUALITĀTE KOMPETENČU PIEEJAS KONTEKSTĀ PIRMSSKOLĀ

The Relevance of Transformational Leadership in the Context of the Competence Approach in Pre-School

Rasa Pakalniņa

Liepāja University Faculty of Pedagogy and Social Work, Latvia

Maija Ročāne

Liepāja University Faculty of Pedagogy and Social Work, Latvia

Pāvels Jurs

Liepāja University Institute of Educational Science, Latvia

Abstract. *In the context of the ongoing changes in the education system of Latvia, the principles of learning approach in pre-school education are based on the competence-based approach, as well as the development of transformative skills. To successfully implement change, the need to develop teachers' creativity, entrepreneurship, decision-making, organisational skills, teamwork, cooperation, sociability, risk-taking and assessment, openness to innovation, reflective thinking and leadership skills becomes essential. Today, it is important for every teacher to strive for professional development and to achieve individual and collective goals. Leadership skills include the ability to motivate others, good communication skills, positive thinking, delegation of responsibilities, creativity, reliability, responsibility, time management, influence, and decisiveness. Change can also be difficult to be accepted and even can become a reason for leaving a teaching job. Leaders who can accept contemporary challenges, communicate effectively with others, and facilitate the development of leadership skills in colleagues become important in every educational institution. The aim of this publication is to research and evaluate the scientific literature on the relevance of transformational leadership, highlighting the need for developing each teacher's leadership skills.*

Keywords: *change, leadership, leadership skills, openness to change, teacher, transformational leadership.*

Ievads

Introduction

Latvijas Republikas izglītības sistēmā noritošo pārmaiņu kontekstā arī pirmsskolas izglītībā aktualizējas jaunās vadlīnijās iestrādāti mācību satura apguves pieejas principi, kas balstās integrētā mācību procesā visas dienas garumā un caurviju prasmju attīstīšanā.

Lai produktīvāk un mērķtiecīgāk īstenotu izglītības satura pārmaiņas, domājot par bērna kognitīvo un metakognitīvo attīstību izziņas procesā, nozīmīga kļūst ikkatra pedagoga profesionālā meistarība, personības un rakstura iezīmes, paradigmas maiņa, kā arī radošuma, uzņēmējdarbības, lēmumu pieņemšanas, organizatorisko prasmju, komandas darba, sadarbības, sabiedriskuma, riska uzņemšanās, reflektīvās domāšanas un līderības prasmju pilnveidošanas nepieciešamība. Mūsdienās ikvienam pedagogam ir svarīgi virzīties uz savu profesionālo pilnveidi, kā arī uz individuālo un kopīgi izvirzīto mērķu sasniegšanu. Līderības prasmes ietver spēju motivēt citus, labas komunikācijas prasmes, pozitīvu domāšanu, pienākumu deleģēšanu, radošumu, uzticamību, atbildību, laika plānošanu un izlēmību. Tādējādi aktualizējas arī transformatīvo kompetenču nozīmīgums (angļu: *transformative competence*), kuras raksturo atvērtība pārmaiņām un spēja pielāgoties dažādām dzīves situācijām/uzdevumiem. Pārmaiņas var būt arī grūti pieņemamas un tās var kļūt arī par iemeslu pedagoga darba pamešanai. Tādēļ ikvienā izglītības iestādē nozīmīga kļūst skolotāju līderības prasmju pilnveidošana, jo ikkatra izvēle, rīcība, diskusija un mijiedarbība atspoguļo to, kā mēs vadām savu dzīvi. Ar savu rīcību mēs apzināti vai neapzināti ietekmējam savu apkārtējo pasauli (Montuori & Donnelly, 2018).

Mūsdienu skolotājam ir nozīmīgi kļūt par profesionāli, kurš spēj pieņemt izaicinājumus, efektīvi komunicēt ar pārējiem un sekmēt līderības prasmju pilnveidi kolēģos un skolēnos. Bieži praksē līderības prasmes izglītības nozarē strādājošajiem kā nepieciešamība tiek aktualizēta tieši izglītības iestāžu vadītājiem un vadības komandai, piemēram, iestāžu direktoriem, mācību pārziņiem un citiem izglītības iestādes administrācijas darbiniekiem. Taču tieši skolotāju profesionalitāte un viņiem piemītošās prasmes nosaka skolēnu panākumus mācībās izglītības iestādē, ārpus tās un arī viņu turpmākajā dzīvē. Efektīvi skolotāji kļūst par skolēnu līderiem un viņi spēj labāk virzīt skolēnus uz panākumiem mācībās (Langdon Warren, 2021a). Pedagogu kā pārmaiņu virzītāju raksturo atvērtība pārmaiņām un gatavība mācīties (Dudareva, 2018, 208).

Skolotājiem – līderiem piemīt izcilas klases vadības prasmes, un viņi spēj labāk virzīt skolēnus uz panākumiem mācībās. Skolotāju līderības prasmes tiek attīstītas tieši klasē, strādājot ar skolēniem, savukārt skolēnu mācību sasniegumi ir cieši saistīti ar skolotāju līderības prasmēm (Bolkan & Goodboy, 2009, 11). Langdon Warren (2021b) akcentē, ka skolēniem, kurus māca skolotāji līderi, ir lielāka varbūtība gūt panākumus mācībās, kā arī citās izaugsmes jomās, salīdzinot ar skolēniem, kurus māca skolotāji, kuriem trūkst līderības prasmju. Tādējādi publikācijas mērķis ir izpētīt un izvērtēt zinātnisko literatūru par pārmaiņu līderības (angļu: *transformational leadership*) aktualitāti, akcentējot pedagoga līderības prasmju attīstīšanas nepieciešamību, kā arī veikt empīrisko pētījumu pirmsskolas pedagogu līderības prasmju aktualitātes novērtēšanai kompetenču pieejas kontekstā.

Skolotāju līderības prasmju attīstīšanas priekšnoteikumi un pārmaiņu līderība

Prerequisites for developing teachers' leadership skills and transformational leadership

Līderis apzinās ne tikai savas, bet arī apzinās un respektē citu cilvēku vērtības, izvirza mērķus, spēj iedvesmot un motivēt citus izvirzīto mērķu sasniegšanai (Vīksna, 1999). “Par līderiem kļūst skolotāji, kas mērķtiecīgi un meistarīgi ievieš inovācijas savā praksē un ir apguvuši nepieciešamās vadības prasmes. Viņi var strādāt kā konsultanti – sniegt personalizētu atbalstu, vadīt skolotāju sadarbības grupas, savstarpēji vēroto stundu analīzi u.c.” (LU Starpnozaru izglītības inovāciju centrs, 2018). Turlais (2020) promocijas darbā “*Transformatīvās līderības ietekme radošumu veicinoša organizācijas klimata pilnveidošanai*” uzsver, ka “nav iespējams atrast ideālu līderības stilu”, akcentējot, ka “līderības stils ir daudzu faktoru sajaukums” (Turlais, 2020, 19). Arī Juneja (2015) uzsver nepieciešamību skolotāju nepārtrauktai profesionālajai pilnveidei, kā būtisku priekšnoteikumu līderības prasmju attīstīšanai minot arī nepieciešamību inovācijām ieviešanu un atvērtību pārmaiņām. Langdon Warren (2021b) rakstā “*Skolotāju līderība sākas ar pašlīderību*” (angļu: *Teacher Leadership Begins with Self-Leadership*) atklāj, ka, lai attīstītu līderības prasmes, skolotājam ir jāspēj efektīvi un atbildīgi vadīt savu darbu, pirms viņš vada citus gan klasē, gan ārpus tās. Pašlīderības prasmes sekmē savas personīgās rīcības nozīmes, stipro pušu, personiskās izaugsmes, kā arī savas domāšanas un jūtu apzināšanos, konkrētu mērķu sasniegšanā un sevis pieņemšanu. Pašlīderības prasmju attīstīšana ir nozīmīga ne tikai darba rezultātu uzlabošanai, bet arī personības pilnveidei un dzīves bagātināšanai (Langdon Warren, 2021b).

Virzoties uz kopēju mērķu sasniegšanu izglītības iestādē, nozīmīga kļūst ne tikai tās tradīciju un vērtību pieņemšana un stiprināšana, bet arī atvērtība inovācijām. Lai kļūtu par līderi, svarīgas kļūst komunikācijas un analītiskās domāšanas, problēmu risināšanas, kritiskās un radošās domāšanas, laika plānošanas, lēmumu pieņemšanas, u.c. prasmes. Tieši darbinieku līderības prasmes lielā mērā nosaka visas izglītības iestādes atvērtību pārmaiņām, piemēram, uz kompetenču apguvi virzīta mācību procesa īstenošanu. Līderības prasmju nepieciešamība īpaši aktuāla kļūst reformu īstenošanas procesā (Xu & Patmor, 2012, 253). Jebkura projekta/inovācijas aprobēšanā nozīmīgi ir ne tikai papildināt zināšanas un izpratni par jaunām pieejām un metodēm, bet arī ir būtiski šos procesus īstenot labi organizētā un disciplinētā veidā, kas ietver jaunu mērķu formulēšanu un kopīgu virzību uz to, īstenojot zinātniski pamatotas un inovatīvas metodes, reflektējot par ieguvumiem un pilnveides iespējām (Kapur, 2022).

Skolotāju līderi raksturo viņam piemītošā atbildība par kopīgu mērķu sasniegšanu. Viņiem ir svarīgs komandas darbs, atbalstot ikviena komandas biedra iniciatīvu (Bolkan & Goodboy, 2009). Skolotāju izvirzītie individuālie

mērķi var būt kardināli atšķirīgi no izglītības iestādē kopīgi izvirzītajiem mērķiem. Pretrunas mērķu izvirzīšanā var ievērojami apgrūtināt kopīgu mērķu sasniegšanu (Stiggins, Arter, Chappuis, & Chappuis, 2002), kas akcentē mērķu apzināšanās nepieciešamību. Ikvienam indivīdam ir nozīmīgi apzināties vīziju, kuru viņš rada ar savām domām, uzskatiem, rīcību un mijiedarbību, un salīdzināt to ar tādu pasauli, kuru viņš vēlētos radīt, un ar to, kāds cilvēks viņš vēlētos būt (Montuori & Donnelly, 2018, 3). Līderības neatņemama sastāvdaļa ir lēmumu pieņemšanas process profesionālajā darbā. Skolotājs ikdienā pieņem lēmumus par mācīšanas un mācīšanās metodēm, mācību materiāliem, stratēģijām, mācību vidi, u.c. Nozīmīga ir arī vispiemērotākās un vērtīgākās alternatīvas izvēle (Kapur, 2022). Ikvienam skolotājam ir nozīmīgi apzināties, ka viņš “rada un vada, pārveidojot sevi un pasauli” (Montuori & Donnelly, 2018, 3).

Mūsdienās aktuāla kļūst transformatīvā līderība, kas ir virzīta uz pārmaiņām. Pārmaiņu līderība lielā mērā attiecas arī uz skolotāju, kas palīdz skolēniem augt un mainīties, lai sasniegtu vēlamos mērķus, jo līderība ir nepārtraukts un dinamisks process, kurā viena vai vairākas personas mijiedarbojas viena ar otru, virzoties uz mērķi, risinot problēmsituācijas un pielāgojoties dažādiem apstākļiem (Mulovhedzi & Joubert, 2022). “Jauns mācību saturs, jaunas pieejas skolēnu rezultātu vērtēšanā un pedagoģisko uzskatu maiņa ir daži inovāciju piemēri skolu kontekstā. Izmaiņas skolas kopienas dalībnieku uzskatos un izpratnē ir pamats, lai sasniegtu ilgstošas pārmaiņas izglītībā” (Čakāne & Butkēviča, 2018, 233). Pārmaiņu līderība savā būtībā ir līdzdalības process, kurā notiek radoša sadarbība un pārveidošanās. Tās pamatprincipi akcentē ikviena ieguldījumu un līdzdalību. Pārmaiņu līderība var ietvert gan ievērojamas, gan šķietami nebūtiskas darbības ar “*tauriņa efekta*” potenciālu: nelielas darbības, žesti, pat nejauši vai neapdomīgi pateikts vārds var radīt lielu ietekmi gan personīgajā dzīvē, gan organizācijā. Pārmaiņu līderība izpaužas uzņemoties atbildību, izvēlē un radošumā, taču īpaši nozīmīgi ir saskatīt iespējas pozitīvām pārmaiņām (Montuori & Donnelly, 2018).

Var secināt, ka kompetenču pieejas kontekstā nozīmīga kļūst skolotāju atvērtība pārmaiņām un inovāciju ieviešanai. Tādējādi aktuāla kļūst skolotāju pārmaiņu līderība- tāds klases darba vadības veids, kas palīdz pašam skolotājam un skolēniem augt un mainīties, radoši sadarbojoties un pārveidojoties, lai sasniegtu vēlamos mērķus, sekmējot ikviena ieguldījumu un līdzdalību, kā arī pozitīvas pārmaiņas gan mācību procesā iesaistīto indivīdu personīgajā dzīvē, gan arī visā organizācijā kopumā.

Pirmsskolas pedagogu līderības prasmju empīriskā analīze kompetenču *Empirical analysis of preschool teachers' leadership skills*

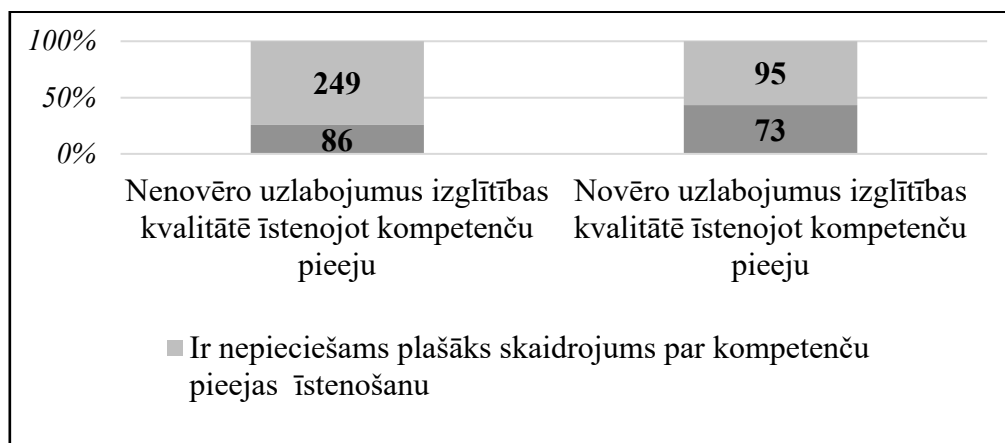
Metodoloģija *Methodology*

Lai veiktu pirmsskolas pedagogu līderības prasmju empīrisko analīzi kompetenču pieejas kontekstā, tika īstenota pirmsskolas skolotāju aptauja, jo „aptaujas specifiska pazīme ir iespēja rakstiski uzdot arī lielāku skaitu jautājumu un saņemt atbildes no lielāka skaita pētāmo” (Kamerāde, Mārtinsone, & Pipere, 2016, 215). Aptauja tika īstenota tiešsaistē. Aptaujas datu pamatotībai tika īstenota datu statistiskā apstrāde ar prognozējošās analītikas un statistiskās analīzes programmatūras pakotni (IBM 81 SPSS v.22 Rezultāti tiek pieņemti par statistiski nozīmīgiem, ja $p(\text{statistiskā ticamība}) < 0.05$). Aptauja norisinājās no 2023.gada 1.janvārim līdz 2023.gada 30.janvārim. Aptaujā iesaistījās 510 respondenti no dažādiem Latvijas reģioniem (Kurzemes, Vidzemes, Zemgales, Rīgas un Latgales). Visi respondenti bija pirmsskolas skolotāji.

Rezultāti *Results*

169 (33%) no visiem 510 respondentiem apgalvoja, ka ir novērojuši uzlabojumus izglītības kvalitātē, īstenojot kompetenču pieeju. 245 (48%) respondenti apgalvoja, ka kompetenču pieejas principi viņiem ir saprotami. 199 (39%) respondenti apgalvoja, ka ir domājuši par darbavietas maiņu jaunās kompetenču pieejas dēļ. Respondenti tika lūgti arī novērtēt savas līderības prasmes no “1” (ļoti sliktas) līdz “10” (izcilas). Respondenti savas līderības prasmes no “1” līdz “10” mediāni novērtēja ar “7” (IQR 1).

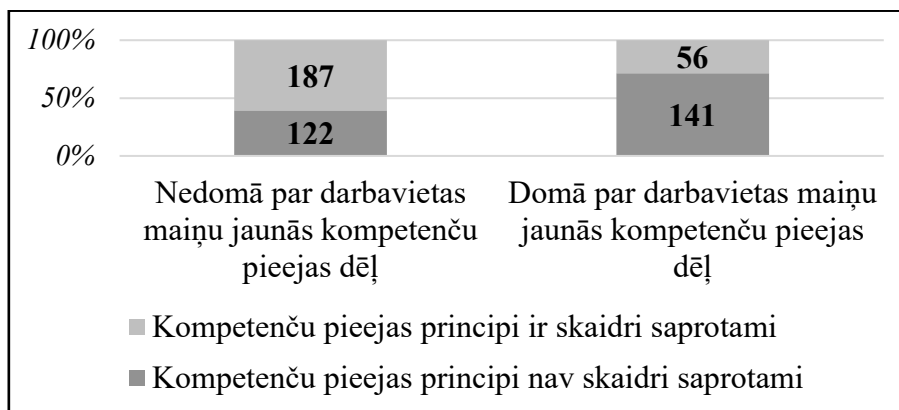
Kompetenču pieeja akcentē nepieciešamību pārmaiņām, tai skaitā mācību pieejas maiņai. Būtiska ir arī pašrefleksija un sava mācīšanas stila nemitīga pilnveide (Lieberman, Friedrich, 2010). Veicot Pīrsona Hī kvadrāta testu tika atklāts, ka respondenti, kuri nenovēro uzlabojumus izglītības kvalitātē, īstenojot kompetenču pieeju, biežāk apgalvo, ka ir nepieciešams plašāks skaidrojums par kompetenču pieejas īstenošanu ($p < 0.001$) (skat. 1. attēlu).



1.attēls. Saikne starp uzlabojumiem izglītības kvalitātē, īstenojot kompetenču pieeju un vēlmi pēc plašākiem skaidrojumiem par kompetenču pieejas īstenošanu (N=510)
(autoru veidots)

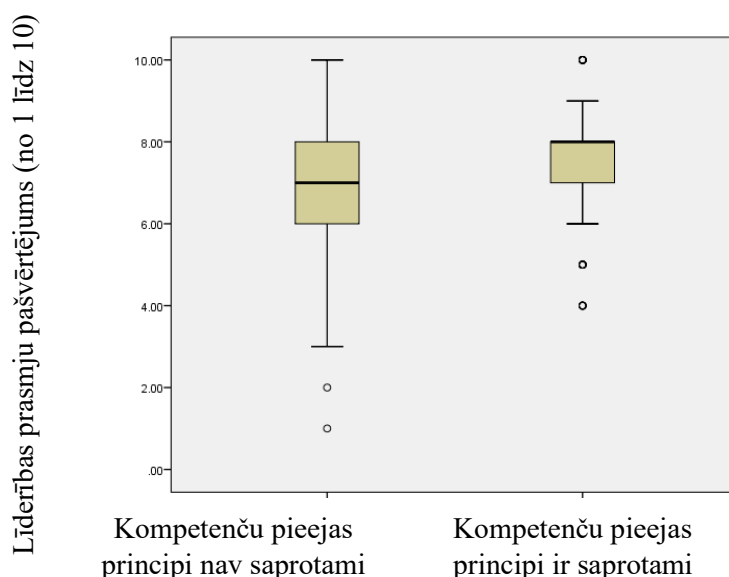
Figure 1 Relationship between improvements in the quality of education through the competences approach and the desire for more explanation of the competences approach (N=510) (made by authors)

Tieši izmaiņas skolotāju uzskatos un izpratnē ir priekšnoteikums ilgstošu pārmaiņu izglītībā sasniegšanai (Čakāne & Butkēviča, 2018, 233). TALIS (2018) pētījums atklāj, ka apmēram 13% Latvijas skolotāju darba stāžs ir 1-5 gadi, taču tieši jaunie skolotāji ar iegūtu pedagoģisko pieredzi bieži pamet darbu skolā par ko liecina fakts, ka skolotāji ar stāžu no 6 līdz 10 gadiem skolās ir tikai 6,5% (TALIS, 2018). Veicot Manna-Vitnija U testu var secināt, ka respondenti, kuri apgalvo, ka nav domājuši par darbavietas maiņu jaunās kompetenču pieejas dēļ, savas līderības prasmes mediāni vērtē augstāk (8, IQR 1) nekā respondenti, kuri apgalvo ka par darbavietas maiņu ir domājuši jaunās kompetenču pieejas dēļ (7, IQR 2, $p=0.009$). Pīrsona Hī kvadrāta tests akcentē, ka respondenti, kuri nenovēro uzlabojumus izglītības kvalitātē, īstenojot kompetenču pieeju, biežāk apgalvo, ka domā par darbavietas maiņu jaunās kompetenču pieejas dēļ ($p<0.001$), kā arī respondenti, kuri domā par darbavietas maiņu jaunās kompetenču pieejas dēļ, biežāk apgalvo, ka kompetenču pieejas principi nav skaidri saprotami ($p<0.001$) (skat. 2. attēlu).



2.attēls. Saikne starp un darbavietas maiņas apsvēršanu jaunās kompetenču pieejas dēļ un apgalvojumu, ka kompetenču pieejas principi nav skaidri saprotami (N=510) (autoru veidots)

Figure 2 Relationship between considering and changing jobs because of the new competences approach and saying that the principles of the competences approach are not clearly understood (N=510) (made by authors)



3.attēls. Atšķirības līderības prasmi pašvērtējumā respondentiem kuri apgalvo, ka kompetenču pieejas principi ir saprotami un respondentiem, kuriem kompetenču pieejas principi nav saprotami (N=510) (autoru veidots)

Figure 3 Differences in self-assessed leadership skills between respondents who say they understand the principles of the competence approach and respondents who do not understand the principles of the competence approach (N=510) (made by authors)

Ikvienam skolotājam ir nepieciešamas līderības prasmes, kuras sekmē pozitīvas pārmaiņas profesionālajā darbā (Montuori & Donnelly, 2018, 3). Veicot Manna-Vitnija U testu atklājās, ka respondenti, kuri novēro uzlabojumus izglītības kvalitātē, īstenojot kompetenču pieeju, savas līderības prasmes vērtē augstāk (8, IQR 1) nekā respondenti, kuri uzlabojumus nenovēro (Mediāna 7 IQR 2, $p < 0.001$). Savukārt respondenti, kuri apgalvo, ka kompetenču pieejas principi

ir saprotami, savas līderības prasmes mediāni vērtē augstāk (8, IQR 1) nekā respondenti, kuri apgalvo ka kompetenču pieejas principi viņiem nav saprotami (7, IQR 2, $p < 0.001$) (skat.3.attēlu).

Tādējādi var secināt, ka aptaujas rezultātu analīze akcentē saikni starp skolotāja līderības prasmju pašvērtējumu, uzlabojumiem izglītības kvalitātē kompetenču pieejas īstenošanas kontekstā un izpratni par kompetenču pieejas teorētiskajiem un praktiskajiem aspektiem.

Secinājumi **Conclusions**

Skolotāju līderības prasmes sekmē ne tikai skolēnu panākumus mācībās un citās izaugsmes jomās, bet arī visas izglītības iestādes atvērtību pārmaiņām, piemēram, uz kompetenču apguvi virzīta mācību procesa īstenošanu, jo ikvienam indivīdam ir nozīmīgi apzināties vīziju, savas domas, uzskatus, rīcību, lēmumu pieņemšanu profesionālajā darbā un mijiedarbību izglītības iestādes izaugsmes kontekstā.

Mūsdienu izglītībā aktuālas kļūst transformatīvās kompetences, kuras raksturo atvērtība pārmaiņām un spēja pielāgoties dažādām dzīves situācijām/uzdevumiem, piemēram, jaunu projektu un inovāciju īstenošanai procesā izglītības iestādē. Līderības prasmes nodrošina inovāciju īstenošanu labi organizētā un disciplinētā veidā, kas ietver mērķu formulēšanu un kopīgu virzību uz to, pielietojot zinātniski pamatotas un inovatīvas metodes, reflektējot par ieguvumiem un pilnveides iespējām.

Skolotāju līderības prasmju attīstīšanai nozīmīga kļūst pašrefleksija, aktīva sadarbība ar kolēģiem, sava mācīšanas stila nemitīga pilnveide, konfliktu risināšanas prasmes, inovāciju ieviešana un atvērtība pārmaiņām.

Pārmaiņu līderība ir līdzdalības process, kurā notiek radoša sadarbība un pārveidošanās – pozitīvas pārmaiņas skolotājā un skolēnos, kas norisinās radošā sadarbībā, pārveidojoties, lai sasniegtu vēlamos mērķus, sekmējot ikviena ieguldījumu un līdzdalību, kā arī pozitīvas pārmaiņas gan mācību procesā iesaistīto indivīdu personīgajā dzīvē, gan arī visā organizācijā kopumā, akcentējot ikviena ieguldījumu un līdzdalību.

Empīrisko datu analīze atklāj:

- ka, respondenti, kuri nenovēro uzlabojumus izglītības kvalitātē, īstenojot kompetenču pieeju, biežāk apgalvo, ka domā par darbavietas maiņu jaunās kompetenču pieejas dēļ. Savukārt respondenti, kuri domā par darbavietas maiņu jaunās kompetenču pieejas dēļ, biežāk apgalvo, ka kompetenču pieejas principi nav skaidri saprotami, aktualizējot nepieciešamību zināšanu un izpratnes par pārmaiņām izglītības sistēmā pilnveides nepieciešamību.

- saikni starp skolotāja līderības prasmju pašvērtējumu, uzlabojumiem izglītības kvalitātē kompetenču pieejas īstenošanas kontekstā un izpratni par kompetenču pieejas teorētiskajiem un praktiskajiem aspektiem. Tādējādi var secināt, ka skolotāju līderības prasmes, izmaiņas skolotāju uzskatos un izpratnē, ir būtisks priekšnoteikums uz organizācijas izaugsmi virzītu pārmaiņu sasniegšanai.

Kopsavilkums *Summary*

Leadership is a continuous and dynamic process in which one or more individuals interact with each other to move towards a goal, solve problems and adapt to different circumstances. Teachers' leadership skills contribute not only to students' success in learning and other areas of growth, but also to the openness of the whole educational institution to change, e.g. the implementation of competency-based learning. Transformative competences, characterised by openness to change and adaptability to different life situations/tasks, such as the implementation of new projects and innovations in an educational institution, are becoming relevant in education today, as well as the necessity for each individual to be aware of the vision, thoughts, beliefs, actions, professional decision-making and interactions in the context of the growth of the educational institution.

Leadership is a continuous and dynamic process in which one or more individuals interact with each other to move towards a goal, solve a problem and adapt to different circumstances

Leadership competences ensure that innovation is implemented in a well-organised and disciplined way, involving the formulation of goals and working towards them together, using scientific and innovative methods, reflecting on the benefits and opportunities for improvement.

Self-reflection, active collaboration with colleagues, continuous improvement of teaching style, conflict resolution skills, innovation and openness to change become important for developing teachers' leadership skills. Developing self-leadership skills lead to the improvement of the performance, personal development and life enrichment. Self-leadership skills contribute to the awareness of one's own strengths, personal growth, thinking and feeling, to the achievement of specific goals and to self-acceptance. While transformational leadership leads to the growth and change in order to achieve desired goals. Transformational leadership is a participatory process of creative collaboration and transformation. Its guiding principles emphasise the contribution and participation of everyone.

Analysis of empirical data reveals that

- pre-school teachers who do not observe improvements in the quality of education as a result of the competence based approach are more often

say that they need more explanation about the implementation of the competence based approach and are more likely to think about changing their job;

- pre-school teachers who perceive an improvement in the quality of education as a result of the competence based approach rate their leadership skills higher;
- respondents who have not thought about changing jobs because of the new competence based approach rate their leadership skills higher.

Literatūras saraksts

References

- Bolkan, S., & Goodboy, A. (2009). Transformation leadership in the classroom: Fostering student learning, student participation, and teacher credibility. *Journal of Instructional Psychology*, 36(4), 296-306.
- Čakāne, L., & Butkēviča, A. (2018). Inovāciju pārnese skolā un starp skolām. *Mācīšanās lietpratībai*. (232-250). Rīga: LU Akadēmiskais apgāds. DOI: 10.22364/ml.2018.10
- Dudareva, I. (2018). Informācijas tehnoloģijas mācīšanās iedziļinoties atbalstam. *Mācīšanās lietpratībai*. (189-211). Rīga: LU Akadēmiskais apgāds. DOI: 10.22364/ml.2018.8
- Juneja, P. (2015). *Leadership Basics. Management Study Guide*. Retrieved from: https://www.managementstudyguide.com/leadership_basics.htm
- Kamerāde, D., Mārtinsons, K., & Pipere, A. (2016). *Pētniecība: teorija un prakse*. Rīga: RaKa
- Kapur, R. (2022). Understanding the Goals of Educational Leadership. *The Journal of Social Sciences Studies and Research*, 2(3), 105-113. Retrieved from https://www.researchgate.net/publication/361950788_Understanding_the_Goals_of_Educational_Leadership
- Langdon Warren, L. (2021a). The Importance of Teacher Leadership Skills in the Classroom. *Education Journal*, 10(1), 8-15. DOI: 10.11648/j.edu.20211001.12
- Langdon Warren, L. (2021b). Teacher Leadership Begins with Self-Leadership. *Teacher Education and Curriculum Studies*, 6(1), 1-4. DOI: 10.11648/j.tecs.20210601.11
- Lieberman, A., & Friedrich, L., D. (2010). *How Teachers Become Leaders: Learning from Practice and Research. Series on School Reform*. New York: Teachers College Press.
- LU Starpnozaru izglītības inovāciju centrs (2018). *Skolotājs līderis*. Retrieved from: https://www.siic.lu.lv/fileadmin/user_upload/lu_portal/projekti/siic/VPP_publicikcijas/VPP_ieteikumu_lapas/19_Skolotajs_lideris.pdf
- Montuori, A., & Donnelly, G. (2018). *Transformative Leadership*. Handbook of Personal and Organizational Transformation. Publisher: Springer. DOI: 10.1007/978-3-319-29587-9_59-1
- Mulovhedzi, S. A., & Joubert, I. (2022). Teachers' strategies to develop leadership skills in Foundation Phase learners. *The Independent Journal of Teaching and Learning*. On-line version, 17(1), 121-136. ISSN 2519-5670. Retrieved from http://www.scielo.org.za/scielo.php?script=sci_arttext&pid=S2519-56702022000100008&lng=en&nrm=iso&tlng=en#:~:text=One%20teachers'%20strategy%20that%20can,%2C%20daily%2C%20in%20the%20lessons
- Stiggins, R., Arter, J., Chappuis, J., & Chappuis, S. (2002). Classroom assessment for learning. *Educational Leadership*, 60(1), 40-43. New Jersey: Pearson Education.

- TALIS 2018. (2020). *Skolotāji un skolu vadītāji kā augsti novērtējami profesionāļi*. Pieejams: <https://www.oecd.org/education/talis-2018-results-volume-ii-19cf08df-en.htm>
- Turlais, V. (2020). *Transformatīvās līderības ietekme radošumu veicinoša organizācijas klimata pilnveidošanai*. Promocijas darba kopsavilkums. Rīga: RISEBA Retrieved from: <https://www.ba.lv/wp-content/uploads/2014/10/promocijas-darba-kopsavilkums-1.pdf>
- Vīksna, A. (1999). *Personāla vadība*. Rīga: Jumava.
- Xu, Y., & Patmor, G. (2012). Fostering Leadership Skills in Pre-Service Teachers . *International Journal of Teaching and Learning in Higher Education*, 24(2), 252-256. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ996270.pdf>

THE PROBLEM OF ADAPTATION OF PRESCHOOL CHILDREN FOR A PRESCHOOL INSTITUTION

Valentina Romenkova

University of Latvia, Latvia

Abstract. *The problem of adaptation of the child in kindergarten is still rather relevant. Despite the fact that the issue was raised by the classics of preschool pedagogy and psychology (Rubinshtein, 1957; Aksarina, 1977; Bure, 2014; Bozhovich, 1967), there are currently no answers to several important questions related to adaptation in general and to the adaptation of children. This is due to the complexity and diversity of the adaptation mechanism inherent in all living beings. The process of adaptation studied by different sciences affects different levels of adaptation to changing environmental conditions: from cells to society.*

In relation to a preschool child, it is important to determine the structure of the adaptation process, including such diverse phenomena as the nature of sleep, nutrition, health indicators, emotional state, as well as attitudes towards relatives and alien adults and children, the ability to actively act in a new social environment. The idea of this study grew out of the need to hierarchize the child's individual ways of responding to a new environment and to determine the sequence and timing of normative adaptation. Currently, there are very different assessments of the ability of a preschool child to be included in a social environment that is conditionally unfamiliar to him.

Firstly, most authors consider the adaptation period to be extremely painful and difficult for a child, in which he is able to receive a load of difficult experiences and health disorders. The severity of the process is often estimated by the level of morbidity in children during the period of adaptation. Secondly, the course of the adaptation process itself is determined from 2 weeks to six months. Also, the specifics of children of different ages getting used to kindergarten, as well as the time when the beginning of his attending is the most favorable, has not been studied.

The aim of the study is to determine the structure of the process of adaptation of children of primary preschool age in a kindergarten.

Keywords: *adaptation, adaptation structure, indicators of adaptation, preschool children.*

Introduction

More and more young children are starting to attend kindergarten. In 2021 in Latvian preschool institutions there were 3,360 children at the age of one, 14,489 children at the age of two and 17,669 children at the age of three (Official statistics of Latvia, 2021). The relevance of the study is due to the need to answer many questions related to the adaptation of children to a new social environment. First of all, we are talking about the teacher's understanding of the standard course of the adaptation

process. In our opinion, the adaptation model is formed for the first time when a child enters a new social environment. The first alien adult the child meets is the teacher. The nature of the adaptation of the children, their emotional well-being depends on their sensitivity and competence.

It is also important to be able to evaluate the various components of children's adaptation, taking into account their individual characteristics, to find ways to cooperate with children, to form a sense of security and optimism. The ability to assess the nature of behavioral and psychophysiological manifestations will allow the teacher to find the best ways to respond in problem situations, to improve his/her competence.

The aim of the study is to determine the structure of the process of adaptation of children of primary preschool age in a kindergarten.

The object of the study is the features of the process of adaptation of preschool children.

The subject of the study is the sequence of components of the process of adaptation of young children.

Methods

The research methods included observation of certain indicators named below, a survey of educators, methods for determining the self-esteem of children, and statistical processing of data.

Since the study of the process of adaptation in the curricula of training programs for students of pedagogical specialties occupies a large place, it was necessary to choose indicators that would correspond to the developmental characteristics and the specifics of the process of adaptation of young children. The development of speech at the age of one to two and a half years did not allow, for example, the self-esteem of the child when talking with him. Therefore, both self-esteem and emotional state were determined by visually observed emotions, positive attitude, willingness to cooperate with adults and children.

The very activity of the child in different types of activity is closely related to the process of adaptation and the stages of affective regulation of activity (Lebedinsky et al., 1990).

At the first stage, indicators of observation of children were determined. including the nature of parting and meeting with parents, features of attitude towards an adult (teacher), attitude towards peers, activity (participation in classes and games), understanding and acceptance of the rules of the hostel in kindergarten, self-service skills, mood and emotional reactions during the day (positive mood, optimism), sleep, appetite, personality traits. Since other educators also worked in the groups, the indicators were refined taking into account the observations of other adults in the

process of their questioning. The level of adaptability of each child was determined at the beginning of the study, its characteristics were compiled, and the teacher planned work to optimize the adaptation process on their basis.

At the second stage, the assessment of the level of adaptability was determined again at the end of the study and indicators that determined one or another nature of adaptation were identified. The qualitative nature of the obtained data was determined as well.

The study involved working students of pedagogical specialties of PPMF LU and 119 children aged 1.1 to 2.6 years attending kindergarten from August to November 2022. When structuring the adaptation model, the data obtained by the author of the article from the study of children's adaptation in a mixed group conducted in 2007, were taken into account.

Definition of Problem

Although adaptation is recognized as a permanent mechanism for integrating into the world, in which the subjects either change themselves or change the environment, many authors believe that at an early age the child is still too dependent on the mother and new conditions are not always useful. Nearly every article on this topic highlights the traumatic experience, trauma, regression in a child's behavior and skills, as well as illnesses and long-term negative consequences for the development of the personality of children who are forced to attend kindergarten (Wall et al., 2016; Brown, 2020).

On the other hand, the development of communication skills, full-fledged socialization have a very positive effect on the development of the child's personality, the level of development of his/her self-awareness, activity and success in activities, future school performance, etc.

The adaptation period of children aged from 2-3 weeks to 6 months to kindergarten is also ambiguous (Tonkova-Yampolskaya, Chertok, & Alferova, 1993; Puškarevs, 2001; Gailuma, 2002; Alsberga, Antīņa, Dortāne et al., 2012), as well as the classification of the process of adaptation according to the period of normalization of all psychophysiological parameters, normalization of the child's behavior, the absence of diseases and neurotic reactions, etc. It is considered that the longer the child adapts, the more difficult the process itself is. The type of severe adaptation, according to the authors, occurs precisely in children aged 1.5-2 years. Thus, it is believed that the younger the children of early age, the easier it is for them to adapt (Tonkova-Yampolskaya, Chertok, & Alferova, 1993). One of the objectives of the study is to verify this statement.

In the work of other authors, the optimal age for entering kindergarten is 5 years (Puškarevs, 2001). Such different assessments, in our opinion, are associated with

different disciplines, within which adaptability was assessed, resulted in the process of adaptation to a new environment, including social, as well as with different theoretical positions of the authors.

L. Dikaya (2007), in her analysis of methodological problems and main directions of research, notes the prospects for a systematic approach to the study of adaptation, which would allow combining all data in a multi-level system. concerning the psychophysiological, psychological and socio-psychological levels of adaptation. These are mental states and the attitude of a person to the surrounding reality, to himself, etc. at every moment of time.

According to the author, a person's attitude is the central, system-forming characteristic of the entire component composition of mental adaptation. "From the point of view of a systematic approach, human mental adaptation is understood as a complex, holistic, polyfunctional and polystructural phenomenon, which allows studying adaptation at various levels of generalization: from the most general descriptions to descriptions of certain forms of mental adaptation of a particular subject" (Dikaya, 2007).

The idea is based on the theory of relations by V. N. Myasishchev. L. Dikaya believes that such an approach will allow "to call the holistic state of a person, covering all the structural levels of his organization, namely mental adaptation." The author proposed a block diagram of a systematic approach to the study of adaptation with such characteristics of adaptation as level-based, coinciding with the level-based organization of a person, subjectivity - objectivity and a degree of generalization (Dikaya, 2007).

In the study of the process of adaptation of young children, the structuring of indicators of adaptation and their integrity are seen as valuable. Since many young children do not yet speak, their psychophysiological characteristics that can be significant in assessing the level of adaptation.

Observation of the emotional state of the child made it possible to identify the features of the emotional regulation of activity, the normativity of the child's reactions to the new environment. V. V. Lebedinsky (Lebedinsky et al., 1990), the creator of the original classification of disorders in the mental development of children, determined the levels of affective regulation, linking them with the expansion of objects that the child learns in the process of adaptation to the environment and with the nature of internal and external reactions.

Valuable for our study is that the author defines both pathological and normative emotional manifestations. At first, the child reacts affectively to the assessment of the quantitative effects of the environment (temperature, illumination, sounds). Then he forms affective stereotypes, choosing them on the basis of an affective assessment

(comfortable-uncomfortable, pleasant-unpleasant) and individualizes the circle of his preferences, forming a prototype of integral sensory perception of the world based on communication with his mother, in which various sensory impressions are combined on the basis of a single strong positive effect (Lebedinsky et al., 1990).

The appearance of stereotypes in motor skills, in behavior, in play, in speech is important, which helps to calm the child in a stressful situation. At the level of affective expansion, the child, overcoming obstacles, masters new objects and space. The activity of a certain type develops in the child at this stage. If the familiar environment changes, as in the case when the child starts visiting a kindergarten, activity is observed only if the child is oriented towards an adult. Children can play or study with an adult individually. Therefore, participation in group sessions appears later, when the adaptation process is completed. The appearance of positive emotions is associated with communication, with the expansion of the social environment. There is an establishment of affective communications with another person. The level of symbolic regulation is observed in older preschoolers. At the same time, the system of preschool education assumes that a child's visit to a children's institution, the development of communication skills, full-fledged socialization have a very positive effect on the development of the child's personality, the level of development of his self-awareness, activity and success in activities, future school performance, etc.

Therefore, as indicators of observation in our study, we also chose features of mood, daytime sleep, and appetite, which could indicate the course of adaptation.

Presentation of the material Results

The study observed children who were between 1.1 and 2.6 years old, therefore, at the end - three months older. At the start of the study, most of the children could not speak.

Table 1 Distribution of children by age and gender (made by author)

Age	Girls	Boys	Total
Up to 2 years	22	25	47
Up to 3 years	35	37	72

At the first stage of the study, the indicators of observations and the degree of their severity were determined.

Table 2 Criteria and indicators for evaluating adaptation (Vorobjova, 2022)

Criterion	3 points	2 points	1 point
Saying goodbye to parents	Says goodbye to parents easily and quickly, immediately finds something to do	Does not come to the group independently, only with a parent. Saying goodbye to parents shows sadness	Saying goodbye to parents with difficulty. Cries, screams, doesn't let the parent go.
Building a relationship with a teacher	Easy, likes to communicate, participates in activities organized by an adult	Insecure, watching, needs extra encouragement	Negative, difficult to make contact
Child's emotional state	Happy, cheerful and active	Calm, sometimes thoughtful	Dominated by negative emotions, worried, often cries
Working with toys	Active, goes and picks up toys, plays with them independently, feels safe	Waiting for an adult to show, to give	Mainly plays with his/her favourite toy
Attitude towards organized activities	Active and cooperative	Attitude is variable, cooperates in some activities	Does not participate in activities, avoids them
Child's daytime sleep	Sleep is calm, falls asleep quickly	Does not fall asleep for a long time, sleeps peacefully	Fall asleep with crying, can't fall asleep for a long time, restless in sleep
A child eats in a preschool educational institution	The child has a good appetite	The child does not have much difficulty with eating	The child eats poorly, sometimes refuses food

Important for understanding the mechanism of adaptation was the definition of relationships with adults, especially with the mother. The nature of communication and parting of the child with a close adult in the initial period of attending kindergarten was recorded. Communication with a close adult is a prerequisite for the formation of the ability to communicate with someone else's adult, and then with peers, which determines the nature of the adaptation process. Not all children have formed a secure attachment to an adult by the time they enter kindergarten. Consequently, a sense of security, methods of communication with an adult were not formed, the child did not acquire subjectivity. Therefore, the most dramatic picture of parting was among those

children who did not learn to communicate with their mother, but were used to being around. They, on the other hand, could not get used to the educator for quite a long time and did not show interest in their peers until the end of the observations.

O...rs (1.5 years). O... has the most difficult adaptation. The boy started visiting the garden from September, and at first stays in the kindergarten until noon. It is very difficult for a child to part with his parents. Entering the group, the boy shouts at the door, then looks for a place to hide, refuses breakfast. Such behavior repeats every day, he does not come to the teacher's lap, does not allow himself to be petted. The child does not participate in activities organized by an adult, only cries (from the observation protocol).

Gradually he has begun to stay near the teacher, not communicating, but not going far. Sometimes he responds to offers to play with an adult. In November, he has begun to sleep during the daytime hours. He doesn't wake up. Parting with parents is almost always calm. He does not play with his peers, he keeps around an adult.

It should be noted that the child usually establishes contact with the teacher who first met him.

During the child's passive presence next to the teacher, which many people consider "bad adaptation", the child ceases to be afraid of other rooms, closed closets, the need to dress, wash, begins to understand the requirements and changes in the group throughout the day. He studies the attitude towards children from the outside, from the educator, i.e. begins to navigate in a new environment.

It is difficult to say for what reason there may be difficulties in mutual understanding between a child and close adults. Perhaps it has to do with the parenting style.

G...vs, 1;3. Does not want to let his mom or dad go in the morning, cries for a long time after parents leave, often refuses food. Language and self-service skills are poorly developed. Avoids contact with other children, is more self-centered and withdrawn.

It is mostly the dad who takes him to the kindergarten, who seems very nervous, emphasizes that the boy is already big enough (1;3) to dress himself, etc. He is ashamed on the fact that the boy cries in the morning. Gustavs seems to be a little afraid of his father (from the observation protocol).

If the interaction with parents has developed, the child quite easily begins to focus on someone else's adult, and adaptation is successful.

Anna 1; 3. When she arrives at the pre-school educational institution, the girl cries, but soon she is able to calm down on her own. Language skills are well developed for the age. Prefers communication with adults, does not pay attention to other children.

The relationship between the girl and her parents seems to be good. The girl is the only child in the family, maybe a little spoiled. Parents never rush the girl, they listen if she has something to tell about the day in kindergarten (from the observation protocol).

Already at the beginning of the observations, important facts for understanding the patterns of the adaptation process in young children were revealed. First, successful adaptation did not depend on age. Secondly, the duration of the adaptation process did not mean its destructiveness, severity for the child. Some children got used to it faster, and some more slowly.

This was manifested in the study and establishment of cooperation with someone else's adult, i.e. with the teacher. Children who got used to the situation quickly established contact with an adult after 5 weeks, and children who got used to it for a long time established the contact after 12–13 weeks. *Thus, the ability to communicate, trust in the teacher is the first in the structure of the child's adaptation to kindergarten.*

Children who have gained this experience with their parents very quickly accept the caregiver and move on to play alongside peers at an early age, or begin to build relationships with peers if they are over 3 years old. Many researchers considered this model of adaptation to be normative and easy. As a rule, in older children, the period of inclusion in the group of a new child is accompanied by conflicts. This, in our opinion, means *the next stage of adaptation*.

Children who have not developed attachment with close adults, provided that the caregiver is sufficiently empathic, actually form an attachment model for the first time, namely with an alien adult. This takes time and effort and prolongs the adaptation period.

Given the impossibility of creating mutual understanding with the teacher and the absence of such with the parents, the child experiences disadaptation. Those children who "are getting adapted" for half a year do not have a primary structural element - an orientation towards an adult. Therefore, after a short visit to a children's institution, the child begins to get sick. With each new visit, this model is reproduced again. The older the child, the more difficult it is for him to find an adult with whom he could establish a full-fledged confidential communication. Therefore, in our opinion, adaptation is more calm and natural in children before the crisis of three years, and is the most difficult at 5 years (Romenkova, 2008).

Conclusions

The study confirmed that the main factor in successful adaptation in young children is the relationship between close adults and the child, which allows the formation of a secure attachment.

1) Successful adaptation includes 1) the orientation of the child to an adult (interest, friendly attitude, ability to establish contact); 2) successful assimilation of the norms and values of the group; 3) mastering the rules of relationships with the children of the group; 4) good indicators of the emotional state (joy and optimistic mood, openness of emotions); 5) good indicators of health and physical condition; 6) easy transition from one social environment to another, joy and politeness towards parents, preservation of the old means of communication).

2) Relationships and trust in the world are formed in a child of an early age before the opportunity to verbalize their states.

- 3) The task of the educator is to determine the methods and techniques that
- a) encourage the child's desire to communicate with adults and children
 - b) maintain children's positive mood,
 - c) help the child calm down after the parents leave,
 - d) develop children's understanding of rules in preschool,
 - e) promote involvement in daily activities in games,
 - f) provide attitude building,
 - g) help the child fall asleep independently in a preschool educational institution.

References

- Aksarina, N. M. (1977) *Vospitanije detei rannego vozrasta.*-M., Medicina, 301 s.
- Alsberga, M., Antīņa, I., Dortāne, R., Frolova, I., Helmane, I., Jonīte, V., Līne, A., Milaša, M., Paisuma, K., Platnova, J., Prole, A., Šnepere, L., & Volāne, E. (2016). *Metodiskie ieteikumi Pirmsskolas mācību programmu īstenošanai*. Valsts izglītības un saturs centrs. ISBN 978-9934-540-08-0. 4 -5.lpp
- Bozhovich, L. I. (1967). Formation of personality in a team. In: L. I. Bozhovich, L. V. Blagonadezhina. *Issues of Psychology: the thirteenth year of publication*. Ed. A. A. Smirnov, V. N. Kolbanovsky. - No. 3 May-June 1967. - p. 144-152.
- Bozhovich, L. I. (2008). *Personality and its formation in childhood*. - St. Petersburg.: Peter, - 398 p..
- Brown, J. (2020). *Kindergarten without tears – what should parents know about the adaptation period?*. Retrieved from: <https://findmykids.org/blog/en/kindergarten-adaptation-period>
- Bure, R. (2014) *Social and moral education of preschoolers. For classes with children 3-7 years old*. GEF. Mosaic-Synthesis.
- Dikaya, L. G. (2007). Adaptation: methodological foundations and main areas of research In: L.G. Dikaya. *Psychology of adaptation and social environment: modern approaches, problems, prospects*, Per Se, - S. 17-42.
- Gailuma, S. (2002). Mazbērnu adaptācijas process pirmsskolā. In: Red. D. Dzintere. *Bērns kā individualitāte pirmsskolas izglītības iestādē*.
- Lebedinsky, V. V., Nikolskaya, O. S., Baenskaya, E. R., & Liebling, M. M. (1990) *Emotional disorders in childhood and their correction*. Moscow, MGU, 1990. Retrieved from:

- https://www.studmed.ru/lebedinskiy-v-v-nikolskaya-o-s-baenskaya-e-r-libling-m-m-emocionalnye-narusheniya-v-detskom-vozraste-i-ih-korrekcija_ad44e981f1d.html
- McLean, S. (2016). The effect of trauma on the brain development of children. *Evidence-based principles for supporting the recovery of children in care*. Retrieved from: <https://www.researchgate.net/publication/311223824>
- Official statistics of Latvia. (2001). *Pre-school education*. Retrieved from: <https://stat.gov.lv/lv/statistikas-temas/izglitiba-kultura-zinatne/pirmsskolas-izglitiba>
- Puškarevs, I. (2001). *Attīstības psiholoģija*: RaKa, 2001. 88 lpp.
- Romenkova, V. (2008). *Bērns ģimenē un sabiedrībā*. BJC "Rīgas Skolēnu pils", BJC "Rīgas Skolēnu pils", 2008. -76 lpp.
- Rubinshtein, S. L. (1957). *Social being and consciousness*, - M., 1957.
- Tonkova-Yampolskaya, T. Y., & Chertok, I. N. Alferova (1993). *Fundamentals of medical knowledge: Textbook. allowance for ped. colleges on special. "Preschool education"*, 3rd ed., finalized. - Moscow: Enlightenment.
- Vorobjova, A., (2022). *1.posma vecuma bērniem veiksmīgās adaptācijas nosacījumi pirmsskolas izglītības iestādē*. Kvalifikācijas darbs. LU.
- Wall, L., Higgins, D., & Hunter, C. (2016). *Trauma-informed care in child/family welfare services* (CFCA Paper No. 37). Melbourne: Australian Institute of Family Studies.

PROBLEMATIC ASPECTS OF HEALTH-PRESERVING COMPETENCE DEVELOPMENT IN PRESCHOOL TEACHERS

Tetiana Andriushchenko

MEI “Cherkasy Regional Institute of Postgraduate education of Pedagogical Employees of the Cherkasy Regional Council”, Ukraine

Liubov Lohvytska

Hryhorii Skovoroda University in Pereiaslav, Ukraine

Nataliia Martovytska

The Bohdan Khmelnytsky National University of Cherkasy, Ukraine

Alla Sirenko

MEI “Cherkasy Regional Institute of Postgraduate education of Pedagogical Employees of the Cherkasy Regional Council”, Ukraine

Abstract. *The article substantiates the problem of health-preserving competence development in teachers of preschool education: as an important task of the modern world, as a priority personal characteristic, as a component of professional training. The essence of the phenomenon of “health-preserving competence” is revealed, the following structural components are distinguished: emotional and motivational, cognitive and activity-centered. The goal of the research is to determine the conceptual foundations of the development of health-preserving competence in teachers of preschool education; data collection and processing of information to clarify problematic aspects of the phenomenon being under consideration. In the course of empirical research, the authors used the method of anonymous thematic survey (questionnaire) and its analysis. The research group consisted of: students of the 4th year of dual mode of study (who work on specialty) – 38 participants (group A); students of the 4th year of part-time mode of study who work on specialty (in preschool educational institutions) – 45 participants (group B) and students of advanced training courses – 53 participants (group C). The total number is 136 respondents. The conducted research proved that the respondents are aware of the main categories of health; are motivated and aware of the importance of health-preserving behavior, but are not sufficiently aware of modern health-preserving technologies. Therefore, the activity-centered component requires to be strengthened for the development of health-preserving competence in teachers of preschool educational institutions. Prospects for further scientific work will consist in the implementation to the system of higher education and advanced training courses for preschool teachers of the elective course “Formation of health-preserving competence in the subjects of the educational process” and determining the effectiveness of its implementation.*

Keywords: *activity-centered component, cognitive component, emotional and motivational component, health-preserving competence, preschool teachers, professional training.*

Introduction

Among all the values health is the most important. In a globalized world, the issues of formation, preservation and strengthening of health are becoming more and more relevant. Contemporaneity is marked by the development of the health movement, in which the World Health Organization plays a leading role. Health is defined as “a means of life, as a positive sense”, which includes a complex of characteristics (physical, mental, social, emotional, intellectual, medical, spiritual, etc.) (World Health Organization, 2020).

The list of “Key Competences For Lifelong Learning” outlines “Personal, social and learning to learn competence”, which provides for the formation of the following indicators: “<... support one’s physical and emotional well-being, to maintain physical and mental health, and to be able to lead a health-conscious, future-oriented life ...>” (The Council of European Union, 2018). However, a person in society, should also take care of the health of those around. The holistic individual psychological formation of the personality, which is manifested in its behavioral traits (Hofmans, Vantilborgh, & De Gieter, 2020) and is aimed at preserving one’s own health and that of others, is considered as health-preserving competence.

Therefore, the readiness of an individual to take care of his/her own health and the health of others is determined by the development of the appropriate competence – health-preserving as the basic one of an individual, the essence of which is “<... physical and mental well-being, including “taking care of oneself”, “managing myself” and “staying well”...>” (European Commission, 2018). Its development should be started from preschool age. For this purpose, this competence is to be developed in the teachers of preschool educational institutions (*hereinafter referred to as PEI*), who perform the task of promoting the preservation and strengthening the children’s health. Scientists from different countries of the world – England, China, Lithuania, Finland, etc. – noted the importance and problems in the process of health care competence development in teachers who work with preschoolers (Byrne, Rietdijk, & Pickett, 2018; Hu et al., 2020; Lamanauskas & Augienė, 2019; Lamanauskas, Daiva Malinauskienė, & Augienė, 2021; Mikkonen et al., 2022). This issue is also important for the Ukrainian educational system for the scientific understanding and determination of ways to improve the formation of health-preserving competence among preschool teachers.

The purpose of the study is to determine the conceptual foundations of the health-preserving competence development in PEI teachers; data collection and processing to clarify the problematic aspects of the phenomenon being under consideration among students of the specialty of Preschool Education from two Ukrainian universities and students of advanced training courses for specialists of preschool education (Ukraine).

Research objectives: (1) to substantiate the problem of health-preserving competence development in PEI teachers on the basis of scientific literature review and analysis; (2) reveal the essence of the phenomenon of “health-preserving competence” and outline its structural components: cognitive, emotional and motivational and activity-centered; (3) to find out the real state of the problem of the health-preserving competence development in PEI teachers by conducting a thematic survey and its analysis and to determine the ways of improvement.

The following *methods* were used to implement the set of research tasks: theoretical – analysis of the review materials of the scientific-source base, their generalization and synthesis, systematization and specification; empirical methods – anonymous thematic survey (questionnaire) of participants; data collection, quantitative processing and qualitative interpretation of the obtained results.

Literature review

To determine the base of the health-preserving competence development in PEI teachers, an analysis of the review of the scientific and source base was carried out according to the following algorithm: how the process of health-preserving competence formation occurs; what components this phenomenon contains; what is the mission of the PEI teacher in the development of health-preserving competence in children.

Recognition of health and health-preserving behavior is a priority in public policy in different countries, which indicates awareness of the problem importance not only for the current generation, but also for the future in the process of the civilized world development (Byrne, Rietdijk, & Pickett, 2018). Preschool childhood is a sensitive period in the formation of a number of vital competences, including health-preserving ones (Andriushchenko, 2015; Kurowicka, 2019; Lamanuskas, Daiva Malinauskienė, & Augienė, 2021; Noble, Fetherston, Jackson, & Craike, 2020). Having acquired a complex of knowledge, abilities and skills, a valuable attitude to life and health, a competent person will be able to help oneself in solving various health-related problems. For this purpose, programs are being implemented in various countries that implement the task of forming preschool children’s knowledge about health, the ability to preserve and strengthen it, and treat it as the most valuable one: for example, in Lithuania (Lamanuskas, Daiva Malinauskienė, & Augienė, 2021), in Spain (Llorent-Bedmar & Cobano-Delgado, 2019), in Ukraine (Lokhvytka, 2020).

The role of a teacher in the health-preserving process of PEI and the formation of appropriate competence in children is absolute (Hu et al., 2020; Kurowicka, 2019; Lamanuskas, 2018; Lamanuskas & Augienė, 2019). The

preschool teacher's mission is to provide children with a set of elementary knowledge about a person and his/her health, a healthy lifestyle, to develop a sustainable motivation for health-preserving behavior, which encourages the development of a conscious attitude to one's health and the health of others. This is precisely what creates the necessity to develop health-preserving competence in PEI teachers.

At the same time, it is worth emphasizing the formation of health-preserving competence in future teachers, on the creation of appropriate conditions that would ensure the relationship between theoretical training and the "practice" of this competence (Byrne, Rietdijk, & Pickett, 2018; Mikkonen et al., 2022; Pašinska, 2021; Lamanauskas, 2018; Llorent-Bedmar & Cobano-Delgado, 2019). Currently, Ukrainian science and education (Maksymchuk et al., 2020; Sivkovych, Slyvka, & Hamerska, 2020) emphasize the necessity of health-preserving competence development in each student, which provides the opportunity to rise to a qualitatively higher level of readiness for independent life and the ability to compete in the labor market as a qualified specialist.

Researchers (Andriushchenko, 2015; Lamanauskas & Augienė, 2019; Maksymchuk et al., 2020; Mikkonen et al., 2022; Sivkovych, Slyvka, & Hamerska, 2020) convincingly proved that health-preserving competence is acquired through the formation of knowledge about health, the development of a valuable attitude towards the one's own health preservation and the health of others, as well as the accumulation of skills of health-preserving behavior in the environment. In particular, the assimilation of a set of knowledge about health, the factors of its preservation, the basics of a healthy lifestyle is seen as a cognitive component; belief in the necessity for health preservation and the desire, encouragement and directing efforts to strengthen and protect one's own life and health and that of others – as an emotional and motivational component; formation of health-preserving behavior skills, when health is recognized as the most valuable, – as an activity-centered component.

Thus, based on the analysis of the literature, the justification of the problem of the formation of health-preserving competence in PEI teachers as an important task of the modern civilized world, as the development of a priority personal characteristic, and as a compulsory component of professional training was carried out. The working definition is taken as follows: health-preserving competence development in PEI teachers – is a process that involves the formation of personal qualities aimed at the assimilation of knowledge, the development of attitudes and the development of health-preserving skills, which is produced in the implementation of protection, preservation and strengthening of health in children (students) and the development of the same competence in them, and contributes to the professional growth as well. In the structure of the phenomenon of "health-preserving competence", the following structural components are distinguished: cognitive, emotional and motivational and

activity-centered, which will be taken as a basis for conducting an empirical study.

Methodology of research

Research tools. While conducting empirical study, the method of anonymous survey (questionnaire) was applied, which took place in an online format using the Google Forms service, by filling in the author's questionnaire "Self-reflection of health-preserving competence" (see link to Google Forms <https://forms.gle/EeU87pUevbhqPRrc6>). Its purpose was to find out the essence of problematic aspects regarding the formation of health-preserving competence in PEI teachers. The scientific works of J. Byrne et al. (2018), H. Hu et al. (2020), V. Lamanuskas & D. Augienė (2019), V. Llorent-Bedmar & V. Cobano-Delgado (2019), H. Sivkovich et al. (2020) were taken as the basis for the questionnaire development. It included 9 questions. The content of the questions is combined into three blocks according to the structure of health-preserving competence (cognitive, emotional and motivational, activity-centered components).

Data collection procedure and methods of analysis. The research took place in three stages: at the first stage (September – November 2022) – respondents filled out the questionnaire; at the second stage (December 2022) – collection of empirical data of the study was carried out, the processing of the obtained data, their quantitative and qualitative analysis was carried out; at the third stage (January 2023) – the results were shaped.

Study sample are described. Students of the first level of higher education (bachelor's degree) studying on educational and professional program (EPP) Preschool Education at Hryhorii Skovoroda University in Pereiaslav and Bohdan Khmelnytsky National University of Cherkasy (Ukraine), as well as course participants of advanced training on the specialty "Teacher of preschool educational institution" MEI "Cherkasy Regional Institute of Postgraduate education of Pedagogical Employees of the Cherkasy Regional Council" (Ukraine) were involved in the survey. The choice of such a research group is due to the fact that the participants involved in the empirical study either are receiving professional training for further work in PEI and working on the specialty at the same time or are taking an advance course.

The research group consisted of: students of the 4th year of dual mode of study (employed on specialty) – 38 participants (group A); students of the 4th year of the part-time mode of study, working by specialty (in the PEI) – 45 participants (group B) and students of advanced training courses – 53 participants (group C). The total number is 136 people.

Results of research

The conducted survey made it possible to find out the problematic aspects of health-preserving competence development in PEI teachers: respondents' awareness of the essence and structure of health-preserving competence (questions 1–3 of the questionnaire – *cognitive component*); motivation of teachers to preserve and strengthen their own health (questions 4–6 of the questionnaire – *emotional and motivational component*); focus on the implementation of health-preserving activities throughout life (questions 7–9 of the questionnaire – *activity-centered component*). Quantitative analysis of the conducted questionnaire results to determine the problematic aspects of the formation of health-preserving competence in PEI teachers is presented in Table 1.

Table 1 *Quantitative analysis of the survey “Self-reflection on the formation of health care competence” (according to structural components) (made by Authors)*

n=136

Cognitive component																		
question	1 question						2 question						3 question					
respond	yes		partially		no		yes		partially		no		yes		partially		no	
group	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
A (n=38)	29	76.3	9	23.9	-	-	21	55.2	12	31.6	5	13.2	26	68.4	10	26.3	2	5.3
B (n=45)	38	84.4	7	15.6	-	-	28	62.2	14	31.1	3	6.7	26	57.8	15	33.3	4	8.9
C (n=53)	45	84.9	8	15.1	-	-	31	58.5	17	32.1	5	9.4	38	71.7	12	22.6	3	5.7
Emotional and motivational component																		
question	4 question						5 question						6 question					
respond	yes		hard to say		no		I myself		example of other people		doctors		yes		hard to say		no	
group	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
A (n=38)	38	100	-	-	-	-	10	26.3	28	73.7	-	-	5	13.2	31	81.5	2	5.3
B (n=45)	45	100	-	-	-	-	15	33.3	27	60.0	3	6.7	8	17.8	32	71.1	5	11.1
C (n=53)	53	100	-	-	-	-	24	45.3	20	37.8	9	16.9	9	16.9	41	77.4	3	5.7
Activity-centered component																		
question	7 question						8 question						9 question					
respond	yes		going to		no		yes		going to		no		yes		going to		no	
group	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
A (n=38)	8	21.1	19	50.0	11	28.9	7	18.4	13	34.2	18	47.4	4	10.5	9	23.7	25	65.8
B (n=45)	11	24.5	19	42.2	15	33.3	9	20.0	15	33.3	21	46.7	4	8.9	8	17.8	33	73.3
C (n=53)	15	28.3	26	49.1	12	22.6	9	16.9	26	49.1	18	34.0	6	11.3	8	15.1	39	73.6

Conventional signs: n – absolute index (number of people); % is a relative index

The obtained results made it possible to carry out a qualitative interpretation of the problematic aspects of the formation of health-preserving competence in PEI teachers.

Thus, the majority of respondents (76.3% from group A, 84.4% from group B and 84.9% from group C) gave an affirmative response to the *first question*: “Are you aware of the essence and structure of health-preserving competence?” A less number of the respondents (23.7% from group A, 15.6% from group B and

15.1% from group C) indicated partial awareness. No negative responses were recorded.

Responses to the *second question*: “Do you possess knowledge of modern and traditional health-preserving technologies?” demonstrated that 55.2% of respondents from group A, 62.2% from group B, and 58.5% from group C are confident in their knowledge, while 31.6% from group A, 31.1% from group B, and 32.1% from group C expressed insufficient confidence. It is a positive fact that only 13.2% from group A, 6.7% from group B and 9.4% from group C admitted that they do not have information about health-preserving technologies.

Analysis of the responses to the *third question*: “Do you know anything about health-preserving life skills?” proved that 68.4% of respondents from group A, 57.8% from group B, and 71.7% from group C are aware of health-preserving life skills. 26.3% of respondents from group A, 33.8% from group B, and 71.7% from group C consider themselves insufficiently informed. It is encouraging that only a minimal percentage (namely: 5.3% of respondents in group A, 8.9% in group B, and 5.7% in group C) have no idea about health-preserving life skills.

Thus, we can make the following generalizations regarding to the formation of the cognitive component: all respondents (both students and teachers of PEI) are, to one degree or another, familiar with modern and traditional health-preserving technologies and are aware of what life skills contribute to the human health preservation. Absolutely everyone understands the essence of health-preserving competence, and therefore, no problematic aspects in the formation of health-preserving competence have been identified.

We consider it important for research to determine the influence of motivation on the formation of health-preserving competence. Responses to the *fourth question*: “Do you consider your own health one of the priority life values?” presented the unanimity of the respondents’ opinions. All the participants – 100% – perceive health as a value.

The dynamics of responses to the *fifth question*: “Who motivates you to preserve and improve your own health?” seemed interesting with the following variants of responses: 1. I myself. 2. The example of other people. 3. Doctors. Thus, for 73.7% of students of dual mode of study (group A), the motivator is the example of other (significant for them) people, and only 26.3% of them are guided by their own desire to be healthy. 60% of part-time students (group B) also rely on the example of other people. However, the share of respondents increased – 33.3%, who are motivated to self-maintain health, and 6.7% follow the doctor’s advice. At the same time, among PEI teachers (group C), the largest percentage of people (45.3%) who motivate themselves for health-preserving activities were found. For 37.8% of respondents, the example of others is important, and for 16.9% – recommendations of doctors.

While formulating the *sixth question*: “Are you confident in your own readiness to perform health-preserving activities throughout your life?”, we aimed to find out how conscious the respondents are about their own health and the health of other people. However, the absolute majority of participants – 81.5% from group A, 71.1% from group B and 77.4% from group C – chose the response option: “It’s hard to say”. An affirmative response was found in 13.2% of students from group A, 17.8% from group B, and 16.9% of teachers from group C. There were also negative responses – 5.3% in group A, 11.1% in group B, and 5.7% in group C.

The obtained responses focused us on such a problematic aspect as the respondents’ lack of motivation for the health-preserving competence. Thus, students of both dual and part-time mode of study are not aware of their own responsibility for preserving and improving health. As it turned out, PEI teachers become more responsible with the gaining of life and professional experience. The majority of those interviewed have not developed a desire to carry out health-preserving activities throughout their lives.

An important component of health care competence is the activity-centered component. The manifestation of its formation was determined by analyzing the responses to questions 7–9. Responses to the *seventh question*: “Do you self-educate to improve the level of health-preserving competence?” pointed out that the majority of respondents (50% in group A, 42.2% in group B and 49.1% in group C) only have in plans health-preserving self-education. Among the responses: “Yes” and “No” there was a slight difference between students and PEI teachers. In groups A and B, 21.1% and 24.5% of students chose “Yes”, respectively, and “No” – 28.9% and 33.3%. At the same time, the situation is the controversial among PEI teachers: “Yes” – 28.3%, and “No” – 22.6%.

Responses to the *eighth question*: “Do you use specific health-preserving technologies to improve your own health?” demonstrated that, unfortunately, only a small number of respondents – 18.4% of students from group A, 20% from group B and 16.9% of teachers from group C – actually apply health-preserving technologies. The majority of respondents do not implement health-preserving technologies in practice (47.4% of students from group A, 46.7% from group B and 34.0% of PEI teachers from group C) or only plan to do that (34.2% of students from group A, 33.3% from group B and 49.1% of PEI teachers from group C).

Responses to the *ninth question*: “Do you carry out a systematic analysis and self-assessment of your own health-preserving activities?” made it possible to determine that only 10.5% of respondents from group A, 8.9% from group B and 11.3% from group C are really conscious, who really analyze their own health-preserving activities. 23.7% from group A, 17.8% from group B and 15.1% from group C are going to do this. The maximum number of respondents

(65.8% from group A, 73.3% from group B and 73.6% from group C) do not carry out systematic analysis and self-assessment their own health care activities.

Thus, the conducted research proved that the respondents are aware of the main categories of health and the factors of its preservation. However, the majority are not sufficiently motivated for independent health-preserving activities throughout life and do not implement their knowledge about health-preserving technologies in practice to strengthen their own health. This position is identical to the scientific results of V. Lamanuskas, D. Malinauskienė, & D. Augienė (2021). Therefore, a powerful range of problems related to the formation of health-preserving competence of PEI teachers is concentrated precisely in the inactivated ability of students and practitioners to implement the existing knowledge on preserving and strengthening health in everyday activities.

Conclusions and discussion

The study of the issue of health-preserving competence development in PEI teachers revealed its multifaceted nature, in particular, its global importance in the world dimension, its role in personal growth, and its importance in professional training.

“Health-preserving competence” was interpreted as a phenomenon consisting in the presence of a system of knowledge about health and the factors of its preservation (cognitive component); conscious desire and motivation to lead a healthy lifestyle (emotional and motivational component); formation of health-preserving behavior skills in society (activity-centered component).

The analysis of the real state of the problem of the health-preserving competence formation in PEI teachers on the basis of a survey conducted among students of Ukrainian universities (majoring in Preschool Education and students of advanced training courses for preschool education specialists) demonstrated positive results regarding to the possession of theoretical knowledge of health among respondents and means of its preservation. However, for the formation of health-preserving competence in PEI teachers, the emotional and motivational and activity-centered components are to be strengthened.

However, the following issues remain debatable: ►How to organize comprehensiveness in the formation of health-preserving competence, improving the process of lifelong education in the Competences for LifeLong Learning system, which is consistent with the scientific positions of K. Mikkonen et al. (2022), V. Llorent-Bedmar & V. Cobano-Delgado (2019), H. Sivkovych et al. (2020). ►How to encourage students and teachers to consciously carry out health-preserving activities throughout life.

Prospects for further scientific work will consist in the implementation in the system of higher education and advanced training courses for preschool education specialists of the elective educational course “Formation of health-preserving competence in the subjects of the educational process” and determining the effectiveness of its implementation.

References

- Andriushchenko, T. K. (2015). *Theoretical and methodological framework for forming preschoolers' health-preserving competency*. Doctoral thesis. South Ukrainian National Pedagogical University, Odesa. Retrieved from: <http://www.disslib.org/teoretyko-metodychni-zasady-formuvannja-zdorov-jazberezhuvalnoyi-kompetentnosti-v.html>
- Byrne, J., Rietdijk, W., & Pickett, K. (2018). Teachers as health promoters: Factors that influence early career teachers to engage with health and wellbeing education. *Teaching and Teacher Education*, 69, 289–299. DOI: <https://doi.org/10.1016/j.tate.2017.10.020>
- European Commission. (2018). *Proposal for a Council Recommendation on Key Competences for LifeLong Learning*. Commission Staff Working Document Accompanying the Document SWD/2018/014 final – 2018/08 (NLE). Retrieved from: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2018:0014:FIN>
- Hofmans, J., Vantilborgh, T., & De Gieter, S. (2020). About competencies and situations: A trait-activation approach to the competency framework for peer review. *Industrial and Organizational Psychology*, 13(1), 64–67. DOI: <https://doi.org/10.1017/iop.2020.7>
- Hu, H., Wu, T., Fan, L., Zuo, K., Chen, L., Zhang, J., & Zhao, X. (2020). Knowledge of Child Health and Affecting Factors Among Preschool Teachers: A Cross-Sectional Study in Chongqing, China. *Risk Management and Healthcare Policy*, 13, 2515–2524. DOI: <https://doi.org/10.2147/RMHP.S280214>
- Kurowicka, E. (2019). Health education and health promotion among preschool children. *Journal of Education, Health and Sport*, 9(7), 497–506. DOI: <https://doi.org/10.5281/zenodo.3407784>
- Lamanauskas, V. (2018). Teacher health literacy: Why does it matter? *Problems of Education in the 21st Century*, 76(1), 4–6. DOI: <https://doi.org/10.33225/pec/18.76.04>
- Lamanauskas, V., & Augienė, D. (2019). Kindergarten teachers' health literacy: Understanding, significance and improvement aspects. *Review of Science, Mathematics & ICT Education*, 13(2), 39-60. DOI: <https://doi.org/10.26220/rev.3207>
- Lamanauskas, V., Daiva Malinauskienė, D., & Augienė, D. (2021). Health Education in Preschool Institution: Integration, Effectiveness, Improvement. *EURASIA Journal of Mathematics, Science and Technology Education*, 17(12), em2046.
- Llorent-Bedmar, V., & Cobano-Delgado, V. (2019). Health education training of university students of the early childhood education degree in Spain. *Ciência & Saúde Coletiva*, 24(8), 3067–3078. DOI: <https://doi.org/10.1590/1413-81232018248.28642017>
- Lokhvytska, L. V. (2020). *Program for the basics of health and safety of life of preschool children “We must know about ourselves, care about ourselves”*. Ternopil, Ukraine: Mandrivets.
- Maksymchuk, B., Matviichuk, T., Solovyov, V., Davydenko, H., Soichuk, R., Khurtenko, O., ... Maksymchuk, I. (2020). Developing Healthcare Competency in Future Teachers. *Revista Romaneasca Pentru Educatie Multidimensionala*, 12(3), 24–43. DOI: <https://doi.org/10.18662/rrem/12.3/307>

- Mikkonen, K., Kuivila, H.-M., Sjögren, T., Korpi, H., Koskinen, C., Koskinen, M., ... Kääriäinen, M. (2022). Social, health care and rehabilitation educators' competence in professional education – Empirical testing of a model. *Health & Social Care in the Community*, 30(1), e75–e85. DOI: <https://doi.org/10.1111/hsc.13414>
- Noble, K., Fetherston, H., Jackson, J., & Craike, M. (2020). *Effective integration of health promotion in early childhood education and care settings*. Policy paper 2020-02. Australian Health Policy Collaboration, Mitchell Institute, Victoria University.
- Pašinska, O. (2021). Peculiarities of healthcare specialists' communicative competence in English as a foreign language. *SOCIETY. INTEGRATION. EDUCATION. Proceedings of the International Scientific Conference*. May 28th-29th 2021. Vol. V (pp. 599–614). DOI: <https://doi.org/10.17770/sie2021vol5.6318>
- Sivkovich, H., Slyvka, L., & Hamerska, I. (2020). Pre-service teachers training for efficient health promoting school activities performance. *Advanced Education*, 7(16), 88–97. DOI: <https://doi.org/10.20535/2410-8286.216792>
- The Council of European Union. (2018). Recommendation of 22 May 2018 on Key Competences for LifeLong Learning. (Text with EEA relevance) (2018/C 189/01). *Official Journal of the European Union*. Retrieved from: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604\(01\)&rid=7](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018H0604(01)&rid=7)
- World Health Organization. (2020). *Goals and objectives*. Retrieved from <https://www.who.int/healthpromotion/about/goals/en/>

INTEGRATED LITERACY METHODS FOR THE DEVELOPMENT OF SOCIAL – EMOTIONAL SKILLS: PRE-SCHOOL GROUP CONTEXT

Ilona Tandzegolskiene-Bielaglove
Vytautas Magnus University, Lithuania

Nijole Ciuciulkiene
Vytautas Magnus University, Lithuania

Jūrate Garbaraviene
Vytautas Magnus University, Lithuania

Abstract. *Preschool years are a significant period of a child's life, characterized by a unique social, artistic, cognitive, emotional expression of the child. In the preschool age, children go through a rather difficult period of development, which largely determines the success of their subsequent education at school. At this stage of development, children should feel the need to read and write and thus get to know the world (understand people's relationships, feelings, actions, intentions, etc.); should start reading and writing and feel the joy of reading and writing while successfully interacting with the surrounding world. Having mastered literacy skills, a child can express what he/she feels, hears, and sees. The received data were analyzed while using thematic content analysis. During the observation, it has cleared out that it is quite difficult for children to express their emotions. Practical tasks, such as acting situations, drawing emotions, activities with sand, discussions with parents and researchers when children try to express emotions, practically teach different ways to overcome everyday changes and difficulties and thus acquire social-emotional skills. An attractively equipped book reading area, interestingly used print encourages easier recognition of words and application of reading skills. The application of integrated literacy methods in the implementation of a preschool program is a suitable context for strengthening social emotional skills, which are crucial for recognizing and managing one's emotions, being empathetic, creating and maintaining positive relationships, setting and pursuing positive goals, and making responsible decisions. Literacy techniques such as printed environment, reading books, marking emotions, interactive writing and drawing, social stories, acting situations, and discussions are effective tools and ways to achieve these goals.*

Keywords: *education, integrated literacy, methods, preschool group, social emotional abilities.*

Introduction

The Organization for Economic Cooperation and Development (OECD, 2019), assessing the needs of a rapidly changing world and summarizing international research on adolescent literacy, states that it is necessary for students

to develop a wide range of skills, including strong cognitive, social-emotional skills. The European Commission (2018) has identified eight key competences that a person needs throughout life. Two of them are 'literacy' and 'personal, social and emotional learning'. Thus, it can be said that children's literacy development and social-emotional education are among the priority areas of education. This research paper presents the analysis of scientific sources, revealing the possibilities of using integrated literacy methods in the development of social-emotional skills.

The problem of the research. As the development of children's literacy and social emotional abilities is one of the priority areas of education, mastering literacy skills opens wide communication possibilities for a child. He/she can express what he/she feels, hears, and sees. Still, as the majority of scientific literature sources state (Jones & Bouffard, 2012; Weissberg, Durlak, Domitrovich, & Gullotta, 2016; Caudle & Grist, 2016; CASEL, 2015; 2019), it remains a difficulty for a significant number of children to identify their emotions and to express them fluently in the process of verbal communication. The way out of the situation might be the application of integrated literacy methods giving educators more opportunities to strengthen children's social and emotional abilities, which would lead to children's higher self-esteem, more effective realization of their potential, better interpersonal relationships.

The object of the research - the development of social - emotional skills.

The aim of the research - to highlight the assumptions for the formation of social emotional skills by applying integrated literacy methods in a preschool group. Research question - what kind of actions can be applied to integrate literacy methods into the development of social - emotional skills?

Research methods: the research data were collected while conducting the observation of the activities of pre-school children and organizing the focus group discussion with the pre-school teachers.

Literature review

Analyzing the scientific literature, it was noticed that the authors (Weissberg et al. 2016; Durlak et al., 2011; Jones & Bouffard, 2012; CASEL, 2015, 2019) classify social-emotional skills according to their areas of expression. The CASEL (2015) organization divides social-emotional skills into cognitive (cognitive), emotional (relational) and positive behavioral expression areas and distinguishes five related groups of social-emotional skills (Fig.1).

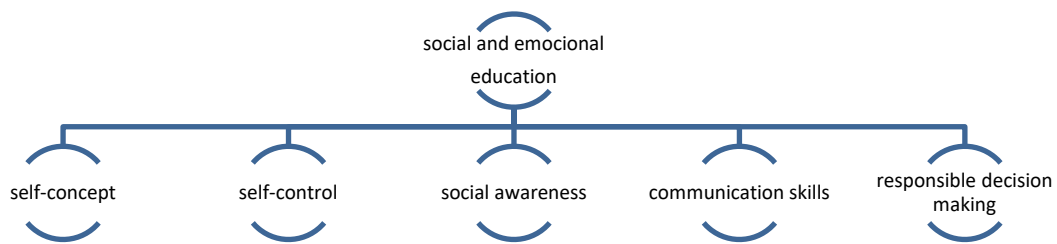


Figure1 Five main groups of social-emotional skills
(Modified according CASEL, 2015)

As indicated by the classification provided by CASEL (2015), the socio-emotional skills of each domain consist of certain skills that are highly related. Similarly, social-emotional skills are named in the works of other authors. Jones & Bouffard (2012) group socio-emotional skills into the expression areas of emotional, cognitive (cognitive) and relational (social) skills. According to the authors, the field of emotional skills includes evaluating, perceiving and analyzing, expressing and regulating emotions. The domain of cognitive skills includes the ability to focus attention and suppress impulses. The domain of interpersonal skills (social skills) includes communication skills, prosocial behavior (cooperation, helping others, being able to give a compliment) and interpersonal skills. So, it could be said that social-emotional education is a process that develops such skills as understanding and managing one's emotions, setting and achieving positive goals, caring for others, creating and maintaining positive relationships with others, appropriate regulation of interpersonal relationships and responsible decision-making.

Social-emotional education helps children to acquire skills that are necessary for successful adaptation and activity in society. During social-emotional education the teachers, the child's family, and the local community are encouraged to work together in cooperation to help children learn to create, maintain good interpersonal relationships, manage emotions, solve problems, develop self-control, and behave ethically. Social-emotional education is defined as an educational process that helps to develop self-relationship and relationship-to-other abilities, strengthens social, emotional and academic skills. Thus, social-emotional education should remain a priority for teachers even with higher academic standards and rigorous learning expectations (Caudle & Grist, 2016).

Success at school is not only determined by a child's knowledge or early reading and writing skills, but also by emotional and social skills that enable the development of self-confidence, interest in the environment, knowing what behavior is expected and how to control oneself when there is a temptation to misbehave, to be able to follow instructions, to approach teachers for a help, to express needs and get along with other children.

Early life experiences provide the foundation for well-being, health and learning. In early childhood, healthy cognitive development coupled with healthy development of social and emotional skills creates a strong foundation for future academic achievement, success, and social-emotional well-being.

Consistent social-emotional education involves focusing on children's social-emotional development, particularly on self-regulation. Social emotional education also focuses on teaching children vocabulary, labeling and recognizing emotions (Caudle & Gist, 2016). Social and emotional education includes an environment where children can develop social and emotional skills, highlighting self-regulation, which is strongly related to the readiness for school.

Denham, Bassett, Zinsser, & Wyatt (2014) examined the relationship between social-emotional learning, its application in a group, and academic performance. Specifically, these researchers examined self-regulation, emotion cognition, problem solving, and social-emotional behaviors and a possibility to predict children's academic readiness and adjustment in kindergarten. Social-emotional skills were linked to academic readiness and specifically to early literacy skills.

Although integrated literacy methods have been proved to be effective in teaching young children to read and write, the idea about how these methods work in the preschool group needs to be explored in a more detailed way. Educators need to support and practice purposeful literacy development while ensuring that the development of social-emotional skills in group activities remains a central part of practice. Integrated literacy activities in pre-school education groups should be organized taking into account a rich print environment, book reading, dialogical reading, interactive writing and drawing (Vukelich, Christie, & Enz 2012).

While summing up, it could be stated that literacy occupies a very important place in the education of children. It is one of the priority areas of education. The preschool age of a child is a very significant time that has a great impact on the child's literacy development. By constantly interacting with the social world, the child acquires the necessary abilities that become necessary in all areas of his/her life. After mastering the skills of writing and reading, the child can more easily express what he/she feels, hears and sees. In order to make the process of developing literacy of a more better quality, it is important for the teacher to provide an environment that encourages the child's curiosity, activity and desire to act.

Methodology

In order to find out what methods of strengthening social-emotional abilities are used while integrating literacy methods in the preschool group, the logic of qualitative research was chosen. The empirical study was carried out in two

stages. In the first stage, the observation of planned activities was carried out while working with children, in the second stage there was organized a focus group discussion in cooperation with pedagogues.

Observation stages and progress. Observation was carried out in 2021, in October - November while working with children of the pre-school group in one of the pre-school institutions of Kaunas city after obtaining the agreement of their parents. Planned and continuous activities were observed for six weeks. Each week, during group observation, the number of children was different due to attendance at the institution: 14 children participated in the first week, 17 children - in the second week, 17 - in the third week, 16 - in the fourth week, 15 - in the fifth week, and 14 - in the sixth week. The participants of the first observation stage were a group of 17 children, including 12 girls and 7 boys. Children's age was from 5 to 6 years. Most children already know how to pronounce all the sounds of the language, speak clearly and understandably in compound sentences. Pupils are able to briefly narrate a simple everyday event, know the main colors, can count according to their age, know and write letters, some of them can read. Children of this age have more sustained attention, they can concentrate for a certain period of time while doing a task. They also hear and take into account the instructions of an adult. As is typical at this age, children are curious, creative, interested in what works and how it works, and like to try everything. Most of the time, an adult only needs to encourage, help the pupils and participate in activities together with the child. In this way, the child learns to trust himself /herself.

The following steps were planned for conducting the observation:

1) goal setting; 2) data recording method; 3) choice of monitoring method; 4) data description; 5) analysis of findings.

The monitoring steps included the following activities:

I step - the printed environment is prepared in the group.

Children need to understand the presentation of printed text before they can read on their own. For example, they understand that printed text is different from illustrations, text is printed from left to right, words are made up of letters of the alphabet. These skills start to develop as children learn to use books, look at pictures, recognize book covers, pay attention to words, and begin to write and read.

II step - optional social stories (6 stories).

Social stories are short descriptive stories that provide information about various social expectations. With the help of social stories, children are helped through situations to understand how to solve problems, cope with difficulties and conflicts that arise in and outside the group. For a group of children, stories are selected that match their age and specific needs. Through social stories, children are shown how to deal with everyday difficulties and react appropriately in various situations.

III step – preparation of practical tasks.

By performing practical tasks, children analyze, retell, act out situations in which they try to say what they have in mind. In this way the children develop the ability to express opinions and show how to express feelings in a difficult situation. Children learn practical ways to cope with everyday changes and difficulties, thus gaining social-emotional skills.

IV step – discussion with the parents and the reflection with the researcher.

Not only children, but also most adults do not find it easy to talk about their feelings. There is quite a number of children who have trouble understanding the "felt" emotions. By carefully listening and observing their children, parents can spot those moments when the children fail to express their feelings, either directly through words or indirectly through body language. Parents and educators, by talking with children about their various experiences, demonstrate to the children that their feelings are accepted and understood. This strengthens the child's sense of inner ME and helps him/her to learn to recognize and name personal feelings. In the second stage of the empirical research, the focus group discussion method was chosen. The method is characterized by a small number of group participants (usually 6 -12 people). They are selected for the study while relying on a common characteristic: all participants should be involved in a pedagogical work in a preschool institution with children of preschool age. The participants of the second stage are pre-school education pedagogues. 4 informants have up to 10 years of pedagogical work experience, 2 informants have more than 20 years of experience in the preschool group. The quality of the data in this method is based on the dynamism of the group: such quality data could not be obtained if the group was not dynamic and did not interact. The group was led by the researcher, who asked open-ended questions and encouraged discussion among group members. Themes for discussion were identified by creating 5 open-ended questions based on the results obtained during the observation and the analysis of the theory. Thematic analysis was chosen for the analysis of the conducted research (Clarke, Braun, & Hayfield, 2015). This is a systematic way of working with qualitative data, which helps to identify typical patterns and formulate topics related to the research problem when coding data (Zydziumaite & Sabaliauskas, 2017). During the conducting of the research, informal observation of children's activities and a focus group discussion with pedagogues were organized. A structured monitoring protocol was created during the observation. The study was based on the general principles of research ethics: voluntariness, provision of information, assurance of security, confidentiality and anonymity.

Research results

The preschool educational institution, where the study took place, cooperates with social partners, the Public institution "For the benefit of the child" and participates in the "Friends of Zipy" program. The program helps teachers to

improve the social, socio-educational competences of motivating and supporting the child, which the teachers needed at work. During the research, 6 stories from the "Friends of Zipy" program were used. They demonstrate how it is easier to overcome everyday difficulties and react appropriately in various situations. Social stories: 1) "Full of feelings". The goal is to develop children's ability to recognize sadness and find ways to respond appropriately to it. 2) "What do I like most?". The goal is to develop children's ability to distinguish between successful and unsuccessful ways to express their feelings. 3) "Are you my friend?". The goal is to develop children's ability to save their friends. 4) "We do not allow ourselves to be abused." The goal is to develop children's ability to recognize the qualities of a good way out. 5) "Goodbye". The goal of the story is to help children understand that change and loss are part of our everyday life experience. 6) "Ourselves". The goal is to develop children's ability to use various methods to overcome difficulties. These stories teach children how to manage everyday emotional difficulties: rejection, loneliness, bullying, difficult changes. They help to understand and encourage talking about one's feelings, looking for ways to deal with those feelings; teach children empathy, to find friends, to ask for and accept support, to help others. Analyzing the obtained data, 4 main themes emerged - expressions of feelings and emotions, experiencing difficult and negative feelings, learning to recognize various feelings and stay with them, efforts to create positive relationships (Fig. 2).

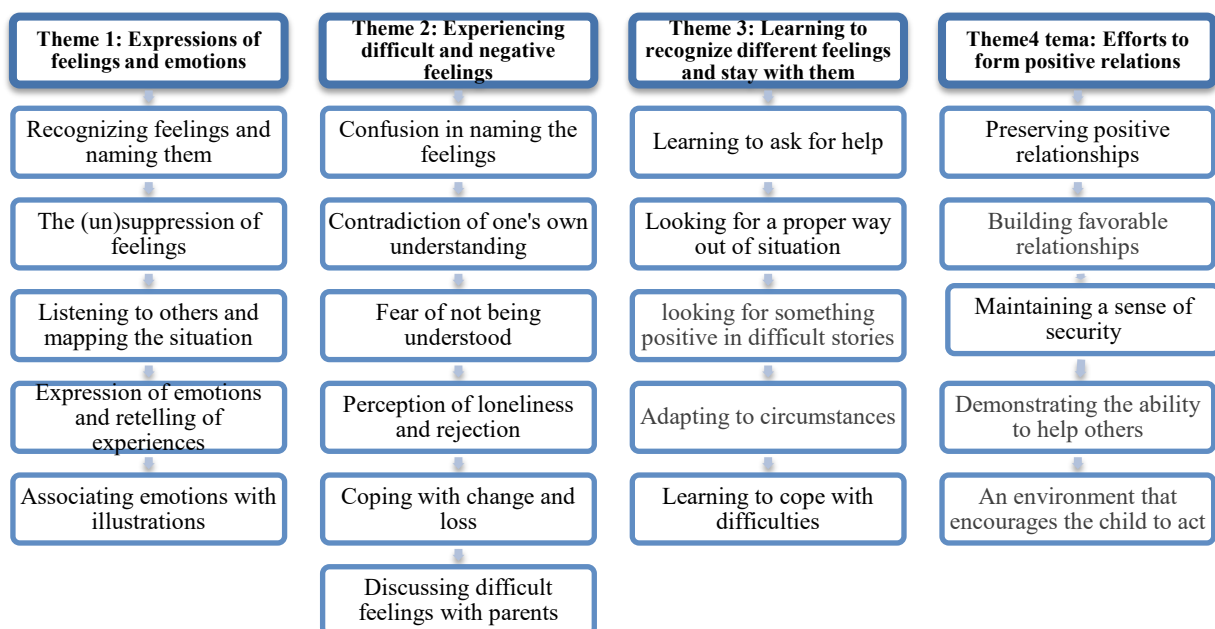


Figure 2 A thematic map of the representation of feelings and emotions from a child's perspective (made by authors)

It could be argued that, in order to strengthen social-emotional abilities, the activities are systematically organized, while integrating literacy methods into them. Topics are chosen purposefully, social stories are chosen according to the

topics, practical tasks - acting situations - are applied, children's discussions with parents and reflection with the teacher are organized. One topic is focused on throughout the week so that children have enough time to absorb the information. Six themes - six stories that are similar to each other, but all of them have different shades. A lot of attention is paid to understanding emotions, expressing them, preserving positive relationships, how to resolve conflicts, overcome difficulties, and survive changes. After listening and discussing the story, practical activities - role-playing situations are applied. During them the children talk about feelings, learn to express emotions and apply their experiences. It has been observed that, when integrated literacy methods are applied, children more easily delve into situations, experience them, try to understand the causes of emotions and name them, find solutions to make things different. Children find it difficult to recognize certain emotions, so they help each other understand, share their experiences and learn from each other. Next, the focus is on working together, cooperation with parents. Tasks for parents are formulated so that parents can discuss the topic with their children at home, and the children can reflect on it with the teacher. This is a very effective method for developing children's social-emotional skills. When children discuss their feelings with their parents, they once again convey them to the teacher. It was noticed that then it is much easier for the child to find words to express his/her feelings and to describe situations more smoothly.

Children avoid talking about difficult emotions and do not rush to open up, but the empathy shown by an adult is the key to a child's heart. It is often enough to show attention to the child, hug him/her, be near him/her, talk to him/her, read his/her favorite book together, but it is important not to leave the child with difficult feelings and finish the activity. Children's moods should be taken into account, activities should be diversified to distract negative feelings. Rules created together with children help children to follow agreements. Illustrations with emotions allow children to connect their emotions with visualizations and understand that it is natural to feel the particular way. Tea breaks will always create a cozy atmosphere, as the teacher's goal is to create an environment in the group where all children can express themselves, feel emotionally safe and valued.

Analyzing the research data obtained in the second stage, 3 main themes emerged: 1) features of social and emotional abilities; 2) applied methods for developing social-emotional skills and 3) educational environment favorable to social-emotional abilities. These topics are highly interrelated. When discussing integrated literacy methods, it is important to clarify what needs to be considered in the development of preschool children's social-emotional skills. The experience of educators in creating educational environments that promote the growth of children's social-emotional abilities is also relevant.

The pedagogues who participated in the focus group emphasize that when developing children's social-emotional skills, it is important to take into account

children's individuality. The participants also say that each child is able to receive information differently and interpret it in a personal way. Participants of the discussion think, that it is very important what experience the child brings to kindergarten from the family. As stated in the discussion, it is important how the child communicates with his/her relatives at home, how the family reacts to the child's emotions, what is the general emotional background in the family. Participants emphasize that it is important for the family to cooperate with the institution in order to achieve the best results. The teachers who participated in the discussion say that they often use similar methods when developing children's social-emotional skills, but most of them distinguish between reading fairy tales and activities that encourage discussions, because the educators believe that this is the most appropriate way to answer all the questions in a language that children can understand.

Focus group participants, discussing the creation of an educational environment, emphasize several aspects: provision of tools, usage of spaces, creation of a safe and cozy environment. Participants pay attention to creative role-play spaces, where children learn to communicate with each other, express their feelings, moods, and thoughts and thus get to know the world around them. The teachers who participated in the discussion emphasize and name such an environment as an important aspect, which must ensure the emotional safety of children. During the discussion with the teachers it became clear that most of them, when developing social-emotional skills, usually take into account the needs of children and the general context of the group. It is very important to help children recognize their emotions and express them in appropriate and acceptable ways. Then teachers must think and apply such methods that help children to reveal themselves. When creating the environment, teachers often use their creativity, for example, they prepare an "emotion wall" in the group, where any child can evaluate his/her emotions according to the heroes of the videos; the "emotional train", where everyone in their car shows what emotion they have come with today; cushions brought from home with the child's letter will always give the child a sense of security.

Conclusions and discussion

During the research, it was observed that with the help of social stories, children better understand emotions and perceive social interactions. Social stories show how it is easier to cope with everyday difficulties and to react appropriately in various situations. According to Caudle and Girst (2016), before children can deal with complex, unexpected problems and conflicts, it is important to understand their own emotions as well as those of others. The conducted observation confirms that when communicating, children gain knowledge from each other, share experiences, and are able to find out the essence of the

difficulties encountered and possible solutions. Knowledge and understanding of the surrounding and personal emotions, their management and control, empathy promotes effective interpersonal communication and positively affects individual decisions. During the observation, it became clear that it is quite difficult for children to express their emotions. Practical tasks, such as role-playing situations, recognizing emotions, expressing them in a drawing, discussions with parents and the researcher, where children try to express emotions, practically teach various ways to overcome everyday changes and difficulties and in such a way to acquire social-emotional skills.

During the research it was observed that applying integrated literacy methods is meaningful and useful, if the conditions are created and a full-fledged environment is created. An attractively equipped book reading area, abundantly used print encourages easier recognition of words and application of reading skills. Vukelich et al. (2012) emphasize that it is very important for pre-school educators to use the press purposefully in the group highlighting functional and environmental aspects. Children feel more fun in an aesthetically attractive group room, playful colors and bright names help create a cozy atmosphere. Properly arranged furniture provides knowledge about the use of space and develops safety skills. A properly and attractively equipped group environment encourages more diverse games. The formation of social skills teaches to be independent and overcome difficulties.

The study revealed that reading fairy tales and activities that promote analysis of situations and discussions of experiences are among the methods which are most often used by educators to strengthen children's social-emotional skills. It is emphasized that this is the way to answer all the questions that arise in a language that children can understand. Teachers usually use various images as tools in their activities, in which children can recognize their emotions and understand them. Creative role-play spaces, where children learn to communicate, express their feelings, moods, and thoughts, and thus get to know the world around them are also of great importance.

References

- CASEL. (2015). *Effective Social and Emotional Learning Programs*. Chicago.
- Caudle, L. A., & Grist, C. L. (2016). Teaching social emotional skills through a balanced literacy approach in the preschool classroom. In Arnold, D. (Eds.), *Preschool children: Social skills, Educational Development and Health Disparities. (Education in a Competitive and Globalizing World)*, Chapter 3; 45-67.
- Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. *Qualitative psychology: A practical guide to research methods*, 3, 222-248.
- Denham, S. A., Bassett, H. H., Zinnser, K., & Wyatt, T. M. (2014). How Preschoolers' Social-Emotional Learning Predicts Their Early School Success: *Developing Theory-Promoting, Competency-Based Assessments. Infant and Child Development*, 23, 426-454.

- Durlak, J., Weissberg, R., Dymnicki, A., Taylor, R., & Schellinger, K. (2011). The Impact of Enhancing Students' Social and Emotional Learning: *A Meta-Analysis of School-Based Universal Interventions*. *Child Development*, 82(1), 405–432. *Emotional Education*, 1(1), 1-7.
- European Commission. (2018). Proposal for a Council Recommendation on Key Competences for Lifelong Learning.
- Jones, S. M., & Bouffard, S. M. (2012). Social and Emotional Learning in Schools: From Programs to Strategies. *Social Policy Report*, 26(4), 1–33.
- OECD. (2019). OECD Skills Outlook 2019: *Thriving in a Digital World*.
- Vukelich, C., Christie, J., & Enz, B. (2012). Helping Young Children Learn Language and Literacy: *Birth Through Kindergarten (3rd ed.)*. New York: Pearson.
- Weissberg, R. P., Durlak, J. A., Domitrovich, C. E., & Gullotta, T. P. (2016). Social and emotional learning: Past, present, and future. In J. A. Durlak, C. E. Domitrovich, R. P. Weissberg, & T. P. Gullotta (Eds.), *Handbook of social and emotional learning: Research and practice*, 1-17. New York: Guilford.
- Zydziumaite V., & Sabaliauskas S. (2017). *Kokybiniai tyrimai. Principai ir metodai*. Vilnius: Vaga.

EMANCIPATION OF PROFESSIONAL ACTIVITIES OF A TEACHER ASSISTANT IN THE PROCESS OF MENTORING AT PRE-SCHOOL INSTITUTION

Nijole Ciuciulkiene

Vytautas Magnus University, Lithuania

Ilna Tandzegolskiene-Bielaglove

Vytautas Magnus University, Lithuania

Ruta Anglickiene

Vytautas Magnus University, Lithuania

Abstract. *When discussing the assistant's emancipated participation in the educational process, it is important not to forget the pre-school teacher who often becomes a formal or informal mentor to the teaching assistant. It is the role of the mentor, his/her influence, that is one of the most important factors in the process of emancipation of the teaching assistant. Interrelationships based on support, respect, tolerance, sharing of experience and responsibility, constant help to each other, and support turn mentoring into a high-quality process that ensures emancipation. It is important that the mentor clearly defines what he/she expects from the assistant and is willing to help him/her to develop. Otherwise, it will not make sense to talk about the emancipation of the teaching assistant's professional activity. Relying on the qualitative research findings it is possible to state that a teacher assistant is supposed to provide a qualified support to an educator and a pupil in ordinary and inclusive educational process. It requires from teacher assistant wide range of competences, enabling him/her to demonstrate rationality, clear value system, professionalism, i.e. to be an emancipated personality. The process of emancipation takes place when there is the harmony among the set of emancipatory legal, philosophical, social, and educational aspects and the personal reality perception, activity and will. In order to develop the emancipation of a teacher assistant's, the competence of the mentor plays the key role, especially his/her abilities to encourage and empower the mentee's independent, still community - directed solutions. Thus, the reversivity of the mentoring process comes to the focus of the attention. The proof of the teacher assistant's emancipation success is considered to be the process of reverse mentoring. The qualitative content analysis of the interviews of the teaching assistants working in pre-school education institutions revealed that the emancipation of teaching assistants is observed in the answers of all informants, but the emancipation of their activities in the mentoring process is only partially ensured.*

Keywords: *emancipation, mentoring, pre-school education, pre-school education teacher assistant.*

Introduction

For quite a long time, classes in various educational institutions have been conducted not only by a teacher, but also by a teacher's assistant. In America, these specialists have been known since the 1960s. Having in mind the fact that teachers work with students with different abilities and knowledge, the assistant performs particularly important functions: help the students with learning difficulties and support those who quickly cope with the given tasks, i.e., individualizes and differentiates the content of the training, if necessary, also conducts inclusive education (Liasidou, 2012; Giangreco, 2013; Ryyanen, Nivala, 2017). Thus, the role of the teacher's assistant in the current complex educational process is particularly relevant, as it creates conditions for a higher quality of the educational process. Full participation in creating a higher quality educational process from the teacher's assistant requires reflection that inspires self-development, making independent decisions that would influence education. Thus, a teaching assistant should be rational, critical thinking, moral, social, and communicative, i.e., emancipated personality (Lissovoy, 2010; Radford, 2012; Čiučiulkienė & Bankauskienė, 2015; Setlhako, 2020).

The problem of the research: the performed documentary analysis and research data demonstrate the lack of conditions for the emancipation of professional activities of teacher assistants in pre - school education institutions.

The object of the research is the emancipation of the activity of a pre-school teacher assistant.

The aim of the research: to reason the emancipation of the activity of a preschool teaching assistant in the mentoring process.

Research methods: research data were collected using a semi-structured interview. The analysis of the findings was performed using the qualitative content analysis method. Scientific research findings reveal that in most cases, mentors create favorable conditions for the emancipation of the professional activity of teacher assistants: they consider the suggestions and opinions of the assistants, scaffold their improvement, share responsibility, and encourage the reversibility of mentoring. Still, there is a lack of legal empowerment of assistants, more frequent reflection on their work, cooperation among the participants of the educational process. So, the emancipation process is gradually commencing, but there are areas to be improved.

The research is based on humanistic and social constructivism theories. In order to answer the research questions, a qualitative semi-structured interview and a focus group discussion were used. Qualitative inductive thematic analysis was used for data analysis.

Literature review

In different countries teacher assistant is defined in different ways. Giangreco (2013) points out that in the world, a person who helps a teacher is called variously - assistant of a pedagogue, teacher's assistant, educational assistant, paraprofessional, paraeducator, learning assistant. Also, these specialists can be called teaching assistants, classroom assistants. The MUKIS website (2014) indicates that the position of the student attendant is closely related to this profession. In the literature and documents of Lithuanian authors, a person who helps a teacher is usually defined as a teacher's assistant. Still, it connotes help not only for the teacher, but also for a special child, class, parents, and the community. The assistant can be considered as an intermediate link between the subject teacher and the social pedagogue (Vilkeliene, 2004).

The teacher's assistant cooperates with the pre-school teacher, special pedagogue, a speech therapist, and other specialists working with the child (group of children), helping the children to use their potential more productively in the educational process. Educators and specialists advise the teacher's assistant on the specifics of providing special assistance in case of one or another disorder. The assistant should also participate in the meetings of the Council of Teachers, the Child Welfare Commission discussing plans, programs, methods, methods, and intensity of assistance for individual work with a child (group of children). Sharples, Webster & Blatchford (2015) present the recommendations for teaching assistants' work in the context of everyday activities. The authors distinguish four essential areas, which are presented in Figure 1.

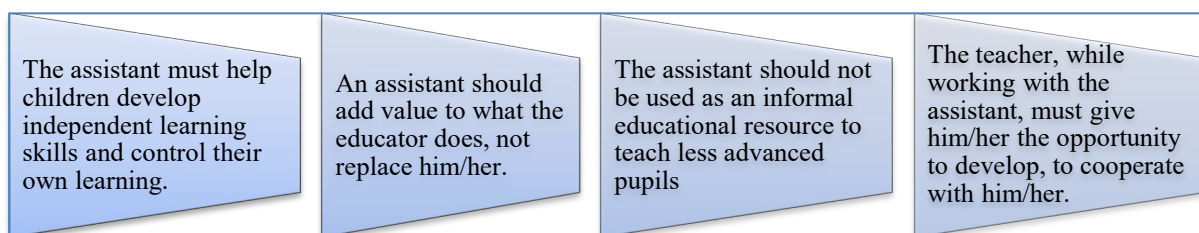


Figure 1 Recommendations for the teaching assistant's work in the context of daily activities (Compiled by Anglickienė & Čiučiulkienė. Reference: Sharples et al., 2015)

It is clear, that the teaching assistant occupies an important place in the educational process and must be professional in many areas. Adequate professional training is undoubtedly important to be able to do one's job properly. Only a qualified, willing, and motivated assistant will be an advantage. Here it is worth paying attention to the concept of volition. Willpower is a quality that enables people to do amazing and complex work, to implement ideas, not to give up, to achieve work and creative achievements. This is an expression of strong will. Personality development is also related to the training of the will, and the

will is a characteristic of a person, who manifests herself/himself in the purposeful regulation of one's actions and activities, the pursuit of a set goal, making every effort to overcome external and internal obstacles (Gennara, Peetz, & Milyavskaya, 2023).

The "help" of an unqualified teacher's assistant, who is not willing to work and improve, who lacks will, can become a distraction. To avoid disturbances, it is necessary to emphasize the importance of cooperation with pedagogues, specialists, the institution's administration, and the parents of the children. One of the most important directions of this cooperation is the connection between the teacher assistant and the teacher working in the group. Pre-school teacher often becomes a formal or informal mentor to the teaching assistant. The teacher is constantly around. The assistant learns from him/her. Mentor's duty is to create all conditions for the assistant to learn, to take over the good practice. Here attention becomes concentrated on the multiple competences of the teacher-mentor who to some extent makes an impact on the professional development of the teacher assistant.



Figure 2 **General competences of a preschool teacher - mentor** (Compiled by Anglickienė. Reference: Monkevičienė & Autukevičienė, 2011)

While reviewing the content of a preschool teacher – mentor competences it is possible to observe several thematic aspects that characterize teacher – mentor activities. Personal and social block highlight value-based mentoring aspects, information and assessment blocks underline responsible communication, including understanding of legal documents and institution rules. Management and teaching/consulting blocks alongside with managerial skills imply the philosophical constructivistic teaching aspects. This thesaurus of competences

enables a benevolent teacher-mentor to take care of the well-being and development of his/her assistant. By advising him/her, indicating opportunities and ways to improve his/her competences, expand his/her horizons, the teacher-mentor of the preschool institution will contribute not only to the quality of education process but also to the emancipation of the teacher assistant.

Nowadays, there are quite a few definitions of emancipation. Alvesson and Willmott (1992) give one of the older but still relevant definitions of emancipation. They define emancipation as the process by which individuals or groups free themselves from repressive social and ideological conditions, especially those that impose socially unnecessary restrictions on human for the expression and development of consciousness.

Today, emancipation expands its content, acquires new shades of interpretation. The rapid development of sciences, interdisciplinary scientific trends provide this concept with the new integral, sometimes even metaphorical meanings (Čiučiulkienė & Bankauskienė, 2015). In the legal sense, emancipation is the legal empowerment of a person in his/her professional field, which is revealed in documents defining the specifics of professional activity, normative legal acts. At the philosophical level, emancipation can be understood as rational thinking, which, discovering and creating new knowledge, leads the personality towards enlightened action based on cultured, liberative and moral argumentative practice. Philosophically, emancipation is also closely related to the perception of personal responsibility. In the educational sense, emancipation can be interpreted as a process whose priority is personality change, based on the perception of reality, will and activity. A person's positive attitude towards improvement in his/her professional field, consideration of opportunities for improvement and career advancement, allows us to assume that he/she is moving towards the emancipation of his/her professional activities. At the social level, emancipation can also be interpreted as the successful socialization of a person in the workplace community. The opportunity to demonstrate one's professional abilities, the transition from formal to informal relationships, and finally - the recognition of others leads to the conclusion that a person experiences emancipation (Radford, 2012; Čiučiulkienė & Bankauskienė, 2015).

For the successful implementation of the emancipation process, it is important that the conditions for the implementation of each of the four mentioned aspects are ensured during it. The process of emancipation of a teaching assistant begins when he/she gets acquainted with the documents defining his/her activities. This process, under favorable conditions, continues at the philosophical level, when a person considers his/her personality traits, values, interests, and competences. Later, there is a need to improve in one's professional field, the will to act emerges. Finally, there is full involvement in the social life of the institution, a quest for recognition. A successful process of emancipation, liberation from another person's dependence, prejudices, mistakes, or limitations leads to the

transformation of the assistant into an emancipated one, i.e., a worker who is aware of reality, has activity and will.

Furthermore, it is worth to note that a teacher's assistant is a person who helps a teacher, working with the students who have certain educational difficulties. It is irreplaceable help to implement the educational process in a high-quality manner. Thanks to this specialist, the possibilities of each student's involvement in education are improved, not excluding those with special educational needs, but on the contrary - giving them the opportunity to become active participants. However, working with a teacher's assistant can also lead to certain problems: excessive attention to pupils with SEN, thus disturbing their independence, loss of the teacher's needs to educate all children in the group, taking into account their abilities and needs; lack of qualification of assistants, etc. However, knowing and understanding these problems and their seriousness makes it easy to prevent them from taking root.

During the analysis of documents and literature, it also became clear that a teacher's assistant must have a wide range of competences, demonstrate various abilities, which are also reflected in the abundance of functions performed by him/her. The specifics of the assistant's work require that he/she be distinguished not only by certain general abilities, but also by special knowledge, since these specialists work in preschool education groups attended by children with milder or more severe disabilities.

The emancipation of the teaching assistant can be analyzed in four essential aspects: legal (legal empowerment), philosophical (self-evaluation), educational (personal development) and social (professional socialization). The emancipation of the teaching assistant is manifested in the process of reverse mentoring, when not only the mentor, but also the person under his/her patronage can transfer the accumulated experience and knowledge.

Methodology

A qualitative research data were collected while conducting expert semi-structured interview. The interview questions were formulated while relying on the theoretical aspects revealed in the theoretical part from the concepts of emancipation and mentoring by distinguishing criteria and indicators. Questions posed to teaching assistants were created according the results of theoretical analysis. They can be grouped into five main themes (see Table1).

Table 1 Thematic content of the questionnaire (made by authors)

No.	Title of the theme
1.	Emancipation as a legal empowerment of the teaching assistant.
2.	Philosophical aspects of the emancipation of the teaching assistant's activities: formation of value orientation
3.	Social aspects of the emancipation of the teaching assistant's activities
4.	Educational aspects of the emancipation of the teacher's assistant's activities;
5.	The mentor's competencies that emancipate the activities of the teacher's assistant and enable reverse mentoring.

The interview questionnaire consists of 14 questions. 15 teacher assistants were involved in the interview. Main criteria of the sampling were the work experience of 2 years. All participants were females. The purpose and course of the study, issues of ensuring confidentiality were discussed, and the agreement of the discussion participants to record the conversation with a voice recorder was obtained. The duration of the discussion was 1 hour 45 minutes. The audio recording of the discussion was transcribed into a computer file in Microsoft Word format. The research instrument used for the interview study is a semi-structured interview. For its implementation, 14 main questions were prepared based on the inductive method (see Table 2).

Table 2 Research questionnaire content (made by authors)

Theme	Semi-structured interview questions	Links to the research problem
Emancipation as legal empowerment of teaching assistant.	How does a mentor help you understand the documents governing your activities?	This group of questions aims to reveal whether the teaching assistant is legally empowered in the institution where he/she works. What is the role of the mentor in the context of the emancipation of the legal assistant teacher?
	What are the competence requirements of your profession?	
	What is the mentor's role in your decision-making?	
Philosophical aspects of the emancipation of the teaching assistant's activities: formation of value system.	Reflection of your activity. How do you do reflection independently and together with a mentor?	Šios klausimų grupės klausimais siekiama atskleisti mokytojo padėjėjo emancipaciją filosofiniame kontekste, ir kokia yra mentoriaus įtaka jo vertybinių orientacijų formavimuisi.
	Your responsibilities: how responsible does the mentor make you feel?	
	Do you discuss values that are important to you? What is your attitude towards sharing your experience with a mentor?	

Social aspects of the emancipation of the teaching assistant's activities.	In what ways do you get involved in group/community life? What is the mentor's help?	The questions of this group aim to reveal the emancipation of the teaching assistant in the social context and what the influence of the mentor on the process of his/her socialization at work is.
	Describe your cooperation with the group educator - mentor.	
	Describe your cooperation with the specialists working in the institution. What is the mentor's influence in the communication between you and the specialists?	
Educational aspects of the emancipation of the teacher's assistant.	In what ways, how often and why do you improve your competences? The attitudes of the mentor and the administration regarding your development.	These questions aim to reveal the aspirations of the teacher's assistant in professional development, what motivates him/her to improve and whether the conditions for this improvement are created in the institution.
	How much effort does it take for you to follow the instructions given by the mentor?	
The mentor's competences that emancipate the activities of the teacher's assistant.	What support do you feel from a mentor when you face difficulties at work? Comment.	These questions aim to reveal the importance of the mentor's competencies in order to achieve the emancipation of the professional activities of the teaching assistant.
	What competences of a mentor do you value the most? What negative qualities do you see?	

During the interview, the research participants were left free to initiate new topics or develop those that seemed important to them thus leaving enough space for their evaluations. Qualitative content analysis was carried out according to the steps recommended by Mayring (2014).

Research results

The deductive content analysis was conducted while centering around five major themes: Emancipation as understanding major legal documents and work rules; Formation of the value system; Mentor and mentee communication – moral argumentative conversation practice; Education – an emancipation vector of mentee’s development; Reverse mentoring – the evidence of teacher assistant’s emancipation. Main themes contain 11 categories and 30 subcategories (See Table 3). While summing up the findings of qualitative content analysis, it can be said that legal, philosophical, social, educational aspects of emancipation of teacher assistants can be seen in the answers of all informants. However, to be able to say that the interviewed assistants are emancipated in their professional activities, there is still a lack of the desire to improve the established order.

The most attention should be paid to the lack of legal empowerment of assistants (Table 3, Theme 1, category 1, subcategory 1.4): most of the informants lack knowledge about the documents regulating their activities, about their responsibilities. The knowledge about it is quite abstract. There is also a lack of a bigger mentor and the intervention of the administration. It is they, especially the newly arrived specialist, who should provide all the necessary information on this matter. Knowing that legal empowerment is the first step towards emancipation, we should pay more attention to it.

During the analysis of the answers to the philosophical emancipation part, represented by value centered activities (Table 3, Theme 2, Category 4) it became clear that there is a great lack of self-reflection of the teaching assistants. It happens that activity reflection does not take place together with the mentor. This is an area that needs to be paid attention to. Reflecting on one's own activities and reviewing the aspects that need to be improved helps not only to improve oneself but also to improve the curriculum. A similar situation emerges with responsibilities that are not entirely clear to the assistants. One should have familiarized oneself with them at the stage of legal empowerment.

However, positive aspects can also be observed - these are rather significant manifestations of the reversibility of mentoring, which are revealed when the mentor and the assistant willingly share and exchange available knowledge, information, and other resources. This shows that the process of emancipation in the professional activities of teacher assistants is taking place, but there are still areas for improvement (Table 3, Theme 5).

Table 3 *Manifestation of themes, categories, and subcategories of “Emancipation of professional activities of a teacher assistant in the process of Mentoring” (made by authors)*

Main themes	Categories	Subcategories
Emancipation as understanding major legal documents and work rules.	1. Studying professional activity documents.	1.1 Knowledge of the content of documents. 1.2 Lack of familiarity with documents. 1.3 Mentor's help in getting to know the documents. 1.4 Lack of mentor's help in getting to know the documents.
	2. Professional requirements for a teacher's assistant.	2.1 Special knowledge. 2.2 Personal characteristics.
Formation of the value system	3. The mentor's influence on the assistant's decisions.	3.1. A teaching assistant's approach to sharing his experience with a mentor. 3.2. Implementation of a values-based mentoring model.
	4. Reflection of the teaching assistant's activities.	4.1. Value guidelines for reflection. 4.2. Ability to analyze successes and failures.

Mentor and mentee communication – moral argumentative conversation practice	5. Mentor and mentee reasoning activities	5.1. Decision-making through communication and cooperation. 5.2. Final decisions are made by the mentor.
	6. Involvement of the teaching assistant in the life of the group and the community of the institution.	6.1. Experiences of involvement in group/community. 6.2. Ways of engaging in group life. 6.3 Ways to engage in community life. 6.4. Mentor support in getting involved in group/community life.
Education – an emancipation vector of mentee’s development	7. Responsibilities of the teaching assistant.	7.1. Knowledge of one's responsibilities. 7.2. Experience comes with responsibility. 7.3. The mentor's approach to the assistant's responsibility. 7.4. Sharing of responsibility.
	8. The teacher's assistant's motivation to improve his/her competences.	8.1. Ways of improving competences. 8.2. Frequency of competence development through qualification courses. 8.3 Mentor, administration support and creation of conditions for improving competences.
Reverse mentoring – the evidence of teacher assistant’s emancipation.	9. Cooperation between teacher assistant and mentor.	9.1. Ways of self-reflection of activity. 9.2. Self-reflection of the activity is not carried out. 9.3. Discussion of the activity with the mentor.
	10. Expression of the teacher assistant's will.	10.1. Willingness to try. 10.2. Quality of work.
	11. The willingness of the teaching assistant to share the experience.	11.1 The mentor's openness to learning from his/her protégé. 11.2. Protégé's readiness to share his/her achievements and give qualified recommendation to the colleagues and mentor.

In the field of social emancipation, it became clear that all respondents feel fully involved in the life of the group in which they work, as well as in the community of the entire institution. Although the mentor's help in forming relationships with the team was almost not evident, the conditions were created for the assistants to get involved in social life on their own, gradually, independently.

During the analysis of the educational aspects of emancipation, it became clear that teacher assistants spend a lot of time on personal development: they attend seminars, read literature, etc. There are also manifestations of a mentor's help: he/she recommends the necessary sources, provides information, offers seminars, encourages personal improvement. It also turned out that all the survey participants are considering becoming teachers in the future. The analysis of the mentor's competences that emancipate the activities of the teaching assistant revealed that all mentors provide support to their assistant, which is very

important in the emancipation process. Mentors have many competencies that help this process to be successful.

Conclusions and discussion

The participants of both studies, who are in favor of early education, claim that it would be beneficial for children experiencing social exclusion, as it helps to reduce social problems. When discussing the legal empowerment of the teaching assistant, which, according to Čiučiulkiene and Bankauskiene (2015), is the first step towards the professional emancipation of the teaching assistant, it can be noticed that it is not given much importance. Teacher assistants lack knowledge about the documents that regulate their activities. Neither the institution's administration nor the mentor usually helps in this matter and does not help the assistant to be familiar with these documents.

When discussing the emancipation of teaching assistants on a philosophical level, it is appropriate to mention one of the components - responsibility, which is discussed by Lissovoy, (2010), Ratzinger (2016) and De Ridder, Van der Weiden, Gillebaart, Benjamins & Ybema, (2020). According to the authors, this is one of the features of justice, the foundation of moral behavior. By taking responsibility for his/her actions and deeds, a person expresses himself/herself as a full-fledged personality, assumes it as his/her own identity. The conducted research revealed that the assistants feel a great responsibility in their work, but they cannot precisely define their responsibilities. The division of responsibility between the mentor and the assistant also became evident, which can be considered a very positive thing.

When discussing the emancipation of the teaching assistant in an educational aspect, one can refer to Radford (2012) and the insights of Tur Porres, Wildemeersch and Simons (2014). According to the authors, with a favorable assessment of oneself and one's own knowledge in professional activities, the need for personal development arises - the need to raise one's qualifications, interest in career opportunities. The strong will of the assistants also becomes apparent. The desire to work and perform their work as well as possible, consideration of career opportunities, constant interest in them, improvement of their competences. This shows a successful emancipation in the educational field.

When discussing the emancipation of the teacher's assistant at the social level, it is possible to refer to those that emphasize the necessity of cooperation, planning, coordination, and implementation of joint activities among the participants of the educational process to help students with special needs overcome learning difficulties. The authors note that all of this is sorely lacking. During the analysis of the qualitative research, the lack of cooperation between teacher assistants, pedagogues, and specialists became evident. Although, according to the teacher's assistant, he/she must receive all the information about

the child's individual characteristics, the identified disorder, and educational recommendations, this is still lacking in practice.

The significance of the mentor's competences for the development of his/her protégé is discussed by Montvilaitė and Janulaitienė (2014), revealing that the mentor's competence is closely related to the development of the protégé. The research revealed that assistants work with professionals in their field who can provide all kinds of help, support, and support that help them improve. This shows that mentors can create favorable conditions for assistants' emancipation.

The emancipation of the professional activity of a teacher's assistant is a social state dominated by perception of reality, activity and will. The process of emancipation takes place under favorable legal (legal empowerment), philosophical (self-evaluation), educational (personal development) and social (professional socialization) conditions. The combination of these four aspects of emancipation and perception of reality, activity and volition, their fulfillment in professional activities, with the help of a mentor, gives the teacher's assistant liberation, allows him to feel independent, a full participant in the educational process.

The competence of the mentor, the ability to convey the available knowledge, is important is very important while emancipating the activities of the teaching assistant. It must be characterized by general: personal, social, information and communication, assessment, managerial, training and consulting, didactic: selection of educational content, educational planning, application of educational technologies, creation of educational environment, educational process management competencies. (Lissovoy, 2010). With their help, helping to form the basic competences of the teaching assistant, which would involve him/her in the educational process. The proof of the success of the emancipation of the teaching assistant is the process of reversibility of mentoring (Marcinkus - Murphy, 2012; Augustinienė & Čiučiulkiene, 2013), during which not only the mentor, but also the assistant shares available knowledge, advice, and useful information (Jordan & Sorell, 2019).

To enable the emancipation of professional activity teaching assistants, lack knowledge about the content of the documents regulating professional activity and the help of mentors in this area. Self-reflections of assistant activities, greater and more frequent communication between mentor and assistant, discussion of activities, cooperation in decision-making should be expanded. Mentor support in forming relationships with the community of the group, institution, creation of conditions for the professional development of assistants, communication, and cooperation with specialists in various fields must be developed as well.

References

- Alvesson, M., & Willmott, H. (1992). On the idea of emancipation in management and organization studies. *Academy of management review*, 17(3), 432-464.
- Augustinienė, A., & Čiučiulkienė, N. (2013). Reverse mentoring as facilitating factor for the development of a beginning teacher's self-authorship process. *Socialiniai mokslai*, (3), 73-84.
- Čiučiulkienė, N., & Bankauskienė, N. (2015). Sampratos „emancipacija“ interpretaciniai vartojimo aspektai. *Socialinis ugdymas*, T. 40, Nr. 1, 133-146.
- De Ridder, D., Van der Weiden, A., Gillebaart, M., Benjamins, J., & Ybema, J. F. (2020). Just do it: Engaging in self-control on a daily basis improves the capacity for self-control. *Motivation Science*, 6(4), 309.
- Gennara, A., Peetz, J., & Milyavskaya, M. (2023). When more is less: Self-control strategies are seen as less indicative of self-control than just willpower. *Journal of Experimental Social Psychology*, 106, 104457.
- Giangreco, M. F. (2013). *Teacher Assistant Supports in Inclusive Schools: Research, Practices and Alternatives*. USA: University of Vermont.
- Jordan, J., & Sorell, M. (2019). *Why Reverse Mentoring Works and How to Do It Right?*
- Liasidou, A. (2012). *Inclusive education, politics, and policymaking*. London: Continuum.
- Lissovoy, D. (2010). *Rethinking Education and Emancipation: Being, Teaching, and Power*. University of Texas at Austin.
- Mayring, P. (2014). *Qualitative Content Analysis: Theoretical Foundation, Basic Procedures and Software Solution*. Klagenfurt: GESIS.
- Marcinkus–Murphy, W. (2012). Reverse mentoring at work: fostering crossgenerational learning and developing millennial leaders. *Human Resource Management*, Vol. 51, No. 4, 549-573.
- Monkevičienė, O., & Autukevičienė, B. (2011). Mentorius kompetencijų modelis: studentų praktikai vadovaujančių ikimokyklinio ugdymo mentorių nuomonė. *Pedagogika*, 64–73.
- Montvilaitė, S., & Janulaitienė, N. (2014). *Mentoriaus veikla ugdymo institucijoje*. Ugdymo veiksniai mokymo(si) kontekste globalizacijos sąlygomis: mokslinių straipsnių rinkinys. 222-235. Vilnius.
- Radford, L. (2012). Education and the illusions of emancipation. *EducStudMath* 80, 101 – 118.
- Ratzinger, J. C. (2016). *Truth and tolerance: Christian belief and world religions*. Ignatius Press.
- Ryynanen, S., & Nivala, E. (2017). Empowerment or emancipation? Interpretations from Finland and beyond. *Pedagogica Social. Journal of research in social pedagogy*, 30, 33-46.
- Setlhako, M. A. (2020). Teaching assistants' competencies and the community of inquiry at an open distance learning institution. *Journal of Social Sciences and Humanities*. Vol. 16. No.8, 1-17.
- Sharples, J., Webster, R., & Blatchford, P. (2015). EEF guidance report: making best use of teaching assistants. *London: The Education Endowment Foundation*.
- Tur Porres, G., Wildemeersch, D., & Simons, M. (2014). Reflections on the emancipatory potential of vocational education and training practices: Freire and Rancière in dialogue. *Studies in continuing education*, 36(3), 275-289.
- Vilkeliene, A. (2004). Pedagoگو padėjėjo veikla; socializacijos aspektai. *Pedagogika*, (70), 213-216.

SOCIĀLĀ PEDAGOĢIJA
Social Pedagogy

THE REALISATION OF CHILDREN'S RIGHT TO PARTICIPATION IN COMMUNITY CHILDREN'S CARE HOMES

Rita Raudeliūnaitė

Mykolas Romeris university, Lithuania

Vida Gudžinskienė

Mykolas Romeris university, Lithuania

Abstract. *The article reveals the findings of a qualitative study the aim of which was to identify the realities of the realisation of the children's right to participation in the community children's care home (hereinafter referred to as CCCH). Research questions of the study: What are real possibilities for children to realise their right to participate in the decision taking in CCCH? How are children involved in decision taking? Nine social workers, working in CCCHs in different locations in Lithuania, participated in the study.*

The study revealed that to realise the child's right for participation a positive attitude of an employee towards child's participation. The positive attitude of an employee should be linked to a child-centre approach, which includes attentiveness to every child, openness to the child's experience, opinion, non-dominance of an adult and the acknowledgement of the child being the expert of his situation. To realise the child's right for participation establishment and maintenance of positive relationships with the child by employees which is linked to a respectful communication with the child, trust in the child and the child's trust in the employee. It is also important to provide the child with information regarding his right for participation by informing that employees are ready to listen to him and that he has a right to express his opinion on different topics regarding himself. Another important aspect of the realisation of the child's right for participation is cooperation with the child which is expressed through the provision of information in the manner which is understandable to the child, his empowerment to participate when taking decisions, listening to his opinion, taking into consideration his opinion, in order to ensure his best interests, the analysis of situations and discussions with children when taking decisions, assistance, but not substitutionary help when the child takes decisions.

The study revealed that CCCHs create conditions for the child's right for participation to be realised in his daily activity which is expressed the child's participation when drawing up CCCH's rules and adhering to them, planning and organising his leisure time, the child's involvement in the creation and maintenance of personal and common spaces, daily choruses.

Keywords: *children, children's home, community participation, right.*

Introduction

One of the rights of the child is to participate in the decision-making. The right of the child to participate in the decision-making is enshrined in Article 12

of the United Nations Convention on the Rights of the Child (United Nations, 1989). Article 12 of the Convention on the Rights of the Child states that the child has the right to freely express his opinion and views and to be heard (United Nations, 1989). General Comment 12 of the United Nations Committee on the Rights of the Child (2009) claims that it is a process in which a dialogue takes place between the child and the adult while exchanging information and on the basis of mutual respect. The General Comment states that the child's participation is not a momentary action, but a continuous process (United Nations Committee on the Rights of the Child, 2009). The children's right to participation is unique, because it acknowledges that that, although children are dependent on their parents and other adults, they have the right to participate in the decision-making that affects them (Lansdown, Jimerson, & Shahroozi, 2014).

When shaping child wellbeing policy, Lithuania relies on principal provisions of the United Nations Convention on the Rights of the Child. This convention was adopted in Lithuania in 1995. As it is noted in the Convention, participating states should respect and guarantee all the rights of every child set out by the convention. The right of participation provides children with the opportunity to be not discriminated, to be heard and to have an impact in the decision-making that directly affects them. This right contributes to the diversified education of children, improves their state of mind, dignity and self-esteem and contributes to the preparation for independent living of children (Fiorvanti & Brassard, 2014).

The child's right of participation depends on adult persons and how they assess and convey this right to children: by informing them on the possibility of participation, creating the possibility to them to voice their opinion, taking it into consideration in the decision-making regarding them (Merkel-Holguin et al., 2019). Children, while feeling their attention and attitude based on trust, become involved in the process of participation when taking decisions with increased willingness (Cossar, Brandon, & Jordan, 2014).

The studies that have been carried out demonstrate the relevance of the participation of the children, who live in institutional care, in the process of decision-making. It is acknowledged that children, who live in institutional care, are provided with limited possibility to participate in the decision-making in various areas, this acts as a break on the formation of independence in children and decreases the possibilities of their successful involvement in society (McPherson, et al., 2020). It is underlined that, when a person leaves the environment characterised by an inflexible daily schedule and rules, in which there is small amount of space for self-determination or free choice, it may be difficult for him to formulate and to express their wishes and to take independent decisions (Salazar, Spiers, & Pfister, 2021). Therefore, it is no coincidence that international (Deinstitutionalisationguide, 2012) and national (LR Ministry of Social protection and labour, 2014) documents, which regulate an institutional

care reform, emphasise that the focus of attention should be on the ensuring of the child's right of participation in the decision-making that directly affects them.

In Lithuania, the child care reform includes the creation of new and the development of the existing community-based services which are alternative to institutional care. One of the forms of the provision of community-based services is a community children's care home (CCCH), which is a children's care home operating in a model close to a family environment (up to 8 children) established in separate premises (e.g., a house, an apartment) in the community. It is noteworthy that, in the Description of community children's care home (LR Ministry of Social protection and labour, 2021), particular emphasis is put on the ensuring of the child's right of participation. However, having performed the analysis of the studies, which examine the deinstitutionalisation process of childcare institutions in Lithuania, which began in 2014, it was established that there is a lack of studies, which reveal the realisation of the children's right of participation at CCCH. The realization of the children's right of participation in the decision-making that affects them is closely related to decision-making skills in children. Scientific studies demonstrate that children, who had lived in institutional care, having begun to live in CCCH, lack decision-making skills (Raudeliūnaitė & Gudžinskienė, 2018). The process of institutional care reform, which is conducted in Lithuania, has reached the second phase, therefore, it is expedient to research how, after the living conditions of children have changed while they live in an environment close to the family at CCCH, their right of participation is realised. The objective of the study is to identify the realities of the realisation of children's right of participation at CCCH.

Research methodology

Method of data collection. To conduct the study, qualitative type of research was chosen. The method of a semi-structured interview was used in the study, which enables to move closer to the perception of human experiences, the identification of meanings, the definition of situations and the interpretation of reality (Creswell, 2014). In order to reveal the realities of the realisation of children's right of participation at CCCH, during the interview, the social workers were given the following questions: What are real possibilities for children to realise the right of participation in decision-making at CCCH? How are children involved in decision-making?

Method of data processing. The obtained data were analysed by using the content analysis method. According to J. W. Creswell (2014), a content analysis is a technique, which, having examined the specificity of a text, allows to draw reliable conclusions objectively and systematically. When performing a qualitative content analysis this consistency was adhered to: multiple reading of the transcribed interview texts and reflection on them, data encoding while

singling out semantic units in the text, grouping codes into subcategories, formation of categories from subcategories, integration of categories/subcategories into the context of the phenomenon under analysis, the interpretation of study data (Creswell, 2014). J. W. Creswell (2014) emphasises that content analysis is a valid method for making specific inferences from the analysed text.

The research data was analysed by two researchers. Before beginning the data analysis, the researchers agreed regarding the data analysis. Y. Zhang & B. Wildemuth (2017) note that when study data is analysed by a few researchers it is necessary to discuss data encoding rules and to practically verify that all the researchers uniformly understand them. The primary data analysis was performed by the researchers individually, while encoding data and forming primary subcategories and categories. After that the researchers compared the primarily distinguished subcategories and categories, discussed and finally formed them by common agreement.

The sample of the research. Targeted selection of the study participants was used in the study. The participants of the study were selected according to the following criteria:

- 1) social workers who have a degree in the area of social work;
- 2) social workers who work at CCCH, 3) at least 3 years of work experience at CCCH.

The study was conducted in the April - June of 2022. All the interviews were conducted remotely while recording interviews at the same time. Nine social workers, working in CCCHs in different locations in Lithuania, participated in the study. Collection of the research data was stopped in compliance with the data saturation principle. When it was noticed that the answers obtained during interviews started repeating the earlier received data, the new research participants were not included in the research.

Ethics of the research. The study was based on the respect for personal privacy, benevolence and attitude not to harm a researcher, confidentiality and anonymity (Aluwihare-Samaranayake, 2012). The participants of the study participated voluntarily. They were briefed on the purpose and the use of the study, the method of study data collection and the procedure of the study, anonymity and confidentiality were ensured. Study participants were assigned a code by using the letter 'A, B, C' and so on. The encoded data of all the study participants are available only to the researcher.

Research results

The right of the child to participate in the decision-making is an integral part of the child wellbeing and the child's social rights. The environment, which encourages participation, significantly contributes to the implementation of

children's rights (Venninen, Leinonen, Lipponen, & Ojala, 2014). One of the functions of the employees of institutions, working in the area of the realisation of children's right of participation, is the implementation of children's right of participation. In order to achieve that, it is important that employees would demonstrate attention to the child, would search for ways, methods allowing the child to realise the child's right of participation, to appreciate the realities of the realisation of the child's right of participation, that they would remove obstacles for the realisation of the child's right of participation. The study is aimed at revealing the realities of the realisation of the children's right of participation in the community children's care home.

Having performed the study data analysis, it was established that children, living at CCCH, are provided with opportunities to realise the right of participation. Having analysed the study data, five categories, which are associated with the realisation of the children's right of participation at CCCH, were distinguished: a child-centred approach, the creation of positive relationships with the child, the provision of information to children concerning their right of participation, cooperation with the child when realising his right of participation and the creation of conditions to realise the child's right of participation in his daily activity (Table 1).

Table 1 The expression of the child's right of participation in the community children's care home (made by Authors)

Categories	Subcategories
A child-centred approach	Attentiveness to every child
	Openness to the experience and opinion of the child
	Non-dominance of adults
	The recognition of the child as an expert of his situation
The creation and maintenance of relationships with the child	Respectful communication with the child
	Trust in the child
	The child's trust in the employee
The provision of information to children concerning the right of participation	The informing of children regarding them being giving a hearing
	The informing of children regarding the expression of their opinion
Cooperation with the child while realising his right of participation	The provision of information to the child in a way understandable to him while empowering him to participate in decision-making
	Listening to the child's opinion
	The consideration of the child's opinion in order to achieve his best interests
	The analysis and discussion of situations with children when making decisions
	Supportive, but not substitutionary assistance for the child when he makes decisions

The creation of conditions to realise the child right of participation in his daily activity	Child participation while creating CCCH rules and adhering to them
	Child participation when planning and organising leisure
	The involvement of the child in the creation and maintenance of personal and common spaces
	The involvement of the child in housekeeping

The study revealed that, when realising the child's right of participation, an important role is played by the positive position of adults concerning child participation. Positive position of an employee is expressed through a child-centred approach. A child-centred approach is associated with attentiveness to every child. According to the study participants, "every child should be visible, he should feel important, necessary. To that end, time should be given to communicate with every child, because this is the only way you can know him better, a closer relationship, trust, openness is established" (H). An employee, by paying his attention to every child, shows that he and his opinion are important.

A child-centred approach is also expressed through the openness of an employee to the child's experience, his opinion and the non-dominance of adults. According to the study participants: "you shouldn't look down at the child's experience, override him" (A), "it is very important to be interested and open to the child's experience, not to disparage or ignore it. It assists in understanding the child's situation better, his approach" (I), "to take such a position that not only my opinion, as the specialist's or the adult's, the person's with experience, is important, but also that of the children and to demonstrate that to them, to help understand" (C). That demonstrates that, in order to realise the right of child participation, it is important to recognise the child as the expert of his situation. J.Strömpla & K. Luhamaa (2020) also note that there should be attitude towards children as experts of their own situation that they are able to perceive and interpret their life circumstances themselves. According to the authors, one of important steps, which should be taken in order to give a hearing to children, is to look at a situation through their lenses. Only the giving of a hearing to children and looking at their experiences seriously gives a reason to expect their openness, only then children may provide with important information and participate in the decision-making that affects them (Pöllki, Vornanen, Pursiainen, & Riikonen, 2012).

The study has established that the creation and maintenance of positive relationships with the child are important when realising the child's right of participation. When creating and maintaining positive relationships, respectful communication of the adult with the child and trust in the child and the child's trust in the employee are important. According to the study participants: "in order to ensure child's participation, it is important that employees would communicate

with children respectfully, would listen to the opinion of children and that they would trust the child and would believe in him” (D), “if we want that children would participate when making decisions, then, first of all, they must trust us... that their security would be guaranteed and promises would keep during decision-making and after” (B). Having won children`s trust, it is possible to convey information to children easier, to listen to them and to involve children in the processes of decision-making regarding issues that are related to them. Children, feeling the attention and the positive attitude of adults, which is based on trust, privacy and integrity, will want to become involved in the process of participation (Cossar, Brandon, & Jordan, 2014).

The study identified that, in order to realise the child`s right of participation, the provision of information to children concerning their right of participation, that they are able to voice their opinion and that they will be heard, are important. The study participants pointed out that “it is necessary to inform children that they can voice their opinion and it will be heard, understood (F), „children know that I will hear and will understand them, therefore, they openly voice their opinion, propose a way out, solutions” (E). The provision of information to children is a necessary condition, in order to involve children in meaningful participation in the process of decision-making (Križ & Roundtree-Swan, 2017). S. Bessell (2011) states that the participation of children is influenced by the fact whether they have enough information on the possibility of participation, whether they have the possibility to freely express their views, whether the child opinion influences the decision.

The study revealed that when realising the child`s right of participation it is important to cooperate with the child. Having analysed the experiences of the study participants, it was identified that social workers, working at CCCH, cooperate with children by making various decisions that affect them, presenting information during the decision-making process in a way understandable to them and empowering them to participate in the decision-making, listening their opinion, taking into consideration the child`s opinion, in order to achieve his best interests, analysing situations and discussing with children when making decisions. The study participants noted: “it is important to present information on issues related to them while using words understandable to the children taking into consideration their age and understanding” (A), “it is important to talk with children both in those cases when their wishes will be adhered to and when there is no possibility to adhere to their wishes, in a case like this, it is important to explain to the child that he would understand why it is so” (G), “if the child`s opinion is ignored, then it should be explained clearly and reasonably why so while assisting him in understanding through a discussion, and he shouldn`t be left in the dark by imposing such decision from on high“ (H), “it seems to me that the hearing of the child's opinion does not depend on the age of children, but on the fact how much effort we, adults, put to hear and to understand the child“. In

addition, the study participants noted that “it is very important to use appropriate methods of communication with the child, tools which would assist in understanding his wishes, expectations, possibilities” (B), „an individual approach to every child is very important, because not everyone is able say what he wants, therefore, it is important to use various tools both to get information and to present it” (D). The study participants also pointed out that some children do not express their wishes due to the circumstances, in which they find themselves, in their environment, because others have not encouraged them to express their wishes, would not ask their opinion, but made decisions instead of them, therefore, “there is a need to put considerable efforts into winning in the child that he would understand that his opinion is important, there is a wish to talk, to consult with him” (F). Thus, the statements made by the study participants demonstrate that children can influence the decisions, which are made, by expressing their thoughts. In addition, the study demonstrates that it is necessary to talk with children about their opinion, which they have expressed, and the influence they wield on their further decisions. P. Pöllki et al. (2012) also note that it is necessary to talk to children about reasons and possible consequences when making decisions. According to the authors, it is very important to convey all information to children on the issues related to them. The provision of information to the child assists in expressing his opinion easier, influencing or making a well-considered decisions and giving feedback.

The study demonstrated that some children encounter difficulties when making decisions, therefore, they need the assistance of CCCH employees. However, the study highlighted that supportive, but not substitutionary assistance should be provided to the child when making decisions. Supportive assistance in the taking of decisions is focused on the promotion of the child's autonomy, his will is respected and acknowledged, his dignity is not infringed and decisions are not made in place of the child. Substitutionary decision-making means that the child is deprived of the right to make autonomous decisions, and other persons make decisions in place of him, which, in turn, devalues one of the basic rights of the child – the right to decision-making, the child becomes defeated. The study participants noted that, when providing assistance regarding decision-making, it is important „to provide the child with the fullest information on the possible consequences of his decisions and behaviour in ways and a language which are understandable to him“ (C), „ although sometime the wishes and decisions of children may seem unreal, however, the duty of the social worker is not to deny them, but to assist the child in understanding his situation and possible consequences for various decisions“ (G). That demonstrates a child-centred approach of social workers which encourages to look for methods, tools, in order to increase the empowerment of the child in the taking of decisions. J. Strömpla & K. Luhamaab (2020) claim that children should be provided with assistance

which can help them express their approach. Every child has different abilities, therefore, adults must have appropriate methods and tools to reveal them.

The study revealed that the employees, who work at CCCH, create conditions for children to realise the right of participation in their daily activity. The study demonstrates that children participate in the creation of rules at CCCH. The study participants pointed out: “we involve children in the creation of CCCH rules, we encourage children to make proposals, we consider them and, by common accord, we adopt them” (E), “when children participate in the creation of rules they adhere to them more responsibly, because they participated in the creation and maintenance of them” (D). The involvement of children in the design of CCCH rules creates conditions for children to voice their opinion, to hear another’s opinion, to consider proposals and to make decisions and to assume responsibility for their execution.

The study demonstrates that child participation in the planning and organising of leisure is one more opportunity to realise their right of participation. The social workers noted that they listen to each child’s wishes about, how they would like to spend their leisure, and plan leisure pursuits both at the home and outside CCCH together. Attention should be drawn to the fact that the children’s right of participation is realised not only by planning leisure, but also by organising it. The study participants noted that „when we plan leisure with children, they undertake its organisation willingly, assume responsibilities for one or other activities” (A), „by getting involved in various leisure organisation activities children learn to make proposals, to voice their wishes, to listen to each other, to perceive another’s needs and wishes, they learn agree” (I). Children, when getting involved in the planning and organisation of various activities, they develop problem-solving skills. A. M. Salazar, S. S. Spiers, & F. R. Pfister (2021) maintain that children should be involved in the planning, organisation, execution of various activities and their analysis. That provides an opportunity to children to be listened to and heard, to undertake an initiative and to achieve self-fulfilment.

The study identified that children realise the right of participation by getting involved in the creation and maintenance of personal and common spaces. At CCCH, every child has his personal space which he can create according to his needs and wishes, he also contributes to the creation and maintenance of common spaces and is responsible for order in them. The study participants pointed out: “we give opportunities for children to fit out their room according to their wishes themselves” (B), “we consult with children how we will decorate common spaces, how we will fit them out” (E), “when children contribute to the creation of cosiness at the home they make greater efforts to maintain order there, they assume responsibility” (C). Children realise the right of participation by getting involved in household chores at CCCH. The study participants noted that household chores, for children, are not allocated, but there is consulting,

discussion regarding them, arising problems are conversed about, solutions are sought together: “our family conducts meetings, we talk over various household chores, children express their wishes, needs, complaints, we also talk with children individually” (G), “at least once a week, we all gather together to talk over household chores, leisure, purchases, successes and failures. During every meeting, we endeavour that all the children would express their opinion on a given topic: we encourage the timid ones, we try to respond to the needs of children by discussing, resolving arising problems, to introduce certain changes according to the proposals of children” (F). This demonstrates that employees endeavour to give a hearing to the opinion of children and to consult with them when making decisions. When the child is enabled to share his opinion and adults listen to his opinion and take it into consideration, thereby children feel not only the respect of adults, but also his support, and then they are more willing to share their opinion and reflect on their own views (Tisdall, 2017). Children always appreciate and open up more and speak their mind when an interest and flexibility concerning them is demonstrated (Van Bijleveld, Dedding, & Bunders-Aelen, 2015). In order to respect the child's approach and an experience he has gone through, it is important to converse with the child, to hear and to understand him, to support and to encourage him to be active when making decisions that affect them.

Conclusions

The study revealed that, in order that the right of participation of children living at CCCH be realised, a child-centred approach of employees, the creation of positive relationships with the child, the provision of information to children concerning the right of participation, cooperation with the child when realising his right of participation and the creation of conditions to realise the child's right of participation in his daily activity are important.

A child-centred approach is attributable to attentiveness to every child, openness to the child's experience, his opinion, the non-dominance of adults and the recognition of the child as an expert of his situation. The creation and maintenance of positive relationships with the child by social workers are important in the context of the child's right of participation. The creation and maintenance of positive relationships with the child are attributable to respectful communication with the child, trust in the child and the child's trust in the employee. When realising the child's right of participation, it is important to provide children with information concerning their right of participation by informing children that they can voice their opinion and their opinion will be heard. The cooperation of social workers with the child is also important when realising the child's right of participation at CCCH. Cooperation with the child is attributable to the provision of information to the child in a way he understands, his empowerment to participate in the decision-making, the listening to his

opinion, the taking into account of the child's opinion, in order to achieve his best interests through the analysis of situations and discussion with children when making decisions, supportive, but not substitutionary assistance to the child when making decisions.

At CCCH, conditions are created to realise the child's right of participation in his daily activity. In their daily activity, children realise their right of participation by participating in the creation of CCCH rules and adhering to them, participating in the planning and organising of leisure, getting involved in the creation and maintenance of personal and common spaces, and performing household chores.

References

- Aluwihare-Samaranayake, D. (2012). Ethics in qualitative research: A view of the participants' and researchers' world from a critical standpoint. *International Journal of Qualitative Methods*, 11(2), 64-81.
- Bessell, S. (2011). Participation in decision-making in out-of-home care in Australia: What do young people say? *Children & Youth Services Review*, 33(4), 496–501. DOI: 10.1016/j.chilyouth.2010.05.006
- Deinstitutionalisationguide. (2012). *Common European Guidelines on the Transition from Institutional to Community Based Care*. Retrieved from: <http://deinstitutionalisationguide.eu/>
- Cossar, J., Brandon, M., & Jordan, P. (2014). You've got to trust her and she's got to trust you': Children's views on participation in the child protection system. *Child & Family Social Work*, 21(1), 103–112. DOI: doi.org/10.1111/cfs.12115
- Creswell, J. W. (2014). *Research design: Qualitative, Quantitative and mixed methods approaches*. London: Sage.
- Fiorvanti, C. M., & Brassard, M. R. (2014). Advancing child protection through respecting children's rights: A shifting emphasis for school psychology. *School Psychology Review*, 43(4), 349–366. DOI: doi.org/10.1080/02796015.2014.12087410
- Raudeliūnaitė, R., & Gudžinskienė, V. (2018). The development of social skills of young people living in community care homes. In *Society, integration, education: proceedings of the international scientific conference, May 25th -26th, 2018* (vol. 3: Special pedagogy, social pedagogy, pp. 368-377). Rezekne: Rezeknes Academy of Technologies. DOI: doi:10.17770/sie2018vol1.3184
- Križ, K., & Roundtree-Swain, D. (2017). We are merchandise on a conveyer belt: How young adults in the public child protection system perceive their participation in decisions about their care. *Children and Youth Services Review*, 78, 32–40. DOI: <https://doi.org/10.1016/j.chilyouth.2017.05.001>
- Lansdown, G., Jimerson, S. R., & Shahroozi, R. (2014). Children's rights and school psychology: Children's right to participation. *Journal of School Psychology*, 52(1), 3–12. DOI: doi.org/10.1016/j.jsp.2013.12.006
- LR Ministry of Social protection and labour. (2014). *Action Plan for Transition from Institutional Care to Family-based and Community-based Services to People with Disabilities and Children without Parental Care for 2014-2020*. Retrieved from: <https://www.e-tar.lt/portal/lt/legalAct/c90d41f097de11e3bdd0a9c9ad8ce1bf>

- LR Ministry of Social protection and labour. (2021). *Description of community children's care home*. Retrieved from: <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/609e30e255df11eba1f8b445a2cb2bc7?positionInSearchResults=0&searchModelUUID=458ff0d7-a8f0-4aad-8b3e-1adacf912bef>
- McPherson, L., Vosz, M., Gatwiri, K., Parmenter, N., Macnamara, N., Mitchell, J., & Tucci, J. (2020). What does research tell us about young people's participation in decision making in residential care? A systematic scoping review. *Children and Youth Services Review*, 122, 105899. DOI: doi.org/10.1016/j.childyouth.2020.105899
- Merkel-Holguin, L., Schwab-Reese, L., Drury, I., Allan, H., & Hollinshead, D. (2019). Nothing about me without me: Children and young people's experiences with family group conferences. *Child & Family Social Work*, 25(1), 27–36. DOI: doi.org/10.1111/cfs.12648
- Pöllki, P., Vornanen, R., Pursiainen, M., & Riikonen, M. (2012). Children's Participation in Child-Protection Processes as Experienced by Foster Children and Social Workers. *Child Care in Practice*, 18(2), 107–125.
- Salazar, A. M., Spiers, S. S., & Pfister, F. R. (2021). Authentically engaging youth with foster care experience: definitions and recommended strategies from youth and staff. *Journal of Youth Studies*, 24(8), 1015-1032. DOI: <https://doi.org/10.1080/13676261.2020.1792863>
- Strömpla, J., & Luhamaa, K. (2020). Child participation in child welfare removals through the looking glass: Estonian children's and professionals' perspectives compared. *Children and Youth Services Review*, 118, 105421. DOI: doi.org/10.1016/j.childyouth.2020.105421
- Tisdall, E. K. M. (2017). Conceptualising children and young people's participation: Examining vulnerability, social accountability and co-production. *International Journal of Human Rights*, 21(1), 59–75. DOI: <https://doi.org/10.1080/13642987.2016.1248125>
- United Nations. (1989). *Convention on the Rights of the Child*. Retrieved from: <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-rights-child>
- United Nations Committee on the Rights of the Child. (2009). *General comment No. 12: The right of the child to be heard*. Retrieved from: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/G09/436/99/PDF/G0943699.pdf?OpenElement>
- Van Bijleveld, G. G., Dedding, C. W. M., & Bunders-Aelen, J. F. G. (2015). Children's and young people's participation within child welfare and child protection services: A state-of-the-art review. *Child & Family Social Work*, 20(2), 129–138. DOI: <https://doi.org/10.1111/cfs.12082>
- Venninen, T., Leinonen, J., Lipponen, L., & Ojala, M. (2014). Supporting children's participation in Finnish child care centers. *Early Childhood Educ J*, 42, 211–218.
- Zhang, Y., & Wildemuth, B. (2017). Qualitative analysis of content. In B. Wildemuth (Eds), *Applications of social research methods to questions in information and library science* (318- 329). USA: Libraries Unlimited.

FORMATION OF ADOLESCENTS' SOCIAL COMPETENCE IN EDUCATIONAL INSTITUTION ENVIRONMENT

Natalia Dmitrenko

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Oksana Voloshyna

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Alla Beldii

Vinnitsia Danylo Zabolotny Medical College, Ukraine

Valentyna Hrebenova

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Vitalii Zelinskyi

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Olha Pinaieva

Vinnitsia Mykhailo Kotsiubynskyi State Pedagogical University, Ukraine

Abstract. *The study is devoted to the actual problem of the formation of social competence of adolescents. The aim of the research is to present the theoretical essence of the social competence and try the method of forming the social competence of teenagers out in practice. It is stated that the formation of the personal social competence is one of the key tasks of the present-day school due to the main school documents and the guidelines for the schoolchildren education in educational institutions. It is justified that social competence is an acquired skill that can be formed and developed throughout the person's life. The developed social competence determines the status of an individual in society and affects personal success in further professional activities.*

In the study, the social competence is presented as universal personal qualities, knowledge, skills, behavioural models, which are required for person's successful socialization. The key features of social competence are: 1) recognition of the person's value-motivational sphere; 2) readiness to solve complex tasks (state of internal psychological mobilization); 3) persistence of the manifestation of this quality. It was found that important components of social competence for today's adolescence are: the ability to find constructive models of behaviour in various problem situations; navigate in the information space; apply the acquired theoretical knowledge in practice; the ability to work in groups, to cooperate with peers and older people; the ability to resolve productively conflict situations, based on the understanding of mental,

ethnic, and cultural characteristics of different social strata of the population; the ability to conduct business electronic correspondence with various recipients, etc.

Diagnostics for determining the manifestation of social competence of schoolchildren is presented, which is based on Doll's theory of social competence. The study describes the method of forming the social competence of teenagers by means of the case method. The didactic requirements for the use of the case method in order to form the researched quality are revealed, namely: saturation of the content of the cases with a meta-subject social context, multi-problems; connection of tasks with life priorities, interests, values of teenagers; the use of cases, that involves a combination of curricular and extracurricular activities, actualization of interdisciplinary knowledge, social experience of students; use of cases based on group work; implementation of the principle of cooperation in the process of solving cases, performance by the teacher of the role of moderator.

Keywords: *adolescents, application of case method, components of social competence, didactic requirements, educational institution environment, key features of social competence, person's social competence.*

Introduction

In modern conditions, the problem of formation of adolescents' social competence is extremely relevant caused by the search for appropriate ways of preparation for independent life. Responsibility for the life, family and country, in general, creates conditions for development of social competence as social experience, which is connected with features of social relations, offers effective self-realization in the society.

Social competence allows teenagers to engage effectively with other people and act independently, responsibly, using necessary information and their own social experience at their adulthood.

The article is aimed to describe the method of forming social competence of adolescents in conditions of educational institution environment by means of case method.

The methods of the research are: theoretical methods (analysis of psychological, pedagogical, scientific, research, analytical literature; generalization of pedagogical experience); empirical methods (observation of the educational process of pupils in conditions of general educational institution, conversation, questioning, and case method); pedagogical experiment and comprehensive analysis of its results.

Theoretical Background

The concept of «social competence» was introduced firstly into the scientific literature by the German philosophy and pedagogue Roth in the late 60-s of the 20th century. The scientist distinguished three types of person's competence: self-competence (self-knowledge), social competence (interaction with others) and subject competence (practical action) (Roth, 1969). The interpretation of the

social competence of the German researcher became the basis for subsequent scientific research. Kanning (2002) considered social competence as a multifaceted generalization concept that combined a lot of human competences. It was a combination of knowledge, skills and abilities that ensured the quality of social behaviour. The author claimed that social behaviour was the behaviour that promoted realization of the personal goals while preserving socially acceptable behaviour. The social competent behaviour was provided by a set of such methods of action, which determined mutually beneficial and successful cooperation of all participants of such interaction (Jackson, & Cunningham, 2015; Kanning, 2002; Petermann et al., 1995).

In developmental psychology Doran (2002), Emerson (2007), Raino (2008), White (2005) etc., social competence is often equated with the adaptation of an individual to the surrounding world in the process of socialization during education. Riemann, & Allgoewer (1993), Frosch (2002) expanded the interpretation of social competence by understanding that social competence also implied cooperation with the surrounding world (other people), and at the same time confrontation with it through certain personal aspects. Petermann et al. (1995), Seyd (2004) described the reflection characteristics of social competence, which ensured the realization of a balance between personal requests and the expectations of other people.

The latest studies presented the interdependence between high levels of social competence and emotional and well-being regulation and academic results of teenagers as well (Arslan, 2019; Franco et al., 2017). Some studies described the connections between social competence and sociocultural competences (Varela et al., 2020; Gómez-Ortiz et al., 2019). The relation between social competence and self-esteem were described in several studies. They showed that adolescents with higher level of social competence were more resilient and present higher self-esteem (Arslan, 2019; Waldeck et al., 2015). Consequently, the social competence had a significant effect on self-esteem (Bedard et al., 2020; Dembińska et al., 2020).

In some research, it was investigated and proved the important meaning of social competence in educational process (Franco et al., 2017; Gómez-Ortiz et al., 2017). In order to increase the educational success, it is not enough to improve cognitive skills but to promote social skills (Domitrovich et al., 2017; Taylor et al., 2017; Luna et al., 2020). Simultaneously, social skills strengthen interpersonal relationships between students and other participants of the educational process (Bessa et al., 2019; Cronin et al., 2018). Special attention was paid to examine the impact of social competence of adolescents on interpersonal skills in the educational process for positive and quality learning (Gómez-Ortiz et al., 2017; 2019; Bessa et al., 2019).

We consider that the essence of social competence is based on the balance between cooperation and confrontation of the demands and interests of the parties

in situations of interpersonal interaction. Thus, the social competence is a combination of universal personal qualities, knowledge, skills, behavioural models, which are required for person's successful socialization (Dmitrenko et al., 2021; 2022a). The key features of social competence are: recognition of the person's value-motivational sphere; readiness to solve complex tasks (state of internal psychological mobilization); persistence of the manifestation of this quality.

Thus, the social competence is characterized as the process result feature and sophisticated integral formation of personality. It is perceived as integral virtue of personality, represented by the system of personal traits and features, capabilities and socially meaningful faculties providing accordance of individual to the social group and determines the achievement of successful realization of personal and public meaningful aims in heterogeneous society.

Methodology

We have chosen a case method to form the social competence of adolescents. Study of the general features of the case method, as one of the productive interactive methods of teaching, allows to formulate specific didactic requirements to the use of the case method in the process of formation of social competence of pupils of the secondary school: the intensity of the case content with a metaphysical social context, the multi problems of the considered situations, which do not allow to find an unambiguous solution; connection of tasks with pupils' priorities in life, interests and values; use of «cross-cutting» cases, implementation of it involves combining of educational and extracurricular activities, updating of inter-subject knowledge, social experience of pupils; involving pupils in the choice of topics and improving the content of cases; the advantage of using group work, which provide considering individual peculiarities of pupils; realization of the principle of cooperation in the process of case solving, the teacher's role as a moderator in the process of search for the optimal ways of solution by pupils of secondary education.

The variety of cases (project cases, role cases, task cases, analytical cases, internal-operational or external-strategic cases, additive cases, etc.) does not change the cases' creation and structure. They should have: a plot, participants (their roles), a problem (and its features), a task (made / missed decisions), a question and a task to the case (Dmitrenko et al., 2022b).

All cases have the property of a multi-variant choice of a solution. Cases do not have the wrong solutions. Any result is the materials that can be included in the case for the next participants in the future. The teacher acts as a moderator, who ensures that the case is clear. The teacher does not suggest or give advice in

choosing the «correct» decision. And the pedagogue does not act as a mentor or does not exert pressure or «authoritative opinion» for participants.

Sample

Before starting experimental training for formation the social competence of adolescents by means of the case method in educational institution environment, we developed a set of methodical materials aimed at forming separate social competences. In the complex of materials, 5 cases were developed with the help of a psychologist. Those cases were met specified didactic requirements and compiled with consideration of knowledge and needs of teenagers. The case «Implementation of the Electronic Educational environment» was based on the real situation in which pupils were involved in the approbation of the introduction of the electronic educational environment. The change of external factors required the formation of new competencies, which would allow not only to acquire innovations, but also to get the maximum benefit. The students realized that they could influence the life of the school, while working on this case. Teachers and parents were equal participants of the educational process. The pupils took part more actively in the case concerning introduction of electronic educational environment, interacting with the project supervisor, the teacher and peers. Pupil's attention were attracted by the case, which forming the ability to conduct business e-mail with different addresses, cooperate with peers and older people, and achieve the set goal.

A quest-style case, as opposed to a training or seminar, allowed participants to gain experience as a result of independent search. Those cases formed social competence through experience more effectively, because pupils did not perceive the game reality as a learning task that it was distant from real life. There was an opportunity to model both abstract and real situations and create a storyline that would «lead» a person from habit to skill throughout the game. Thanks to the game format, participants «lived» different roles. An essential feature of that case was that it had no ready-made solutions, and the teacher and pupils worked «on equal terms».

Each case offered to the pupils was supplemented with new components: analytical materials, draft decisions obtained in the process of performing tasks. Participation in the creation of didactic materials, rather than just performing the task set by the teacher, increased the level of responsibility for the work results.

Participants

The study involved 58 adolescents aged 13-14 years. The experimental training was conducted in a secondary school among eighth grade pupils. The pupils were divided into two groups: control (29 participants) and experimental

(29 participants). The participants and their parents were informed about the purpose and the structure of the study and assured that their surnames would not be used in the study result reports.

Instruments

The questionnaire was adapted version of the Adolescent Multidimensional Social Competence Questionnaire (AMSC-Q) (Gómez-Ortiz et al. (2017)), that included the following parts: cognitive reappraisal, social adjustment, prosocial behavior, perceived social efficacy, and normative adjustment. The instrument helped to measure the level of formation of the following components of social competence of adolescents: 1) ability to find constructive models of behaviour in different social conditions; 2) ability to navigate in the modern information space, which reflects the cultural, economic, political life of society, different social groups; 3) ability to work in large and small groups, cooperate with peers and older people; 4) ability to resolve conflict situations, understand the characteristics of different social groups; 5) ability to conduct e-mail correspondence.

All indicators in the questionnaire were transformed into statements. In the process of filling in the questionnaire, it was necessary to evaluate to what extent the statement correctly described the behavioural patterns of the respondent on a five-point Likert scale: from «completely agree» (5 points) to «completely disagree» (0 points).

The participants of both groups filled in the self-assessment questionnaire of social competence at the beginning and at the end of the experimental training. During the experimental training, in order to form social competence, the pupils of the experimental group were taught with specially developed cases. The pupils of control group were taught traditionally without any changes in the program.

Results and Discussion

At the beginning of the study, respondents were offered a questionnaire for self-assessment of certain indicators of social competence (Fig. 1).

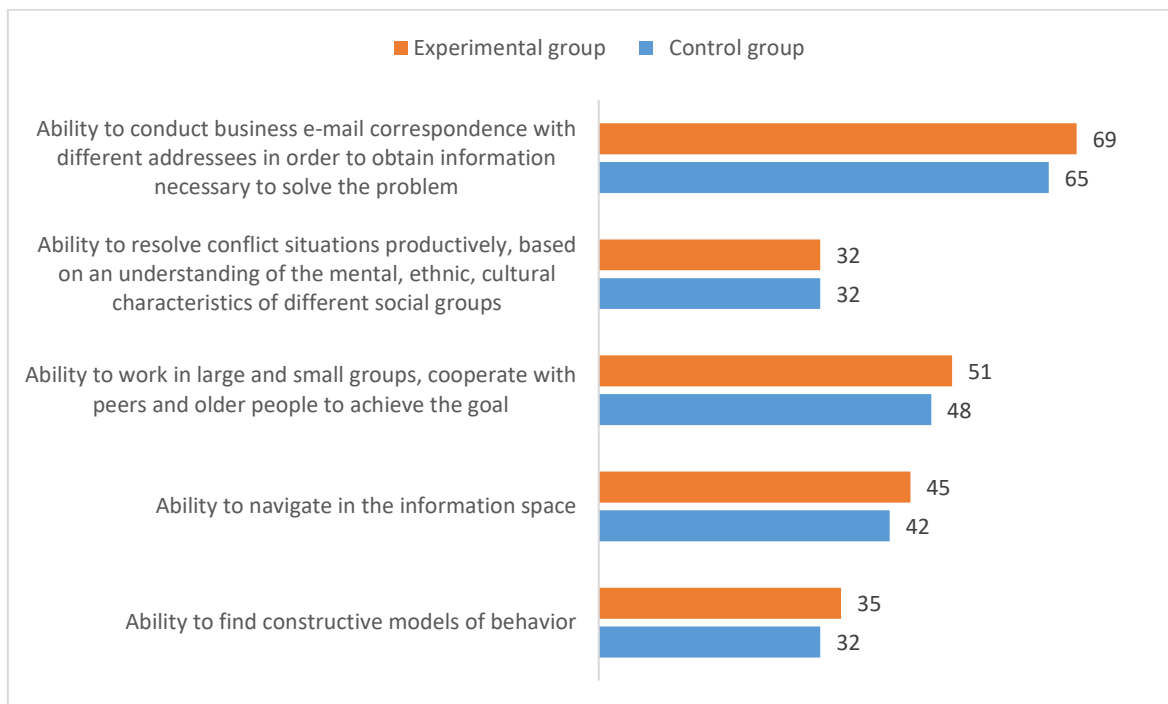


Figure 1 Self-assessment of pupils' social competences at the beginning of the experimental training (made by Authors)

The obtained results showed that the level of social competence in both groups differed insignificantly at the beginning of the experimental training.

At the end of the experimental training, the comparative results regarding to the formation of certain social competencies of pupils according to the determined behaviour indicators were received (Fig. 2).

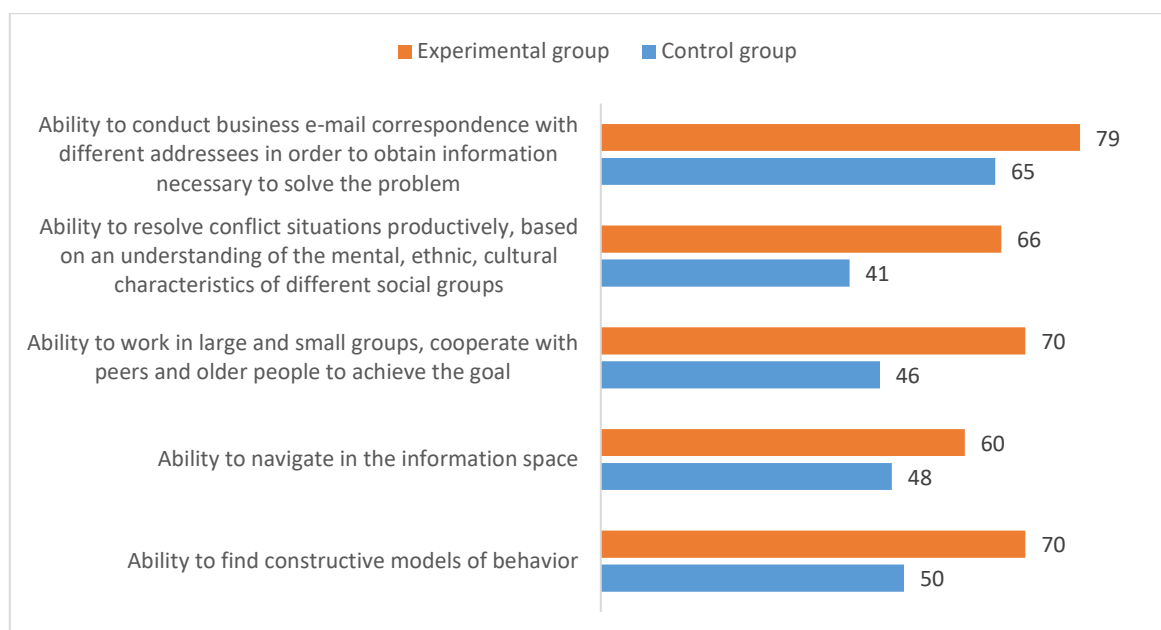


Figure 2 Self-assessment of pupils' social competences at the end of the experimental training (made by Authors)

At the end of the experimental training, according to the questionnaire results of pupils' self-assessment of the formation of social competence, the experimental group showed the formation of such qualities as the ability to work in large and small groups, to determine their own role in the work of the group and to fulfil it, to cooperate with peers and older people much more than the control class. The number of respondents increased to 19% in the experimental group, and in the control group the dynamics is negative.

Productive conflict resolution is an integral part of long-term group work on the case, which had a positive impact on the formation of competences in a fairly short period of time. The number of pupils in experimental group almost doubled: from 32% to 66% who believed that they learned to solve conflicts effectively, in contrast to the control group, where the number of respondents increased only to 9%.

Working with cases, teenagers showed the ability to 1) empathize, understand experience, condition and interests of others, and 2) critically perceive the positive qualities and shortcomings of themselves and their friends. The skill to prevent and productively resolve interpersonal conflicts was formed. If at the beginning of the experimental training the teenagers could make critical statements about their classmates, by the end of the training such behaviour became extremely rare. Pupils began to understand each other much better, there were fewer negative situations. Teenagers have formed an understanding of the unproductivity of excessive mutual criticism. These results converge with other previous research papers that analyze the effectiveness of social competence formation (Bessa et al., 2019; Luna et al., 2019).

The questionnaire results at the initial and final sections showed that the number of pupils who believed that they could find constructive patterns of behaviour in various situations doubled in the experimental group. In the experimental group in contrast to control group, there were significant positive changes according to the criteria "orientation in the information space", "ability to conduct electronic correspondence".

In the control group, where case studies were not used in the educational process, we noted the desire of adolescents for individualization, separation from a large group, closure in small primary groups. This situation could be reflected in difficulties related to further educational and professional activities.

Conclusion

As a result of the study, it is concluded that social competence can be formed effectively in the educational institution environment. The age of adolescence is favourable for its formation and a case method is an effective method for it. The main didactic requirements for the case method are: saturation of the content with meta-subject social context, multiproblems; connection of tasks with life

priorities, interests, values of adolescents; use of cases, the implementation of which involves a combination of lesson and extracurricular activities, actualization of interdisciplinary knowledge, social experience of pupils; involvement of children in the choice of topics and improvement of the content of cases; the advantage of using cases based on group work; implementation of the principle of cooperation, the role of the teacher as a moderator. The use of the case method in classroom and extracurricular activities throughout the school year, constant work with a certain base of created cases provided positive dynamics in the formation of social competence of pupils. It is concluded that an adolescent with high level of social competence 1) has a strong system of knowledge about human interaction in the educational process, and developed social intelligence, 2) understands and accepts social values of other people, 3) is able to cooperate with other participants of the educational process, 4) perform different social roles, 5) is able to adapt to the requirements of a new society, 6) is able to carry out constructive communication and prevent conflicts.

References

- Arslan, G. (2019). Mediating role of the self-esteem and resilience in the association between social exclusion and life satisfaction among adolescents. *Personality and Individual Differences*, 151, 109514. DOI: <https://doi.org/10.1016/j.paid.2019.109514>
- Bedard, C., Hanna, S., & Cairney, J. (2020). A longitudinal study of sport participation and perceived social competence in youth. *Journal of Adolescent Health*, 66(3), 352–359. DOI: <https://doi.org/10.1016/j.jadohealth.2019.09.017>
- Bessa, C., Hastie, P., Araújo, R., & Mesquita, I. (2019). What do we know about the development of personal and social skills within the sport education model: a systematic review? *J. Sports Sci. Med.*, 18, 812-829.
- Cronin, L. D., Allen, J., Mulvenna, C., & Russell, P. (2018). An investigation of the relationships between the teaching climate, students' perceived life skills development and well-being within physical education. *Physycal Education Sport Pedagogy*, 23, 181-196. DOI: <https://doi.org/10.1080/17408989.2017.1371684>
- Dembińska, A., Kłosowska, J., & Ochnik, D. (2020). Ability to initiate relationships and sense of loneliness mediate the relationship between low self-esteem and excessive internet use. *Current Psychology*, 1-7. DOI: <https://doi.org/10.1007/s12144-020-01138-9>
- Dmitrenko, N., Voloshyna, O., Budas, Iu., Davydiuk, M., & Oliinyk, N. (2022a). Formation of Teenagers' Value Orientations through Creolized Texts. *Postmodern Openings*, 13(1), 47-65. DOI: <https://doi.org/10.18662/po/13.1/384>
- Dmitrenko, N., Voloshyna, O., Budas, Iu., & Klybanivska, T. (2021). Formation of Ethical Culture of Intending Educators in the Educational Process of Higher Education Institution. *Society. Integration. Education. Proceedings of the International Scientific Conference. May 28th - 29th, 2021. Rezekne, Rezekne Academy of Technologies*, 1, 95-104. DOI: <https://doi.org/10.17770/sie2021vol1.6293>
- Dmitrenko, N., Voloshyna, O., Melnychuk, T., Holovska, I., & Dutka, H. (2022b). Case Method in Quasi-Professional Training of Prospective Teachers. *Independent Journal of Management & Production* 13(3), Special Edition ISE, 1-17. DOI: <https://doi.org/10.14807/ijmp.v13i3.1849>

- Domitrovich, C. E., Durlak, J. A., Staley, K. C., & Weissberg, R. P. (2017). Socioemotional competence: an essential factor for promoting positive adjustment and reducing risk in school children. *Child Development*, 88, 408-416. DOI: <https://doi.org/10.1111/cdev.12739>
- Doran, W. T. (2002). *Teachers' roles in social competencies of elementary-school students*. Northern Illinois University.
- Emerson, L. A. (2007). *Parental influences on children's social competence: Direct and indirect pathways*. Seattle Pacific University.
- Franco, M. D. G., Beja, M. J., Candeias, A., & Santos, N. (2017). Emotion understanding, social competence and school achievement in children from primary school in Portugal. *Frontiers in Psychology*, 8, 1376. DOI: <https://doi.org/10.3389/fpsyg.2017.01376>
- Frosch, H. (2002). *Im Netz der Beziehungen: Soziale Kompetenz zwischen Kooperation und Konfrantation*. Paderborn: Junfermann.
- Gómez-Ortiz, O., Romera, E. M., & Ortega-Ruiz, R. (2017). Multidimensionality of social competence: measurement of the construct and its relationship with bullying roles. *Rev. Psicodidact. Engl. Edn.*, 22, 37-44. DOI: <https://doi.org/10.1387/RevPsicodidact.15702>
- Gómez-Ortiz, O., Romera, E. M., Ortega-Ruiz, R., Herrera, M., & O'Higgins Norman, J. (2019). Multidimensional social competence in research on bullying involvement: a cross-cultural study. *Behav. Psychol.*, 27, 217-238.
- Jackson, S. L., & Cunningham, S. A. (2015). Social Competence and Obesity in Elementary School. *American Journal of Public Health*, 105(1), 153-158.
- Kanning, U. P. (2002). Soziale Kompetenzen – Definition, Strukturen und Prozesse. *Zeitschrift fuer Psychologie. Hogrefe Verlag, Goettingen*, 210, 154-163.
- Luna, P., Guerrero, J., Rodrigo-Ruiz, D., Losada, L., & Cejudo, J. (2020). Social Competence and Peer Social Acceptance: Evaluating Effects of an Educational Intervention in Adolescents. *Front. Psychol.*, 11, 1305. DOI: <https://doi.org/10.3389/fpsyg.2020.01305>
- Petermann, F., Margraf, J., & Rudolf, K. (1995). *Training sozialer Kompetenz bei Kindern und Jugendlichen*. Baltmannsweiler: Roettger-Schneider-Verlag.
- Raino, Sh. S. (2008). *Factor structure on social competence based upon the perceptions of school psychologists*. Northern Arizona University.
- Riemann, R. A., & Allgoewer A. (1993). Eine deutschsprachige Fassung des «Interpersonal Competence Questionnaire» (ICQ). *Zeitschrift flier Differentielle und Diagnostische Psychologie*, 14, 153-163.
- Roth, H. (1969). *Pedagogische Anthropologie*. Berlin.
- Seyd, W. (2004). *Sozialkompetenzerwerb im BBW mehr als ein guter Vorsatz*. BBW Waiblingen, Fassung.
- Taylor, R. D., Oberle, E., Durlak, J. A., & Weissberg, R. P. (2017). Promoting positive youth development through school-based social and emotional learning interventions: a meta-analysis of follow-up effects. *Child Development*. 88, 1156-1171. DOI: <https://doi.org/10.1111/cdev.12864>
- Varela, J. J., Alfaro, J., Melipillán, R., Gómez, D. O., & González-Carrasco, M. (2020). Perceptions of Safety, Satisfaction with Neighborhood and Life Satisfaction Among Chilean Adolescents. *Child Indicators Research*, 13, 1489-1502. DOI: <https://doi.org/10.1007/s12187-019-09649-z>
- Waldeck, D., Tyndall, I., & Chmiel, N. (2015). Resilience to ostracism: A qualitative inquiry. *The Qualitative Report*, 20(10), 1646–1670.
- White, S. (2005). *An investigation of a model of social competence*. State University of New York at Binghamton.

SPECIĀLĀ PEDAGOĢIJA
Special Pedagogy

**PEDAGOĢISKIE PRIEKŠNOSACĪJUMI ATBALSTAM
SKOLĒNIEM AR MĀCĪŠANĀS GRŪTĪBĀM
IEKĻAUJOŠĀS IZGLĪTĪBAS ĪSTENOŠANĀ**
*Pedagogical Prerequisites for Supporting Students with Learning
Difficulties in Inclusive Education*

Pāvels Jurs

Liepāja University Institute of Educational Science, Latvia

Maija Ročāne

Liepāja University Faculty of Pedagogy and Social Work, Latvia

Liene Ekša

Liepāja University, Latvia

***Abstract.** Responsibility for the inclusion of students with different learning needs in society should be shared equally by all: teachers, parents, education policy makers, local and national authorities, etc. It is not and should not be the sole responsibility of the educational institution, teachers and professionals of the support team. Inclusive education is an integral component of education policy, while a system of support measures is a key condition for inclusive education. Any student with learning difficulties must receive appropriate support measures in order to be able to learn in mainstream education. It is essential that student's learning difficulties are identified as early as it is possible, so that individualised and professional support is provided on time. The humanistic pedagogical framework of the chosen teaching and learning strategy is important. Such approach consists of the varied, targeted and professional application of pedagogical approaches and methods appropriate to each student. This is an essential prerequisite for the successful implementation of inclusive education. Using theoretical research methods - analysis of literature and normative acts, as well as empirical research methods - survey, statistical analysis of results and visualisation of data, the aim of the article is to identify existing challenges and develop proposals for successful implementation of inclusive education in comprehensive educational institutions for students with learning difficulties. As a result of the study, the authors developed a number of recommendations for local authorities as school founders, school administrators, teachers and support team professionals in order to help the implementation of inclusive education at schools more effectively. The results of the study confirm the lack of resources for meaningful and effective implementation of inclusive education in educational institutions, as well as reflect the support measures applied by educational institutions for pupils with learning difficulties, identifying influencing factors in the implementation of inclusive education.*

Keywords: *inclusive education, learning difficulties, student, support measures, teacher.*

Ievads ***Introduction***

Lai arī cik veiksmīgi iekļaujoša izglītība ir pilnveidojusies, nevar apgalvot, ka Latvijā iekļaujošā izglītība tiek īstenota veiksmīgi un rezultatīvi. Iekļaujoša izglītība ir ļoti plašs jēdziens un izpratne par tās īstenošanu ir dažāda. Apvienoto Nāciju Izglītības, zinātnes un kultūras organizācijas 1994. gada “*Salamankas*” deklarācijā iekļaujošās izglītības kontekstā ir uzsvērts: „iekļaujoša izglītība ir visefektīvākais veids, kā cīnīties pret diskriminējošu attieksmi, veidot pretimnākošu un iekļaujošu sabiedrību un panākt izglītību visiem, turklāt nodrošinot efektīvu izglītību skolēnu vairākumam, kā arī uzlabot visas izglītības sistēmas efektivitāti un rentabilitāti” (Kyriazopoulou & Weber, 2009, 14). Jāatzīmē, ka Izglītības likumā iekļaujošā izglītība netiek definēta, savukārt Izglītības attīstības pamatnostādņēs 2021.-2027. gadam iekļaujošā izglītība tiek definēta kā: “process, kurā tiek nodrošinātas atbilstošas visu izglītojamo daudzveidīgās vajadzības, palielinot ikviena izglītojamā līdzdalības iespējas mācību procesā, kultūrā un dažādās kopienās un samazinot izslēgšanas iespējas no izglītības un izglītības ieguves procesa” (Ministru kabinets, 2021), uzsverot nepieciešamību pēc mērķtiecīga atbalsta sistēmas nodrošinājuma iekļaujošās izglītības nostiprināšanai. Jāpiebilst, ka iekļaujoša izglītība attiecas uz izglītības sistēmu, kas ir piemērota visiem bērniem neatkarīgi no viņu fiziskajiem, intelektuālajiem, sociālajiem, emocionālajiem, valodas vai citiem ierobežojumiem (Mukkiri et al., 2021). Tomēr vislielākos šķēršļus iekļaušanai rada sabiedrības attieksme, nevis konkrēti veselības traucējumi. Negatīva attieksme pret citādo, nevienlīdzību izraisa diskrimināciju un var radīt nopietnus šķēršļus mācībām (Dash, 2018).

Izmantojot teorētiskās izpētes metodes – literatūras un normatīvo aktu analīzi, kā arī empīriskās izpētes metodes – aptauju, rezultātu statistisko datu analīzi un vizualizāciju, raksta mērķis ir noteikt pastāvošus izaicinājumus un izstrādāt priekšlikumus iekļaujošās izglītības sekmīgai īstenošanai vispārizglītojošajās mācību iestādēs skolēniem, kuriem ir mācīšanās grūtības.

Skolēnu mācīšanās grūtības – teorētiskais ietvars un aktualitāte ***Students' learning difficulties - theoretical framework and relevance***

Svarīgi, lai skolēnam, kuram ir mācīšanās grūtības, tās laicīgi tiktu pamanītas un laicīgi tiktu sniegts individualizēts un profesionāls atbalsts, jo, ja skolēnam atbalstu sniedz pēc iespējas ātrāk un savlaicīgi, ir iespējams izvairīties no negatīvām

sekām turpmākajā mācību procesā. Jāatzīmē, ka nozīmīga daļa skolēnu ar mācīšanās grūtībām ir tikpat gudri un spējīgi kā citi skolēni, ir tikai jāatrod pareizā pieeja viņu mācīšanās vadīšanai (Kemp, Smith, & Segal, 2021), tādējādi akcentējot, ka ikviens skolēns var kļūt veiksmīgs mācību procesā. Taču ir svarīgi, lai skolēns saprot un prot izmantot piedāvātos atbalsta pasākumus, piemēram, atgādnes, pagarinātu darba izpildes laiku, individualizētu pieeju, u.c. Piemēram, pedagogam ir ieteicams veidot atgādnes kopā ar skolēnu, lai skolēns, jau atgādņu tapšanas procesā, gūtu izpratni par to pielietošanas iespējām, tādējādi, mācoties līdzvērtīgi ar saviem vienaudžiem un sasniedzot izvirzītos mērķus.

Svarīgi nodalīt un atbilstoši lietot jēdzienus “mācīšanās grūtības” un “mācīšanās traucējumi” kā neirobioloģiskie traucējumi (Turkington & Harris, 2006). Lai mācību procesā palīdzētu skolēniem ar mācīšanās grūtībām, ir svarīgi nodrošināt pozitīvu un skolēna attīstību veicinošu vidi, kā arī izvērtēt ģimenes apstākļus. Pētniece J. Dreimane ir apkopojusi informāciju, ka neiroloģiskus traucējumus ietekmē un pastiprina nelabvēlīgi ģimenes apstākļi, vecāku nesaskaņas, konflikti un alkoholisms. Ir vecāki, kuriem nav zināšanu kā atbalstīt bērnu mācīšanās grūtību vai traucējumu gadījumā, tādēļ bieži mācīšanās grūtības var tikt uztvertas kā slimība, kas savukārt var veicināt neveiksmīgas attiecības starp bērnu un vecāku (Dreimane, 2007). Mācīšanās grūtības nereti tiek definētas kā dažādi mācīšanās traucējumi, piemēram, grūtības matemātikā, spējā klausīties, runāt, lasīt, rakstīt (Ghimire, 2017), tomēr mācīšanās grūtības nav tas pats, kas mācīšanās traucējumi. Mācīšanās grūtības var iedalīt vairākās pakāpēs:

1. valodas grūtības – skolēnam grūtības izprast rakstītu tekstu, kas arī var liecināt par disleksijas pazīmēm;
2. matemātiskas grūtības – skolēnam ir grūtības uztvert matemātiskos jēdzienus un veikt aritmētiskos uzdevumus;
3. rakstīšanas grūtības – skolēnam ir grūti veidot burtus vai rakstīt, iekļauties plaknē;
4. neverbālās mācīšanās grūtības - skolēnam ir grūtības saprast valodu, neskatoties uz normālu dzirdi un redzi, kā arī bērnam var piemist vizuālās informācijas apstrādes traucējumi (Shukla & Agrawal, 2015).

Nozīmīga ir ikvienas mācīšanās grūtības laicīga ievērošana izglītības iestādē, skolēna vecāku informēšana par novērotajām grūtībām, kā arī sadarbības ar atbalsta personālu veidošana, tālāko atbalsta mehānismu apzināšanai un piemērošanai. Skolēns pats savas grūtības var arī neapzināties un neuztvert kā mācīšanās traucējumus, īpaši sākumskolas posmā. Tādēļ nozīmīgas kļūst izvēlētas, uz skolēna mācīšanās vajadzībām un progresu balstītās mācīšanas un mācīšanās stratēģijas humānās pedagoģijas ietvarā, atbilstoši katram skolēnam, kā arī pedagoģisko pieeju un metožu daudzveidīga, mērķtiecīga un profesionāla pielietošana. Turklāt jāatzīmē,

ka topošo pedagogu sagatavošanas procesā augstākās izglītības programmās iekļaujošās izglītības kurss, kā obligātais, ir ieviests tikai no 2019. / 2020. studiju gada, sniedzot studentiem zināšanas un pamatprasmes iekļaujošās izglītības jomā (Nīmante & Isackers, 2019) – līdz tam zināšanas par iekļaujošu izglītību apguva tikai speciālās pedagoģijas programmas studenti, bet skolotājiem bija un ir iespēja apgūt 72 stundu pedagogu profesionālās kompetences pilnveides kursus speciālajā pedagoģijā.

Skolēni, kuriem neveicas mācībās, bieži var tikt nosodīti nepietiekamo mācīšanās sasniegumu dēļ, saņemot aizskarošu un nievājošu attieksmi no citiem: gan no vienaudžiem, gan no pedagogiem, kas skolēnam rada vēl lielāku spriedzi (Lapiņa, 2006). Psihologs O. Nikiforovs pēc savas profesionālā darba pieredzes atzīst, ka nav *netalantīgu* skolēnu, problēma ir pieaugušajos, kuri nevēlās vai pat īsti neprot virzīt skolēna mācīšanos, pielāgot mācību procesu skolēna mācīšanās vajadzībām (Nikiforovs, 2014). Līdztekus atbalsta pasākumu nodrošinājumam, kas pieprasa gan pedagoga profesionālo pieredzi, gan finanšu resursus, būtiska nozīme ir arī videi. Psiholoģe J. Maļicka uzsver, ka viens no pedagoga izaicinājumiem ir veidot skolēnam atbalstošu mācīšanās vidi, kurā ikkatrs skolēns spētu attīstīt savas spējas sev piemērotā laikā un tempā. Tā ir vide, kas veicina skolēna izaugsmi un motivē viņu darbošanās priekam (Maļicka, 2004).

Atbalsta pasākumu nodrošinājums vispārīgajās mācību iestādēs skolēniem, kuriem ir mācīšanās grūtības
Provision of support measures in general educational institutions for students with learning difficulties

Jāatzīmē, ka objektīvi novērtēt un konstatēt skolēnu skaitu Latvijā, kuriem ir mācīšanās grūtības ir sarežģīti, jo pastāv atšķirīga pieeja skolēnu mācīšanās grūtību noteikšanai. Vispārējās izglītības iestāžu slogs ir liels, tiek iekļauts ļoti liels skolēnu skaits ar dažādiem traucējumiem, turklāt traucējumi nav līdz galam apzināti, izglītības iestādēs trūkst pienācīgs atbalsta personāla nodrošinājums, iestādēm trūkst inventārs, resursi, tehniskais nodrošinājums salīdzinot ar speciālās izglītības iestādēm. Finansējuma trūkums tiek aktualizēts kā problēma arī izglītības attīstības pamatnostādņēs, pašvaldību vispārējās izglītības iestādēs ir nozīmīgs speciālistu, piemēram, logopēdu un psihologu trūkums. Tikmēr var konstatēt, ka Latvijā pieaug skolēnu skaits, kuriem ir specialās vajadzības (2014./2015. mācību gadā – 11 366 skolēnu, bet 2019./2020. mācību gadā – 15 437 skolēnu), turklāt atbalsta pasākumu nodrošinājums skolēniem ar speciālām vajadzībām valsts līmenī nenotiek sistemātiskā un mērķtiecīgā veidā par ko liecina skaudrie Latvijas Republikas Valsts Kontroles revīzijas ziņojuma “*Vai bērnam ar speciālām vajadzībām ir iespēja*

saņemt tā spējām, vajadzībām un bērna labākajām interesēm atbilstošu izglītību?” apkopotie rezultāti un secinājumi (Valsts kontrole, 2021).

Atbalsta pasākumu sistēma ir galvenais iekļaujošas izglītības nosacījums. Lai jebkurš skolēns, tai skaitā, ar mācīšanās grūtībām spētu mācīties vispārējās izglītības iestādē, viņam ir jāsaņem atbilstoši atbalsta pasākumi. Izglītības likums paredz, ka ikvienam ir tiesības uz kvalitatīvu un iekļaujošu izglītību, turklāt pašvaldības pienākums ir nodrošināt skolēnam, kura dzīvesvieta deklarēta tās administratīvajā teritorijā, iespēju iegūt pirmsskolas izglītību un pamatizglītību dzīvesvietai tuvākajā izglītības iestādē (LR Saeima, 1998). Izglītības iestādei ir jāiekļauj ikviens skolēns, nodrošinot viņam nepieciešamos apstākļus, tomēr praksē šādu prasību izpildīt kļūst arvien sarežģītāk. Skolēnam, kurš mācās vispārējās izglītības iestādē un saņem atbalsta pasākumus pamatizglītības posmā ir nepieciešams izstrādāt izglītojamā individuālo programmas apguves plānu, kurā jāievēro skolēna pieredzi, prasmes, izziņas procesu īpatnības un veselības stāvokli, kā arī izglītības standartā un mācību priekšmetu programmās izvirzītos sasniedzamos rezultātus (Valsts Izglītības un saturs centrs, 2022).

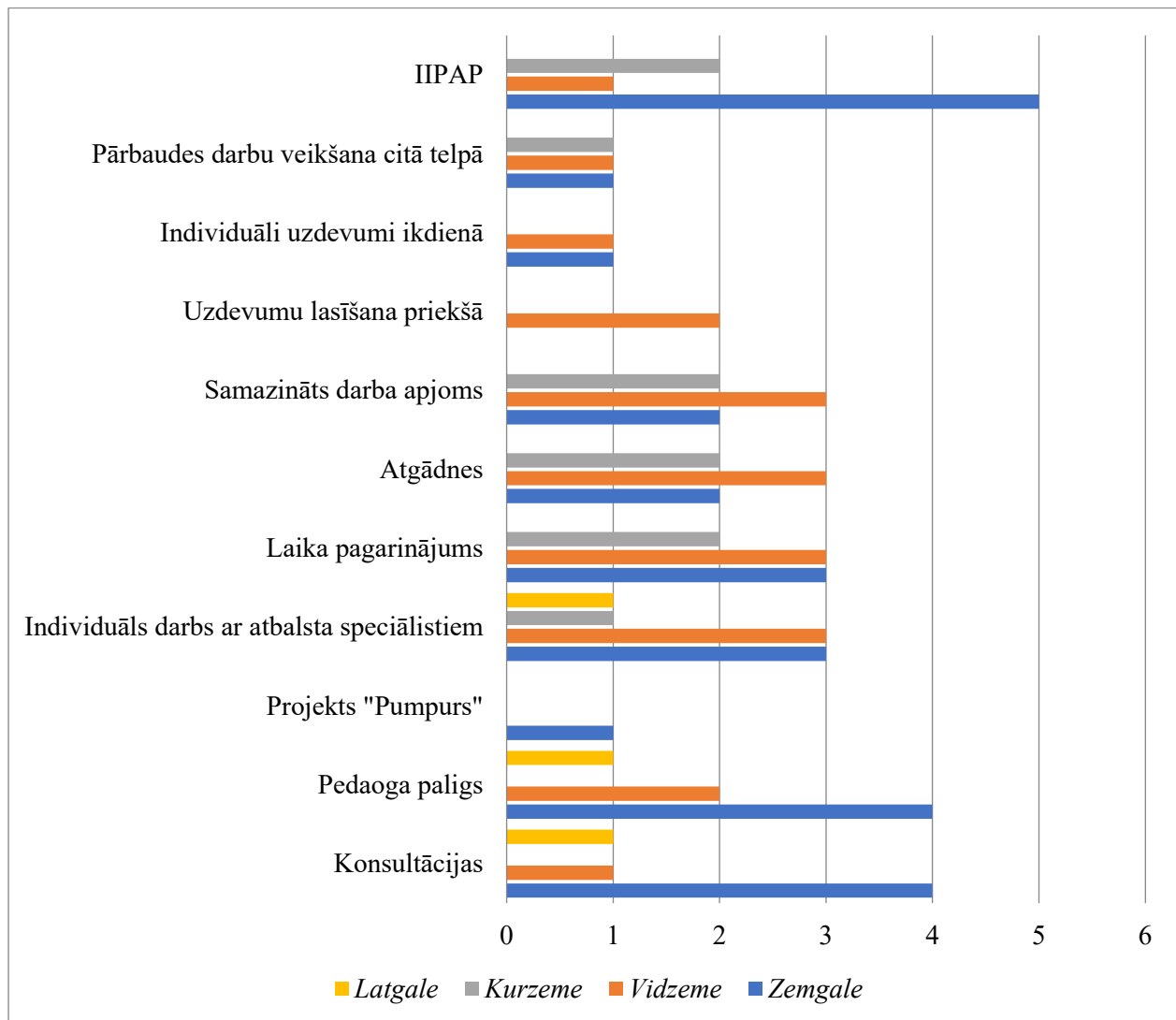
Pedagoģiskā atbalsta nodrošināšanā, līdztekus pedagoga individuālai kompetencei un profesionālai pieejai, svarīgs ir izglītības iestādes, kā mācīšanās organizācijas, īstenota iekļaujošās izglītības politika. Izglītības iestādei jānodrošina pedagogus ar pietiekamu atzinību, sagatavotību, atbalstu, resursiem, tālākas attīstības iespējām. Ja pedagogi ir pienācīgi atbalstīti, viņi var sniegt efektīvas, vienlīdzīgas mācību iespējas saviem skolēniem (UNESCO, 2021). Pedagogam būtu un ir jāsaņem atbalsts no izglītības iestādes, lai varētu nodrošināt mērķtiecīgu atbalstu arī skolēnam ciešā sadarbībā ar skolēna vecākiem vai likumiskiem pārstāvjiem – tā ir sava veida savstarpējās sadarbības un savstarpējā atbalsta sinerģija starp izglītības iestādi, pedagogu un skolēnu, kur nozīmīgu vietu iegūst arī skolēna vecāku vai likumiskie pārstāvju atbildība par savu bērnu, lai sadarbības rezultāts būtu efektīvāks un tiktu mazinātas negatīvās sekas un asociāla uzvedība.

Empīriskā izpēte – metodoloģija un rezultāti ***Empirical research - methodology and results***

Izmantojot kvalitatīvās aptaujas metodi (Geske & Grīnfelds, 2001) ar slēgtiem un atvērtiem jautājumiem, 2022. gada septembrī un oktobrī tika organizēta anketēšana dažādos Latvijas reģionos vispārīzglītojošajās izglītības iestādēs ar mērķi noskaidrot kādus atbalsta pasākumus izmanto skolas un ar kādām grūtībās saskaras skolas iekļaujošās izglītības īstenošanas kontekstā. Pēc nejaušības principa tika nosūtītas 25 anketas uz vispārējās izglītības iestādēm, no tām saņemtas 15 atbildes.

Aptauju aizpildīja izglītības iestādes administrācijas pārstāvis, no kuriem 5 izglītības iestādes atrodas Zemgale, 5 – Vidzemē, 3 – Kurzemē, 2 – Latgalē.

Analizējot aptaujas datus var secināt, ka visplašākais atbalsta personāla nodrošinājums ir Latvijas reģionos Zemgale un Vidzeme, vismazākais nodrošinājums ir Latgalē, galvenokārt izglītības iestādēs strādā logopēds, speciālais pedagogs un sociālais pedagogs. Jāatzīmē, ka visās aptaujātajās izglītības iestādēs mācās skolēni ar mācīšanās grūtībām.



1.attēls. *Īstenotie atbalsta pasākumi reģionālajās izglītības iestādēs (autoru veidots)*
 Figure 1 *Support measures implemented in regional education institutions*
 (created by authors)

Aptaujas ietvaros respondentiem bija jānosauc atbalsta pasākumus skolēniem ar mācīšanās grūtībām, kuri tiek izmantotai konkrētajā izglītības iestādē (1. attēls),

jāatzīmē, ka atbalsta pasākumi ir atšķirīgi. Iestādes minēja tādu atbalsta pasākumus kā konsultācijas (ar priekšmetu pedagogiem), pedagoga palīgs klasē, Eiropas Sociālā fonda projektu “Atbalsts priekšlaicīgas mācību pārtraukšanas samazināšanai” (PUMPURS) piedāvātās iespējas, individuālas nodarbības (konsultācijas) ar atbalsta speciālistiem, pagarināts darba izpildes laiks mācību procesā, pārbaudes darbos, atgādnēs, samazināts darba apjoms pārbaudes darbos (mazāks uzdevumu skaits), uzdevumu lasīšana priekšā, individuāli uzdevumi (pārbaudes darbos atsevišķi piemēroti uzdevumi), pārbaudes darbu rakstīšana citā telpā (pie kāda no atbalsta personāla), izglītojamā individuālās programmas apguves plāns (IIPAP).

Aptaujas rezultāti arī atspoguļo kā izglītības iestādes organizē sadarbību ar skolēnu vecākiem, kas ir ļoti būtisks faktors atbalsta pasākumu veiksmīgai īstenošanai. Respondentu (atvērta tipa jautājums) visbiežāk nosauktie sadarbības veidi ar skolēnu vecākiem vai viņu likumiskiem pārstāvjiem ir: skolēnu individuālās programmas apguves plāna izveide; individuālas sarunas; kopīgi izvirzīti mācīšanās mērķi un uzdevumi; mācību sasniegumu izvērtēšana, u.c.

Respondenti – izglītības iestāžu administrācijas pārstāvji, nosauca vairākus cēloņus, kuri apgrūtina atbalsta nodrošināšanu skolēniem ar mācīšanās grūtībām: atbalsta personāla trūkums, liels skolēnu skaits (ar atbalsta pasākumiem), telpu trūkums, vecāku iesaistes trūkums, pedagogu pārslodze un motivācijas trūkums- bieži pedagogi arī nav motivēti strādāt ar skolēniem, kuriem ir atbalsta pasākumi. Empīriskās izpētes rezultāti apliecina, ka visvairāk iekļaujošas izglītības īstenošanu apgrūtinošs faktors ir grūtības nodrošināt atbalsta personālu, kā arī pārāk lielais skolēnu skaits, kuriem ir mācīšanās grūtības. Aptaujas atvērtie jautājumi nodrošināja respondentiem iespējas sniegt tai skaitā priekšlikumus sekmīgai skolēnu integrācijai, kuriem ir mācīšanās grūtības, rezultātā raksta autori piedāvā sistematizētu priekšlikumu sadaļu, tādējādi arī sasniedzot izvirzīto pētījuma mērķi.

Priekšlikumi *Recommendations*

1. Būtiski ir ne tikai izglītības iestādēm, bet arī pašvaldībām, kā skolu dibinātājiem, pārdomāt un īstenot vienotu stratēģiju un motivācijas sistēmu, lai piesaistītu atbalsta speciālistus, sabalansējot atbalsta personāla noslodzi. Atbildību par skolēnu ar dažādām mācīšanās vajadzībām iekļaušanu sabiedrībā būtu jāuzņemas visiem līdzvērtīgi un atbilstoši savai kompetencei, tā nav un nedrīkst būt tikai izglītības iestādes, pedagogu un atbalsta komandas specialistu atbildība.
2. Ieteicams nodrošināt savstarpēja atbalsta pasākumu pieredzes apmaiņu gan izglītības iestādē, gan konkrētajā pašvaldībā, lai varētu dalīties ar pieredzi

- darbam ar skolēniem, kuriem ir mācīšanās grūtības. Savstarpējā pieredzes nodošana un informācijas iekšējā aprīte, kopīgi meklējot efektīvāko risinājumu, var nodrošināt mērķtiecīgāku un savlaicīgāku palīdzību skolēniem.
3. Lai spētu sniegt vienotu atbalsta sistēmu skolēniem, kuriem ir mācīšanās grūtības, ieteicams izglītības iestādē izstrādāt vienotu pieeju atbalsta pasākumu nodrošināšanai, individuālo plānu izstrādē un to īstenošanā, iesaistot atbalsta personālu, kā arī izveidojot datu bāzi ar skolēnu raksturojumu, lai pedagogs varētu pielietot individualizētu pieeju, apzinoties mācīšanās grūtību spektru.
 4. Apzinoties mācīšanās grūtības un katru individuālo gadījumu, ieteicams izglītības iestādei sadarbībā ar skolēnu un viņa vecākiem vai likumiskiem pārstāvjiem vienoties par mācību sasniegumu vērtēšanas sistēmu un regulāru informācijas apmaiņu.
 5. Pedagoģiem savstarpējā sadarbībā ieteicams izveidot skolēna individuālo *portfolio*, tajā, iekļaujot, piemēram, informāciju par skolēna komunikācijas un sadarbību prasmju pilnveidošanu, mācīšanās vajadzībām, stiprajām un vājām pusēm, izaugsmes iespējām un iespējamām draudiem. Tas palīdzēs noteikt iespējamās skolēna grūtības jau agrīni.
 6. Lai apzinātu un izprastu daudzveidīgo skolēnu mācīšanās grūtību spektru un ievērotu konsekvenci izmantoto atbalstu pasākumu nodrošināšanai individuālā un kolektīvā līmenī, ieteicams izglītības iestādēs sistemātiski un jēgpilni organizēt pedagogu profesionālās kompetences pilnveides kursus iekļaujošās izglītības jomā, īpaši apzinoties skolēnu un pedagogu mainības plūsmu skolās.

Secinājumi **Conclusions**

Latvijā nav nodrošināti atbilstoši apstākļi, resursi un normatīvais regulējums, lai rezultatīvi īstenotu iekļaujošo izglītību vispārīzglītojošajās izglītības iestādēs skolēniem ar mācīšanās grūtībām. Pastāv specialistu trūkums, atbalsta personāla pārslodze, pedagogu profesionālo zināšanu nepietiekamība, atšķirīga izpratne par to kas ir iekļaujošā izglītība un kā tā tiek organizēta.

Iekļaujošās izglītības procesa īstenošanai pašvaldību un nacionālā līmenī, kurā tiek nodrošinātas atbilstošas visu skolēnu daudzveidīgās vajadzības, samazinot izslēgšanas iespējas no izglītības un izglītības ieguves procesa, nav vienota redzējuma un izpildījuma. Atbildība tiek deleģēta galvenokārt katrai izglītības iestādei atsevišķi, nereti ignorējot vecāku un kopējo sabiedrības atbildību par rezultatīvu iekļaujošās izglītības īstenošanu.

Būtiski ir savlaicīgi konstatēt skolēna mācīšanās grūtības, lai nodrošinātu atbilstošāku mācīšanas stratēģiju, kā arī sadarbībā ar atbalsta personāla speciālistiem

un skolēna vecākiem izstrādāt individualizētu atbalsta pasākumu sistēmpieceju mācīšanās procesa pilnveidei.

Mācīšanās grūtības ne tikai rada apgrūtinājumus skolēna ikdienas mācību procesā, bet arī nopietni ietekmē viņa pašvērtējumu. Skolēnam regulāri saņemot kritiku par to, ko viņš nespēj, ar laiku rodas zems pašvērtējums un kritika pret sevi, tādējādi radot mācību pārtraukšanas riskus un paviršu attieksmi pret mācību procesu nākotnē. Būtiski veicināt atbalstošu mācību vidi, sniegt pozitīvu un argumentētu pamudinājumu ikdienā, lai skolēns, kuram ir mācīšanās grūtības, spētu noticēt savām mācīšanās spējām.

Atbalsta pasākumu sistēma ir galvenais iekļaujošas izglītības nosacījums, līdztekus pedagoga individuālai kompetencei un profesionālai pieejai, svarīga ir izglītības iestādes, kā mācīšanās organizācijas, īstenota iekļaujošās izglītības politika un savstarpējā sadarbība.

Empīriskās izpētes rezultāti apliecina, ka vispārīzglītojošajās izglītības atbalsta pasākumi skolēnam, kuriem ir mācīšanās grūtības ir atšķirīgi, galvenokārt tas ir atkarīgs no pieejamiem resursiem. Pārsvarā tie ir: individuālas nodarbības (konsultācijas); skolēna individuālās programmas apguves plāna sastādīšana; atgādnēs, laika pagarinājums pārbaudes darbu izpildē un pedagogu palīgu iesaiste galvenokārt pamatizglītības sākumposmā.

Empīriskās izpētes rezultātā var konstatēt sekojošus faktorus, kas apgrūtina atbalsta nodrošināšanu skolēniem ar mācīšanās grūtībām: atbalsta personāla trūkums; liels skolēnu skaits, kuriem ir mācīšanās grūtības; telpu trūkums; vecāku nepietiekama iesaiste mācību procesā; pedagogu pārslodze, pieredzes un motivācijas trūkums darbam ar skolēniem kuriem ir mācīšanās grūtības.

Summary

The authors of the article cannot conclude that inclusive education in Latvia is being implemented successfully and efficiently. Inclusive education is a very broad concept and perceptions of its implementation vary. It is important that a student's learning difficulties are detected as early as it is possible, thus, personalised and professional support can be given early enough as well and negative consequences for future learning can be avoided. Inclusive education refers to an education system that is appropriate for all children, regardless of their physical, intellectual, social, emotional, linguistic or other limitations. It is important to inform the student's parents about the observed difficulties, and to work with support staff to identify and apply further support mechanisms. A student may not be aware of own difficulties sometimes even not perceiving them as learning difficulties, especially at the primary stage. Therefore, the teaching and learning strategies which are chosen basing on the

student's learning needs and progress, within the framework of humanistic pedagogy and the targeted and professional application of pedagogical approaches and methods become important. In order to identify and understand the diverse range of learning difficulties of students and to maintain consistency in the support measures used at individual and collective level, it is recommended to organise systematic and meaningful professional development courses for teachers in the field of special education in educational institutions. It can be concluded that adequate conditions and resources for the implementation of inclusive education for students with learning difficulties are not sufficiently provided in general education institutions of Latvia. There is a shortage of specialists, overload of support staff, lack of professional knowledge and different perceptions of what inclusive education is and how it is organised. Learning difficulties not only impede a student's everyday learning, but also has a serious impact on self-esteem. If a student is regularly criticised for what he or she cannot do eventually, it leads to low self-esteem and self-criticism, thus creating the risk of dropping out of school and the development of careless attitude towards learning in the future. It is essential to foster a supportive learning environment, to provide positive and reasoned encouragement on a daily basis so that a student with learning difficulties can believe in his or her learning abilities.

Literatūras saraksts

References

- Dash, N. (2018). Problems and Challenges of Inclusive Education for Students with Special Needs. *Online International Interdisciplinary Research Journal*, 08 (01), 155-162.
- Dreimane, J. (2007). *Funkcionālais analfabētisms*. Periodika: Bibliotēku pasaule Nr. 40. Pieejams: <http://periodika.lv/periodika2-viewer/?lang=fr#panel:pa|issue:316445|article:DIVL132|query:no%20>
- Geske, A., & Grīnfelds, A. (2001). *Izglītības pētīju metodoloģija un metodes*, Rīga: RaKa.
- Ghimire, S. (2017). Knowledge of Primary School Teacher Regarding Learning Disabilities in School Children. *Journal of Nobel Medical College*, 6(1), 29-35. DOI: 10.3126/jonmc.v6i1.18084
- Kemp, G., Smith, M., & Segal, J. (2021). *Back to Basics – What is a Learning Disability?* Learning disabilities associations of wellington country, New Zealand. Retrieved from: <https://ldawc.ca/back-to-basics-what-is-a-learning-disability/>
- Kyriazopoulou, M., & Weber, H (2009). *Indikatoru izstrādāšana iekļaujošai izglītībai*. Brisele: Eiropas speciālās izglītības attīstības aģentūra.
- Lapiņa, K. (2006). *Psihosomatiskās sakarības un mūsdienu cilvēks*. Rīga: Librum.
- LR Saeima. (1998). *Izglītības likums*. Rīga: Latvijas Republikas Saeima. Retrieved from: <https://likumi.lv/ta/id/50759-izglitibas-likums>
- Maļcika, J. (2004). *Piederības izjūta un mācību motivācija*. Rīga: RaKa.

- Ministru kabinets. (2021). *Ministru kabineta rīkojums Nr. 436 "Par Izglītības attīstības pamatnostādņem 2021.-2027. gadam"*. Rīga. Retrieved from: <https://likumi.lv/ta/id/324332-par-izglitibas-attistibas-pamatnostadnem-20212027-gadam>
- Mukkiri, S., Kandasamy, P., Subramanian, M., Chandrasekaran, V, & Kattimani, S. (2021). Inclusive Education for Children with Special Needs and Autism: Status in the Schools of Puducherry. *Journal of Child Science*, 11(01), 255-261. DOI: 10.1055/s-0041-1735882
- Nikiforovs, O. (2014). *Pirmsskolas vecuma bērnu intelektuālo spēju diagnostika*. Rīga: RaKa.
- Nīmante, D., & Isackers, K. (2019), *Skolotāju kompetences un attieksmes iekļaujošas izglītības veicināšanai*. Rīga: Latvijas Universitāte.
- Shukla, P., & Agrawal, G. (2015). Awareness of Learning Disabilities among Teachers of Primary Schools. *Online Journal of Multidisciplinary Research*, 1 (01), 33-38.
- Turkington, C., & Harris J. (2006). *The Encyclopaedia of learning disabilities*. New York: Infobase Publishing.
- UNESCO. (2021). *Pārdomas par nākotni. Jauns sabiedriskais līgums izglītības jomā*. Retrieved from: <https://www.unesco.lv/lv/media/848/download>
- Valsts izglītības un saturs centrs. (2022). *Individuālā izglītības programmas apguves plāna sastādīšana un īstenošana*, Rīga. Retrieved from: https://registri.visc.gov.lv/specizglitiba/dokumenti/metmat/metiet_ind_plana_sastadisanai_2022.pdf
- Valsts kontrole. (2021). *Vai bērnam ar speciālām vajadzībām ir iespēja saņemt tā spējām, vajadzībām un bērna labākajām interesēm atbilstošu izglītību?* Rīga. Retrieved from: https://lrvk.gov.lv/lv/getrevisionfile/29455-Asko-F2-FK_-mptgPffbczGdLSEhczVJ.pdf

LĪDZATKARĪBAS SAISTĪBA AR STRESA PĀRVARĒŠANAS STRATĒGIJĀM SIEVIETĒM PARTNERATTIECĪBĀS AR PSIHOAKTĪVO VIELU ATKARĪGU PARTNERI

A Relationship of Co-dependence and Stress Coping Strategies for Women in Relationship with Partner of Substance Use Disorder

Aiva Lāce

VSIA Bērnu klīniskā universitātes slimnīca, Latvija

Velga Sudraba

Rīgas Stradiņa universitāte, Latvija

Abstract. *This study aim is to explore the relationship between coependency and coping strategies of women in relationship with an individual addicted to psychoactive substances. The study included 31 women aged 25 to 64 years ($M = 42.03$; $SD = 9.45$). Three surveys were used in the study - Socio-Demographic Data Survey; Spann-Fischer Co-dependence Scale; The Ways of Coping Scale. Spearman's correlation analysis was used to determine the liabilities, and the prediction of coping strategies / ways of indicators was performed by linear regression analysis. It was found that there is a statistically significant relationship between codependency and emotion-focused coping as strategy (strategic problem-solving, escape and avoidance, taking responsibility). Research on current coping strategies has shown that emotion-focused coping as strategy and corresponding types of stress management such as seeking social support, positive reassessment, planned problem solving and escape and avoidance are more often used.*

Keywords: *addiction, co-dependence, coping, partnership, substance use disorders, women.*

Ievads

Introduction

Psihoaktīvo vielu (alkohola, narkotiku vai medikamentu) lietošana ir viena no aktuālākajām sociālajām problēmām gan pasaulē, gan Eiropā. Vadoties pēc Latvijas iedzīvotāju alkohola un narkotiku lietošanas paradumu tendencēm 2020. gadā, dati liecina, ka alkohola lietošanu Latvijas iedzīvotāju vidū vecumā no 15-64 gadiem bija 81,8%, bet stipros alkoholiskos dzērienus pēdējās nedēļas laikā visvairāk lietojuši cilvēki vecuma grupās 35-44 un 55-64 gadi (SPKC, 2020), bet 2017. gada pētījumā 87% aptaujāto iedzīvotāju atzina, ka narkotikas lieto ilgstoši (10 un vairāk gadi)

(SPKC, 2018). Tendences psihoaktīvo vielu lietošanā bieži vien norāda uz to, ka problemātiskāka psihoaktīvo vielu lietošana ir novērojama vairāk vīriešiem.

Šīs tendences varētu norādīt uz to, ka varētu būt arī salīdzinoši liels sieviešu skaits, kas atrodas partnerattiecībās ar no psihoaktīvām vielām atkarīgu partneri (vīrieti), taču konkrēta statistika par šādu populācijas daļu nav pieejama, un tā varētu būt tikai aptuvena. Līdz šim nav pieejami arī dati par sievietēm, kam raksturīgas uzvedības īpatnības disfunkcionālās attiecībās jeb līdzatkarīga uzvedība, taču nereti ir novērots, ka šādas sievietes vērsas pēc palīdzības un atbalsta. Liela loma šādu uzvedības īpatnību attīstībai nākotnē ir uzvedības modelim attiecībās izcelsmes ģimenē un bērnības pieredzei (Stafford, 2001; Mudar, Leonard, & Solstysinski, 2001). Taču ir pētījumi, kas pievērš uzmanību šādas uzvedības attīstībai tieši atrodoties disfunkcionālās partnerattiecībās ar atkarīgu indivīdu (Noriega, 2004; Dear, Roberts, & Lange, 2005; Sowle, 2014).

Pētījuma mērķis bija noskaidrot, kāda ir saistība starp līdzatkarības un stresa pārvarēšanas stratēģiju rādītājiem sievietēm partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu. Lai to pārbaudītu, tika izvirzīti vairāki pētījuma jautājumi: (1) Kādas ir biežāk pielietotās stresa pārvarēšanas stratēģijas un veidi sievietēm partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu? (2) Vai pastāv saistība starp līdzatkarības un stresa pārvarēšanas stratēģiju rādītājiem sievietēm partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu? (3) Cik lielā mērā sievietēm partnerattiecībās ar psihoaktīvām vielām atkarīgu indivīdu līdzatkarības rādītāji prognozē stresa pārvarēšanas stratēģiju rādītājus?

Literatūras apskats *Review of literature*

Līdzatkarība kā jēdziens definēta pagājušā gadsimta 70. gadu beigās. Sākotnēji “līdzatkarība” definēta kā slimība vai personības traucējums, taču vēlāk jēdziens saistīts ar uzvedības īpatnībām disfunkcionālās attiecībās, kas izpaužas kā pārmērīga fokusēšanās uz otru, emociju un jūtu izpausmes trūkums un grūtības attiecībās ar citiem (Fischer, Spann, & Crawford, 1991; Schneider, 2004). Pētījumos par līdzatkarīgas uzvedības attīstības prognozi novērots, ka ne tikai esošajās disfunkcionālās partnerattiecības attīstās šādas uzvedības īpatnības (faktori: partnera alkoholatkarība, partnera fiziskā un seksuālā vardarbība u.c.), bet arī liela nozīme ir bērnības pieredzei, dzīvojot disfunkcionālā ģimenē (faktori: vecāku alkoholatkarība, novārtā pamešana, zaudējumi, vardarbība u.c.) (Noriega et al., 2008). Augstāki līdzatkarības rādītāji novēroti tieši sievietēm (Harkness & Cotrel, 1997; Fuller & Warren, 2000). Arī izglītības trūkums, kultūras aspekts – sievietes loma vai “dzīves scenārijs”, ir viens no faktoriem, kādēļ šādas sievietes nespēj “izkļūt” no

disfunkcionālām attiecībām esošajās partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu (Stafford, 2001; Noriega et al., 2008; Sarkar, Mattoo, Basu, & Gupta, 2013). Iepriekšminētie faktori tiek raksturoti arī kā stresa faktori, kas bieži raksturīgi disfunkcionālās attiecībās izcelsmes ģimenē, tādēļ bieži vien esošajās partnerattiecībās ar atkarīgu indivīdu no sievietes puses var būt vērojamas noteiktas stresa pārvarēšanas stratēģijas (Bora, Banerjee, & Deuri, 2017; Noriega et al., 2008).

Stresa pārvarēšanas stratēģiju (SPS) izmantošana ir pastāvīgi mainīgi kognitīvi un uzvedības centieni tikt galā ar noteiktām ārējām vai iekšējām prasībām, ko indivīds uztver kā apgrūtinājumu vai resursu iztukšošanu (Lazarus & Folkman, 1984). Svarīga nozīme stresa pārvarēšanas stratēģiju izvēlē atbilstoši stresa situācijai ir indivīda spējai pārņemt kontroli pār situāciju vai tam, ka indivīds uztver situāciju kā kontrolējamu, piemēram, indivīdi, kas ir optimistiskāki attiecībā uz pozitīvām nākotnes vērtībām, biežāk izvēlēsies uz problēmu orientētu stresa pārvarēšanas stratēģiju, taču indivīdi, kuri ir pesimistiskāk noskaņoti attiecībā uz nākotnes cerībām vairāk tiecas tomēr izvēlēties uz emocijām orientētu stresa pārvarēšanas stratēģiju (Pascoe & Richman, 2009). Vairāki pētnieki secinājuši, ka sievietēm, kas ir partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu, lai pielāgotos ģimenes situācijai un pārvarētu psiholoģiskās grūtības, ir novērotas dažādu stresa pārvarēšanas stratēģiju pielietošana (Horner, 2009). Pētījumos, kas veikti citviet pasaulē parādās tendence, ka sievietes, kas ir partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu biežāk stresa pārvarēšanai ģimenes situācijās izvēlas izvairīšanos jeb bēgšanu (uz emocijām orientēta stratēģijas) (Bora et. al, 2017).

Pētījumā par stresa pārvarēšanas stratēģijām, līdzatkarību un sociālo atbalstu, partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu novērots, ka sievietēm ar augstākiem līdzatkarības rādītājiem ir zemāki stresa pārvarēšanas resursu rādītāji un zemāki sociālā atbalsta rādītāji (Bhowmick, Tripathi, Jhingan, & Pandey, 2001).

Metodoloģija *Methodology*

Pētījuma ietvaros aptaujas aizpildīja 80 sievietes vecumā no 25 līdz 72 gadiem, taču mērķa izlasē tika iekļauta 31 sieviete vecumā no 25 līdz 64 gadiem, ($M=42,03$; $SD = 9,45$), kas ir partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu. Pētījuma mērķa izlasē netika iekļautas 49 sievietes, jo partnerim nav psihoaktīvo vielu atkarības diagnoze, potenciālajai pētījuma dalībnieci pašai ir atkarības diagnoze vai aptauju komplekts tika aizpildīts nekorekti. Lielākā mērķa izlases daļa jeb 48% ir vecumā no 36 līdz 45 gadi, 22,6% vecumā no 25 līdz 35 gadiem, 19,3% – 46-55 gadu vecumā, 9,7% sievietes virs 56 gadiem. Mērķa izlasē 80,6% dalībnieces norādīja, ka biežākā atkarības diagnoze partnerim ir alkohola atkarība.

Savukārt 6,5% – uzrādīja partnera narkotiku atkarību, bet 12,9% – vairāku vielu atkarību.

Sociāldemogrāfisko datu ievākšanai tika izmantota pētījuma autoru veidota demogrāfiskā aptauja, kurā iekļauti 19 jautājumi par respondentes vecumu, izglītību, nodarbošanos, attiecību ilgumu kopā ar partneri, kopīgiem bērniem ar partneri, partnera atkarības diagnozi, partnerim diagnosticēto atkarības veidu (alkohola, narkotiku vai medikamentu), partnera atkarības diagnozes ilgumu, vai partneris bijis vardarbīgs, partnera vardarbības veidu (fizisku, emocionālu vai seksuālu), par iepriekšējā partnera atkarību, par iepriekšējā partnera vardarbību, vai respondentei dzīves laikā diagnosticēta atkarības diagnoze, vai vecākiem ir bijusi problemātiska psihoaktīvo vielu lietošana vai atkarība, kuram no vecākiem bijusi problemātiska psihoaktīvo vielu lietošana vai atkarība, par vecāku vardarbības pieredzi, par līdzatkarības kā problēmas novērtēšanu šobrīd, par saņemto palīdzību kā līdzatkarīgai personai līdz šim, palīdzības saņemšanas ilgums.

Lai novērtētu līdzatkarības rādītājus, pētījuma dalībniekiem tika izmantota Spana-Fišera Līdzatkarības aptauja (Spann-Fischer Codependency Scale, SFCDS, Fischer et al., 1991; adaptāciju latviešu valodā veikusi Laizāne, 2003). Aptaujas oriģinālās versijas pielietošana līdzatkarības rādītāju noteikšanai dažādos pētījumos uzrādīja labu saskaņotības rādītāju (Kronbaha alfu), kas variē robežās no 0,76 līdz 0,86 (Fischer et al., 1991), aptaujas tulkotā versija latviešu valodā – 0,78 (Laizāne, 2003, 2011). Šajā pētījumā Kronbaha alfa ir 0,85.

Aptauja ir izveidota kā pašnovērtējuma skala, kas sastāv no 16 apgalvojumiem, piemēram, “Man šķiet, ka es attiecībās ieguldu vairāk nekā saņemu pretī”, “Es bieži lieku citu vajadzības augstāk par savējām” – ar iespēju respondentam atbildes atzīmēt Likerta skalā no 1 līdz 6 (no “pilnīgi nepiekrītu” līdz “pilnīgi piekrītu”). Līdzatkarības rādītāju novērtējums tiek izteikts punktos, kuri tiek summēti atbilstoši atbildēm katrā jautājumā. Līdzatkarības skalas oriģinālajā versijā un adaptētajā versijā punktu summa atbilst 3 veidu pakāpēm – zema līdzatkarības pakāpe (<37 punkti), vidēja līdzatkarības pakāpe (37-67 punkti) un augsta līdzatkarības pakāpe (>68).

Lai noteiktu stresa pārvarēšanas stratēģijas, tika izmantots instruments “Stresa pārvarēšanas veidu aptauja” (The Ways of Coping Scale, Folkman, & Lazarus, 1985; adaptāciju latviešu valodā veica Deklava, 2012). Aptauja sastāv no 66 apgalvojumiem, kas raksturo indivīda rīcību un izjūtas stresa situācijā; respondentam jānovērtē, vai un cik bieži viņš pielieto šo stresa pārvarēšanas paņēmieni. Rezultātu ieguvei tiek izmantoti 50 pamatjautājumi, pārējie tiek lietoti kā “buferjautājumi”. Atbildes sakārtotas 4 punktu Likerta skalu vērtībās no “0” līdz “3”, kur “0” – “neizmantoju nekad”, “1” – “izmantoju dažreiz”, “2” – izmantoju pietiekami bieži”, “3” – “izmantoju ļoti bieži”. Atbildes uz konkrētiem

apgalvojumiem veido sadalījumu pa astoņām apakšskalām (stresa pārvarēšanas veidi, SPV) un ļauj noskaidrot respondenta stresa pārvarēšanas stratēģiju (fokusu). Pētījumā tika aprēķināti visu apakšskalu (stresa pārvarēšanas veidu) vidējie rādītāji un stresa pārvarēšanas stratēģiju vidējie rādītāji. Kronbaha alfas rādītāji skalās variēja no 0,61 līdz 0,81.

Sākotnēji potenciālās respondentes pētījumam tika aicinātas piedalīties pētījumā, sadarbojoties ar pašvaldības, valsts iestādēm un nevalstiskajām organizācijām, kas ikdienā sniedz psiholoģisku palīdzību un sociālo atbalstu atkarīgo ģimenēm/partneriem, taču sakarā ar nelielo atsaucību piedalīties pētījumā tika aicinātas atsaukties dalībai pētījumā arī caur sociālajiem portāliem (piemēram, *Facebook* dažādos forumos). Aizpildot aptaujas komplektus gan elektroniskā formātā, gan zīmuļa/papīra respondentes sniedza informēto piekrišanu dalībai pētījumā. Pētījumā potenciālās respondentes varēja piedalīties pēc brīvprātības principa, kā arī tika saglabāta anonimitāte. Iekļaušanas kritēriji: partnerim diagnosticēta psihoaktīvo vielu atkarība; sievietei nav diagnosticēta atkarība; saprot latviešu valodu.

Tika veikta aprakstošā statistika demogrāfiskajiem datiem un pētījuma mainīgajiem, t.sk., lai atbildētu uz pirmo pētījuma jautājumu par aktuālo stresa pārvarēšanas stratēģiju/veidu novērtējumu izlasē. Atbildot uz pētījuma otro jautājumu, tika veikta Spīrmena korelāciju analīze, bet, atbildot uz pētījuma trešo jautājumu, tika veikta regresijas analīze. Datu apstrādei un analīzei tika izmantota matemātiski statistiskā metode, izmantojot datu apstrādes programmas Excel un SPSS 22 versiju. Visu pētījumā izmantoto instrumentu skalu un apakšskalu saskaņotība tika noteikta ar Kronbaha alfu. Līdzatkarības, stresa pārvarēšanas stratēģiju un veidu rādītāju atbilstība normālam sadalījumam izlasē tika noteikta ar Kolmogorova – Smirnova testu, kura rezultāti liecina, ka Stresa pārvarēšanas veidu testa skalu “Plānveida problēmrisināšana”, “Paškontrolē”, “Atbildības uzņemšanās” rādītāji neatbilst normālam sadalījumam.

Rezultāti **Results**

Lai atbildētu uz pētījuma pirmo jautājumu un noteiktu biežāko stresa pārvarēšanas stratēģiju un veidu pielietošanu sievietēm partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu, tika aprēķināti biežumi pielietotajām stresa pārvarēšanas stratēģijām un veidiem (1.tab.), atbilstoši vidējiem aritmētiskiem testa atbildēs (min =0, max=3).

1.tabula. *Stresa pārvarēšanas stratēģiju un veidu izmantošanas biežums izlasē (%) (autoru veidots)*

Table 1 *Frequency of use of stress coping strategies and methods in the sample (%) (made by authors)*

Mainīgie lielumi	Neizmantoju	Izmantoju dažreiz	Kopā	Izmantoju bieži	Izmantoju ļoti bieži	Kopā
	%	%	%	%	%	%
Uz problēmu orientēta SPS	12,0	32,10	44,1	34,9	21,0	55,9
Konfrontējoša pārvarēšana	19,9	31,7	51,6	31,7	16,7	48,4
Plānveida problēmrisināšana	9,1	32,8	41,9	39,8	18,3	58,1
Sociālā atbalsta meklēšana	7,0	31,7	38,7	33,3	28,0	61,3
Uz emocijām orientēta SPS	22,8	32,5	55,3	27,02	17,7	44,7
Distancēšanās	34,4	40,9	75,3	18,8	5,9	24,7
Paškontrole	16,1	35,4	51,5	27,0	21,5	48,5
Atbildības uzņemšanās	22,6	35,5	58,1	28,2	13,7	41,9
Bēgšana jeb izvairīšanās	30,2	19,8	50,0	23,8	26,2	50,0
Pozitīva pārvērtēšana	10,6	30,9	41,5	37,3	21,2	58,5

Piezīme. N=31. SPS – stresa pārvarēšanas stratēģija

Aprakstošās statistikas rādītāji liecina, ka izlasē kopumā visbiežāk pielietotie stresa pārvarēšanas veidi ir sociālā atbalsta meklēšana (61, 3%). Biežāki ir arī pozitīvas pārvērtēšanas (58,5%), plānveida problēmrisināšanas (58,1%), bēgšanas jeb izvairīšanās (50,0%) kā stresa pārvarēšanas veidu izvēle. Retāk pielietotais stresa pārvarēšanas veids ir distancēšanās (24,7%). Rezultāti uzrāda, ka kopumā šajā izlasē biežāk pielietota tiek uz problēmu orientēta stresa pārvarēšana (55,9%), nevis uz emocijām orientēta stresa pārvarēšana (44,7%).

Lai atbildētu uz pētījuma otro jautājumu, vai pastāv saistības starp līdzatkarības (M=53,19; SD=13,55) un stresa pārvarēšanas stratēģiju rādītājiem, tika veikta Spīrmena korelāciju analīze (2. un 3. tab.). Tika konstatēta vāja, pozitīva sakarība starp Līdzatkarības aptaujas un Uz emocijām orientētu stresa pārvarēšanas stratēģiju rādītājiem ($r=0,37$, $p < 0,05$), kas nozīmē, ka respondentiem ar vidēji augstākiem līdzatkarības rādītājiem bija raksturīgi vidēji augstāki uz emocijām orientētu SPS rādītāji.

“Bēgšana jeb izvairīšanās”, “Atbildības uzņemšanās”, kas Spīrmana korelācijas analīzē uzrādīja statistiski nozīmīgas saistības, kā neatkarīgais mainīgais tika ievadīts līdzatkarības rādītājs.

Regresijas analīze atklāj, ka līdzatkarības rādītājs ļauj prognozēt uz emocijām orientētas stratēģijas pielietošanu ($R^2=0,14$; $\Delta R^2= 0,11$ $F=(1,29)$ 4,85, $p<0,05$), izskaidrojot 11% no “Uz emocijām orientētas SPS” skalas rādītāju variācijas (4. tab.).

4.tabula. *Stresa pārvarēšanas stratēģiju un veidu lineārās regresijas analīzes rezultāti ar līdzatkarību kā neatkarīgo mainīgo (autoru veidota)*
 Table 4 *Results of linear regression analysis of stress coping strategies and types with codependency as the independent variable (made by authors)*

<i>SPS un SPV</i>	<i>Neatkarīgais mainīgais</i>	β	F	R^2	ΔR^2
Uz emocijām orientēta stresa pārvarēšana	1.modelis		4,85*	0,14	0,11
	Līdzatkarība	0,38*			
Plānveida problēmrisināšana	1.modelis		6,69*	0,19	0,16
	Līdzatkarība	-0,43*			
Bēgšana jeb izvairīšanās	1.modelis		9,85**	0,25	0,23
	Līdzatkarība	0,50**			
Atbildības uzņemšanās	1.modelis		8,86**	0,23	0,21
	Līdzatkarība	0,48**			

* $p < 0,05$

Regresijas analīze atklāj, ka līdzatkarības rādītājs ļauj prognozēt “Plānveida problēmrisināšanu” ($R^2=0,19$; $\Delta R^2= 0,16$ $F=(1,29)$ 6,69, $p<0,05$), izskaidrojot 16% no “Plānveida problēmrisināšanas” apakšskalas rādītāju variācijas, kā arī ļauj prognozēt “Bēgšanu jeb izvairīšanos” ($R^2=0,25$; $\Delta R^2= 0,23$ $F=(1,29)$ 9,85, $p<0,01$), izskaidrojot 23% no “Bēgšanas jeb izvairīšanās” apakšskalas rādītāju variācijas un arī ļauj prognozēt “Atbildības uzņemšanās” ($R^2=0,23$; $\Delta R^2= 0,21$ $F=(1,29)$ 8,86, $p<0,01$), izskaidrojot 21% no “Atbildības uzņemšanās” apakšskalas rādītāju variācijas.

Diskusija Discussion

Šī pētījuma mērķis bija noteikt saistības starp līdzatkarību un stresa pārvarēšanas stratēģijām sievietēm partnerattiecībās ar no psihoaktīvām vielām atkarīgu indivīdu. Pētījuma ietvaros noteiktas arī aktuālas stresa pārvarēšanas stratēģijas un veidi mērķa izlasē, kā arī veikta regresiju analīze ar mērķi izpētīt, cik

lielā mērā līdzatkarības rādītājs prognozē stresa pārvarēšanas stratēģiju izvēli. Aktuālo stresa pārvarēšanas stratēģiju un veidu noteikšana un izpēte šādu sieviešu grupā, varētu būt nozīmīga informācija, piemēram, atkarīgo ģimeņu palīdzības stratēģiju izstrādāšanā (t.sk. psiholoģijas jomā). Līdz šim vairāk uzmanība pētījumos tikusi pievērsta atkarīgo indivīdu izpētei, taču mazāk sievietēm, kas ir partnerattiecībās ar atkarīgu partneri (līdzīga tendence vērojama arī citviet pasaulē un Eiropā). Pētījumi veikti lielākoties klīniskā vidē (piemēram, rehabilitācijas centros atkarīgajiem), tādejādi nodrošinot lielāku ticamību pētījuma datiem (informācija par partnera atkarību, potenciālās pētījuma dalībnieces problemātiska atkarību izraisošu vielu lietošana/diagnoze u.c.) un ērtākas pozīcijas potenciālo pētījuma dalībnieku atlasē, kas bija viens no šī pētījuma ierobežojumiem. Taču sadarbībā ar psihologiem, psihoterapeitiem gan valsts, gan pašvaldību iestādēs un privāti, kas ikdienā sniedz psiholoģisko un sociālo palīdzību atkarīgo ģimenēm un partneriem, bija iespēja atlasīt pēc iespējas vairāk potenciālās pētījuma dalībnieces pētījumam.

Atbildot uz pētījuma pirmo jautājumu par pielietotām stresa pārvarēšanas stratēģijām un veidiem, tika konstatēts, ka kopumā šajā izlasē biežāk pielietota tiek uz problēmu orientēta stresa pārvarēšana, nevis uz emocijām orientēta stresa pārvarēšana, kā tas tika noteikts citos pētījumos (Bora et. al, 2017). Taču jānorāda, ka šie rezultāti nav būtiski atšķirīgi, tāpēc nevarētu viennozīmīgi apgalvot, ka šajā izlasē sievietes partnerattiecībās ar atkarīgu indivīdu kā stresa pārvarēšanas stratēģiju izvēlas uz problēmu orientētu SPS. Šādas atšķirības konkrētajā izlasē varētu parādīties, jo pielietotās stresa pārvarēšanas stratēģijas laika gaitā var mainīties, atkarībā no situācijas un indivīda iekšējiem un ārējiem resursiem, sociālā atbalsta un kognitīvajām spējām (James & Goldman, 1971, kā minēts Ali, 2005). Lai gan pētījumos par stresa pārvarēšanu sievietēm partnerattiecībās ar atkarīgu indivīdu ir novērota dažādu stresa pārvarēšanas stratēģiju pielietošana grūtās situācijās attiecībās, lai adaptētos ģimenes situācijai un pārvarētu psiholoģiskās grūtības (Horner, 2009), taču, līdzīgi kā citos pētījumos, arī šajā pētījumā respondentes atzīmēja uz emocijām orientētas stresa pārvarēšanas biežu pielietošanu, kas varētu būt saistīta ar vajākām spējām pielietot uz problēmu orientētu stresa pārvarēšanu un attiecīgus stresa pārvarēšanas veidus (Pascoe & Richman, 2009). Līdzīgi kā citos pētījumos (Bora et. al, 2017), arī šajā pētījumā ir novērots, ka biežāk partnerattiecībās ar atkarīgu indivīdu sievietes pielieto tādas stresa pārvarēšanas veidus kā sociālā atbalsta meklēšana, pozitīvā pārvērtēšana, plānveida problēmrisināšana un bēgšana jeb izvairīšanās. Stresa pārvarēšanas veida kā distancēšanās retāka izmantošana varētu norādīt uz to, ka sievietes nereti mēdz noliegt partnera atkarības problēmu.

Rezultāti uzrāda, ka sievietēm ar augstākiem līdzatkarības rādītājiem tika konstatēti augstāki rādītāji uz emocijām orientētai stresa pārvarēšanai, kas nozīmē, ka iespējamās grūtības kognitīvos procesos, kas var ierobežot spēju domāt analītiski, samazina spēju biežāk izmantot uz problēmu orientētu stresa pārvarēšanu. Pētījuma ietvaros konstatēts, ka augstāki līdzatkarības rādītāji ir saistīti ar zemākiem rādītājiem stresa pārvarēšanas veidam plānveida problēmrisināšana, kas varētu būt izskaidrojams kā vājāka spēja un centieni problēmas risinājumam pielietot analītisku pieeju. Nozīmīgs faktors konkrētu stresa situāciju pārvarēšanā ir šī brīža resursiem (t.sk. atbalstam, partnera atkarības atzīšanai, sapratnei attiecībās u.c.), tādēļ, nereti attiecībās ar no psihoaktīvām vielām atkarīgu indivīdu sievietes spēja izmantot uz problēmu orientētu stresa pārvarēšanu ir vājāka, kas var būt saistīta gan ar psiholoģisko, gan fizioloģisko, gan kognitīvo aspektu (Timko, Young & Moss, 2012). Kopumā pētījumā novērots, ka augstāki līdzatkarības rādītāji statistiski nozīmīgi saistīti ar biežāku uz emocijām orientētu stresa pārvarēšanu (t.sk. uzņemties atbildību, izvairoties no stresa situācijas), kas norāda uz tendenci arī sievietēm ar augstākiem līdzatkarības rādītājiem uzrādīt līdzīgas sakarības, kā tas bija citos pētījumos, kuros ir ņemts vērā tikai aspekts, ka sieviete atrodas partnerattiecībās ar atkarīgu indivīdu.

Pētījumā konstatēts, ka līdzatkarības rādītājs tieši izskaidro atbildības uzņemšanās rādītājus, kas arī apstiprina skaidrojumu, ka jo augstāks ir līdzatkarības rādītājs, jo vairāk sieviete vēlas uzņemties atbildību par stresa situāciju, kontrolēt cita uzvedību, noliedzot, piemēram, partnera atkarību kā viņa problēmu, bet uzņemties atbildību par to. Tad, kad sieviete netiek galā ar partnera atkarības radītajām sekām jeb nespēj kontrolēt (līdzatkarības pazīme) partnera atkarību (uztver stresoru kā nekontrolējamu), sieviete var biežāk izmantot uz emocijām orientētu stresa pārvarēšanu vai arī mēģināt bēgt no negatīvajām emocijām, kas ir saistītas, piemēram, ar vilšanās izjūtu (nespēja nokontrolēt partnera atkarību) (Penley, Tomaka, & Weibe, 2002).

Pētījumam ir vairāki ierobežojumi, kas jāņem vērā. Visi pētījumā izmantotie instrumenti nav standartizēti, līdz ar to iegūtie pētījuma rezultāti nevar tikt attiecināmi uz populāciju kopumā, bet tos ir iespējams izskaidrot tendenču līmenī (piemēram, Spana-Fišera līdzatkarības tests paredz noteikt dažādus līdzatkarības līmeņus – zems, vidējs, augsts; taču tā kā aptauja nav standartizēta Latvijas kultūrvidē, nav iespējams šo testu pielietot pēc būtības). Jāpiemin, ka līdzatkarības testa rezultāti varēja būt atkarīgi no tā, cik objektīvi potenciālā pētījuma dalībniece novērtēja “līdzatkarību” kā problēmu (sociāldemogrāfiskajā anketā izveidots jautājums par līdzatkarības kā problēmas novērtējumu, taču tā ierobežojums ir tāds, ka šī jautājuma atbildes ir kategorizētas). Kā viens no būtiskākajiem pētījuma ierobežojumiem ir maza izlase un datu neatbilstība normālam sadalījumam dažās no

testu skalām (tieši stresa pārvarēšanā – plānveida problēmrisināšana, atbildības uzņemšanās, paškontrolē), līdz ar to iegūtos pētījumu datus nevar attiecināt uz populāciju kopumā. Turpmākos pētījumos varētu papildus izmantot, piemēram, Alkohola lietošanas radīto traucējumu identifikācijas testu (AUDIT) partnera vielu lietošanas paradumu novērtēšanai, lai dati būtu objektīvāki, ja vien pētījums netiek veikts klīniskā vidē (piemēram, ir skaidri zināma informācija, ka partnerim ir noteikta atkarības diagnoze un cik ilgi notiek ārstēšanās process).

Kopsavilkums *Summary*

This study aim is to explore the relationship between coependency and coping strategies of women in relationship with an individual addicted to psychoactive substances.

The study is based on modern psychological resources. Although there is not much research on similar topics, there is a reason to believe that such a connection could be based on the idea of an individual's interaction with the outside world and the formation of behavior, included behavioral peculiarities in dysfunctional relationships with a person of psychoactive substance use disorder or “codependency”, which is how the “program” has developed in the individual. This includes the concept of stress management in relation to an individual's cognitive efforts to cope with a stressful situation, which is also related to difficulties in families with drug abuse or addiction problem and social support as an important resource in coping with stress, depending on the individual's ability to perceive social support as necessary and desirable from family.

The study included 31 women aged 25 to 64 years ($M = 42.03$; $SD = 9.45$). Three surveys were used in the study - Socio-Demographic Data Survey; Spann-Fischer Codependence Scale (adaptation in Latvian by Laizāne, 2003); The Ways of Coping Scale (adaptation in Latvian was performed by Deklava, 2012).

Spearman's correlation analysis was used to determine the liabilities and the prediction of coping strategies of indicators was performed by linear regression analysis.

It was found that there is a statistically significant relationship between co-dependency and emotion-focused coping as strategy and, consequently, the ways of coping – strategic problem-solving, escape and avoidance, taking responsibility. Research on current coping strategies and ways has shown that emotion-focused coping as strategy and coping ways such as seeking social support, positive reassessment, planned problem solving and escape and avoidance were used more often in this sample, but distancing was used the least.

Literatūras saraksts *References*

- Bhowmick, P., Tripathi, B. M., Jhingan, H. P., & Pandey, R. M. (2001). Social support, coping resources and codependence in spouses of individual with alcohol and drug dependence. *Indian Journal of Psychiatry*, 43(3), 219-224.
- Bora, D., Banerjee, I., & Deuri, S. P. (2017). Marital quality in wives of persons with alcohol dependence syndrome. *Open Journal of Psychiatry and Allied Sciences*, 8(1), 53-57.
- Dear, G. E., Roberts, C., & Lange, L. (2005). *Defining codependency: A thematic analysis of published definitions*. In S. Shohov (Ed.) *Advances in Psychology*, 34 (189 - 205). New York, United States of America: Nova Science Publishers.
- Fischer, J. L., Spann L., & Crawford, D. (1991). Measuring codependency. *Alcoholism Treatment Quarterly*, 8, 87-100.
- Fuller, J. A., & Warner, R. M. (2000). Family stressors as predictors of codependency. *Genetic, Social and General Psychology Monographs*, 126(1), 5–22.
- Harkness, D., & Cotrell, G. (1997). The social construction of codependency in the treatment of substance abuse. *Journal of Substance Abuse Treatment*, 14(5), 475-479.
- Horner, M. (2009). *A theoretical model of family dysfunction with coping and codependency*. The University of Texas at San Antonio, ProQuest Dissertations Publishing, 1467607.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- Mudar, P., Leonard, K. E., & Soltysinski, K. (2001). Discrepant substance use and marital functioning in newlywed couples. *Journal of Consulting and Clinical Psychology*, 69(1), 130–134. DOI: <https://doi.org/10.1037/0022-006X.69.1.130>
- Noriega, G. (2004). Codependence: A Transgenerational Script. *Transactional Analysis Journal*, 34(4), 312-322. DOI: <https://doi.org/10.1177/036215370403400404>
- Noriega, G., Ramos, L., Medina-Mora, M. E., & Villa, A. R. (2008). Prevalence of codependence in young women seeking primary health care and associated risk factors. *American Journal of Orthopsychiatry*, 78(2), 199–210.
- Pascoe, E. A. & Richman, S. (2009). Perceived discrimination and health: A meta-analytic review. *Psychol Bull*, 135(4), 531-554
- Penley, J. A., Tomaka, J., & Wiebe, J. S. (2002). The association of coping to physical and psychological health outcomes: A meta-analytic review. *Journal of behavioral medicine*, 25(6), 551-603.
- Sarkar, S., Mattoo, S. K., Basu, D., & Gupta J. (2013). Codependence in spouses of alcohol and opioid dependent men. *International Journal of Culture and Mental Health*. DOI: <https://doi.org/10.1080/17542863.2013.868502>
- Schneider, T. R. (2004). The role of neuroticism on psychological and physiological stress responses. *J Exp Soc Psychol*, 40(6), 795–804.
- Sowle, J. (2014). The Everything Guide to Codependency: Learn to recognize and change codependent behavior. *Special Issue: Social Support*, 26, 93–101.
- SPKC. (2020). *Latvijas iedzīvotāju veselību ietekmējošo paradumu pētījums*. Pieejams: <https://www.spkc.gov.lv/lv/media/16574/download?attachment>
- SPKC. (2018). *Nacionālais ziņojums "2018.gada ziņojums par narkotikām Latvijā un Eiropā (2016.gada dati)"*. Pieejams: https://www.spkc.gov.lv/lv/atkaribu-slimibas?utm_source=https%3A%2F%2Fwww.google.com%2F

- Stafford, L. L. (2001). Is codependency a meaningful concept? *Issues Mental Health Nursing*, 22(3), 273-286. DOI: <https://doi.org/10.1080/01612840121607>
- Timko, C., Young, L. B., & Moos, R. H. (2012). Al-anon family groups: Origins, conceptual basis, outcomes, and research opportunities. *Journal of Groups in Addiction & Recovery*, 7, 279–296.

MŪŽIZGLĪTĪBA
Lifelong Learning

ATKARĪBAS NO SOCIĀLAJIEM MEDIJIEM TESTA ADAPTĀCIJA

Adaptation of the Addiction Test on Social Media

Valērijs Makarevičs

Daugavpils Universitāte, Latvija

Dzintra Iliško

Daugavpils Universitāte, Latvija

Abstract. *The issue of addiction to social networks is relevant for our time. The studies carried out in different cultural contexts indicate that addicted people are anxious, less satisfied with life, they may have problems with academic performance and with the achievement of their life and professional goals. Addicted people are more common among younger generation. For the diagnostic and corrective work with people who have addiction problems, require appropriate tools. One of these tools is described in our work. This is a test of dependence by Sheinov in addiction on social networks. The purpose of this study was to translate this test into the Latvian language, to check its reliability and validity. The relevant procedures described in the text of the article indicate to a high degree of reliability and validity of this test. It can also be used for the scientific purposes.*

Keywords: *dependence, reliability, social networks, test, validity of the test.*

Ievads

Introduction

21. gadsimtā sociālie tīkli sāka attīstīties īpaši strauji. Šim faktam ir noteiktas priekšrocības. Ar sociālo tīklu palīdzību var viegli atrast domubiedrus jebkurā Zemes nostūrī. Sociālie tīkli informē par pasaulē notiekošo agrāk nekā citi mediji. Sociālajos tīklos var atrast padomu, kas var palīdzēt sadzīves un sociālo problēmu risināšanā.

Sociālie tīkli sniedz iespēju iepazīst literāros darbus, tādējādi paplašinot indivīda redzesloku. Taču, tāpat kā jebkurai citai parādībai, sociālajiem tīkliem ir savi trūkumi. Sociālie tīkli var radīt atkarību, nepārvaramu vēlmi atkal un atkal atgriezties internetā, lai uzzinātu jaunumus par draugiem, redzētu viņu reakciju uz mūsu rakstītajiem komentāriem, izteiktu viedokli par aktualitātēm.

Atkarība no sociālajiem medijiem ir bijusi problēma pēdējo divu desmitgadu laikā. Šodien tas tiek intensīvi pētīts. Lai to izpētītu, ir nepieciešami atbilstoši instrumenti – testi. Tāpēc mūsu darba mērķis ir izpētīt esošus testus,

kas ir sastādīti un aprobēti, iztulkot tos latviešu valodā un noteikt testa latviskās versijas ticamību un derīgumu.

Pētījumā ir izmantotas sekojošās metodes: test tulkošana latviešu valodā un tulkošana uz oriģinālvalodu, sasniegtā tulkojuma rezultāta uzlabojums; testa ticamības noteikšana, atkārtoti testējot un salīdzinot divu testu rezultātus; tiek noteikts testa derīgums, salīdzinot ar personīgās trauksmes testa rezultātiem.

Literatūras apskats *Literature Review*

Saskaņā ar jaunākajiem zinātniskajiem pētījumiem, sociālo mediju izmantošana pēdējā desmitgadē ir pieaugusi eksponenciāli, īpaši jauniešu vidū (Cuadrado, Rojas, & Taberner, 2020). Pētījumos īpaši tiek akcentēta atkarība no sociālajiem tīkliem.

Termins ‘sociālo mediju atkarība’ ir definēts kā interneta lietošana, kas rada problēmas ikdienas darbībai, uzdevumu izpildei, attiecībām un/vai rada kādu deficītu (Wainner, 2018).

Saskaņā ar Linna (Lin et al, 2016) un citu zinātnieku atziņām, eksistē vairāki kritēriji, kas saistīti ar atkarībām, kā arī kritēriji gan viedtālrunu, gan interneta atkarībai, kurus var pielāgot sociālo mediju atkarībai.

Tā ir ienākšana sevī, atkārtotas neveiksmes, mēģinot atbrīvoties no pastāvīgas vēlmes atkal un atkal izmantot sociālos medijus. Tas noved pie fizisku vai psiholoģisku problēmu parādīšanās, attiecību pasliktināšanās ar citiem cilvēkiem, akadēmisko un profesionālo sasniegumu samazināšanās (Lin et al., 2016).

Pētījumi par atkarību no sociālajiem medijiem ir atklājuši tā ietekmi uz indivīda personību un uzvedības īpašībām. Grūtības, ar kurām vidusskolēni saskaras dzīvē, veicina un palielina viņu atkarību no sociālajiem tīkliem un samazina prosociālo uzvedību (Sümen & Evgin, 2021).

Pusaudžiem vecumā no 13 līdz 15 gadiem bija pozitīva saikne starp atkarību no viedtālruniem un trauksmi (Korniseva & Rudika, 2018; Doan et al, 2022).

Atkarība no sociālajiem medijiem samazina apmierinātību ar dzīvi (Sahin, 2017), palielina tādas traucējumus kā depresija, stress un trauksme (Tang & Koh, 2017; Brailovskaja & Margraf, 2017; Demirci, 2019). Sociāli trauksmaini cilvēki izmanto sociālos medijus, lai apmierinātu vajadzību pēc sociālās atzīšanas (Casale, & Fioravanti, 2015). Pētījumi ir arī atklājuši negatīvu saikni starp sociālo mediju atkarību un akadēmiskiem sniegumiem (Azizi, Soroush, & Khatony, 2019), kā arī starp pārliecinošu uzvedību un atkarību pusaudžu vidū (Khairunnisa & Putri, 2019; Makarevičs & Iliško 2022a, 2022b).

Pusaudži, kuri ir mazāk uzstājīgi, biežāk izmanto sociālos medijus. Plašsaziņas līdzekļi tiek izmantoti kā alternatīva savu jūtu izteikšanai vai vienkārši saziņai ar citiem cilvēkiem.

Tajā pašā laikā pētījumu rezultāti liecina, ka korekcijas darbs ar studentiem, kuras mērķis bija samazināt atkarību no sociālajiem tīkliem, uzlabo viņu garīgo veselību un akadēmisko sniegumu (Hou et.al., 2019). Tāpēc, kā norāda Esgi (2016), šādu personu identificēšana un labošana ir svarīga mūsdienu problēma (Esgi, 2016).

Diagnostikas un profilakses darbam ir nepieciešami atbilstoši instrumenti. Vienu no šiem instrumentiem, Sheinov-Devitsin testu, lai noteiktu atkarības līmeni no sociālajiem tīkliem, mēs tulkojām un pielāgojām vietējiem apstākļiem.

Metodoloģija *Methodology*

Diagnostikas un pētniecības nolūkos mēs izvēlējāmies testu, kuru izstrādāja Baltkrievijas pētnieks Viktors Šeinovs un kolēģi, jo tas tika izveidots kaimiņos esošajā kultūrā, veicot nepieciešamās procedūras, kā arī pārbaudot testa derīgumu un ticamību (Šeinovs, 2021). Tests, kas pēta atkarību no sociālajiem medijiem sastāv no 15 paziņojumiem. Atbildes uz apgalvojumiem tika izvērtētas Laikerta skalā (no 5 punktiem, kas atbilst atbildei "vienmēr", līdz 1 – "ļoti reti").

Pēc tulkojuma veikšanas no krievu valodas latviešu valodā tika veikts reversais tulkojums, kas tika saskaņots ar autoru. Atkārtotas pārbaudes procesā, kas tika veikta mēnesi pēc pirmā testa, tika konstatēts, ka attiecību koeficients starp pirmo un otro rezultātu bija 0,96 saskaņā ar Pīrsona kritēriju.

Eksperimentā brīvprātīgi piedalījās 50 cilvēki. Viņi visi bija Daugavpils Universitātes Pedagoģiskās nodaļas studenti. Dalībnieku vecums bija vecuma grupā no 20 līdz 63 gadiem. Anketas dalībniekiem tika izsūtītas pa e-pastu. Respondenti atbildēja, atsūtot aizpildītu testu uz e-pastu.

Lai pārbaudītu testa validitāti, tika izmantotas citu pētnieku atklātā mijattiecība starp atkarību no sociālajiem tīkliem un respondentu trauksmes līmeni. Lai to izdarītu, atkarības testa rezultāti tika salīdzināti ar respondentu personīgās trauksmes rādītājiem. Rezultāts tika iegūts, piemērojot Spīlbergera testu.

1.tabula. **Atkarība no Sociālajiem tīkliem** (Šeinovs & Devicins, 2021)
Table 1 Dependence from social media (Šeinovs & Devicins, 2021)

Atbildes tiek vērtētas piecu baļļu skalā: vienmēr (5 punkti), ļoti bieži (4 punkti), bieži (3 punkti), dažreiz (2 punkti), ļoti reti (1 punkts).

Jautājums	Vienmēr	Ļoti bieži	Bieži	Dažreiz	Ļoti reti
1. Cik bieži jūs uzturaties tiešsaistē ilgāk par 2 stundām dienā?					
2. Cik bieži jūs izjūtat neatvairāmu vēlmi pieslēgties sociālajiem tīkliem?					
3. Cik bieži jūs kavējaties domās par sociālajiem tīkliem un plānojat tur uzskavēties?					
4. Cik bieži jūs izmantojat sociālos tīklus, lai izvairītos no domām par personīgajām problēmām?					
5. Cik bieži jūs atjaunojat savu mājas lapu/profilu?					
6. Cik bieži jūs jūtaties uzbudināts/a un noraizējies/usies, kad nevarat pieslēgties savai mājas lapai sociālajos tīklos?					
7. Cik bieži jūs jūtat nepieciešamību atjaunot savu mājas lapu, neatkarīgi no tā, kur atrodaties?					
8. Cik bieži Jūs izjūtat nepieciešamību pievienot fotoattēlus savam sociālo tīklu albumam?					
9. Cik bieži jūs pārbaudāt tālrunī vai ir atjauninājumi Jūsu sociālajā tīkla profilā?					
10. Cik bieži jūs uzzināt visas ziņas no sociālajiem tīkliem?					

11. Cik bieži jūs varat nokavēt darbu vai skolu pēc nakts, kas ir pavadīta sociālajos tīklos?					
12. Cik bieži sociālo tīklu apmeklējums uzlabo Jūsu garastāvokli?					
13. Cik bieži jūs apspriežat jaunumus sociālajos tīklos ar draugiem?					
14. Cik bieži esat mēģinājis/usi samazināt (bet neveiksmīgi) laiku, ko Jūs pavadāt sociālajos tīklos?					
15. Cik bieži jūs ciešat to tā, ka jūsu iecienītākais sociālais tīkls nedarbojas?					

Otrajā tabulā ir parādītas vīriešu un sieviešu atkarības rādītāju vidējās vērtības no sociālajiem tīkliem.

2. tabula. *Atkarība no sociālajiem medijiem* (autoru veidots)
 Table 2 *Addiction from social media* (created by the Authors)

Dzimums	Vidējais rādītājs	Standartnovirze
Sievietes	34	8,97
Vīrieši	30	8,07

Diskusija **Diskussion**

Pīrsona korelācijas koeficients ir aprēķināts pēc sociālo mediju atkarības testa un Spīlbergera personības trauksmes testa rezultātiem, parādīja, ka starp šīm parādībām pastāv ievērojama pozitīva saikne. Palielinoties atkarības rādītājam, palielinās arī personīgā trauksme. Ņemot vērā, ka Pīrsona korelācijas koeficients starp pirmā un atkārtotā testa rezultātiem bija vienāds ar 0,96, var apgalvot, ka latviešu valodā tulkotajai Šeinova-Devitsina testa versijai ir augsta ticamības un validitātes pakāpe.

Turpmākie pētījumi, kuros tika izmantota šī testa latviskā versija, apstiprināja citu pētījumu rezultātus par statistiski nozīmīgu negatīvu sociālās mediju atkarības un pārliecinošas uzvedības asociāciju. Pārliecinoša uzvedība ir

nozīmīga mūsdienu cilvēkam, jo tā veicina indivīda personīgo un profesionālo mērķu sasniegšanu.

Secinājumi **Conclusions**

Sociālo mediju atkarība ir mūsdienu galvenā problēma. Turklāt tas vairāk attiecas uz jaunāko paaudzi. Ir nepieciešami piemēroti instrumenti profilakses un korektīvajam darbam ar indivīdiem, kas ir atkarīgi no sociālajiem tīkliem.

Kā šāds rīks tiek piedāvāta Šeinova-Levitsina testa latviskā versija, kurai ir augsta uzticamības un validitātes pakāpe. To var izmantot arī pētniecības nolūkos.

Summary

The problem of dependence on social networks is particularly topical today. As studies conducted in different countries show, addicted people are restless, less satisfied with life, they may have problems with learning achievements and in achieving life and professional goals. People with addiction problems more often are seen among younger generation. Diagnostic and corrective work with such people requires appropriate tools. One of such tools is described in this article. Sheinov-Devitsin's test of addiction on social media has been chosen for translation. The main of this study is to translate and to adapt the test in Latvian, as well as determine its reliability and validity. The article describes the appropriate procedures that indicate a high degree of reliability and validity of this test. The test may also be used for scientific purposes.

Literatūras saraksts **List of References**

- Azizi, S. M., Soroush, A., & Khatony, A. (2019). The relationship between social networking addiction and academic performance in Iranian students of medical sciences: a cross-sectional study. *BMC Psychol* 7, 28. DOI: <https://doi.org/10.1186/s40359-019-0305-0>
Retrieved from: <https://bmcpyschology.biomedcentral.com/articles/10.1186/s40359-019-0305-0#citeas>
- Brailovskaia, J., & Margraf, J. (2017). Facebook addiction disorder (FAD) among German students – a longitudinal approach. *PloS One*, 12(12), e0189719
- Casale, S., & Fioravanti, G. (2015). Satisfying needs through social networking sites: A pathway towards problematic Internet use for socially anxious people? *Addictive Behaviors Reports*, 1, 34-39.
- Cuadrado, E., Rojas, R., & Tabernero, C. (2020). Development and validation of the social network addiction scale (SNAddS-6S). *European Journal of Investigation in Health Psychology and Education*, 10(3), 763-778. DOI: 10.3390/ejihpe10030056

- Demirci, I. (2019). The adaptation of the Bergen Social Media Addiction Scale to Turkish and the evaluation its relationships with depression and anxiety symptoms. *Alpha Psychiatry, 20*, 15-22. DOI: 10.5455/apd.41585
- Doan, L. P., Le, L. K., Nguyen, T. T., Nguyen, T. T. P., Le, M. N. V., Vu, G. T., Latkin, C. A., Ho, C. S. H., Ho, R. C. M., & Zhang, M. W. (2022). Social media addiction among Vietnam youths: Patterns and correlated factors. *International Journal of Environmental Research and Public Health, 19*(21), 14416. DOI: <https://doi.org/10.3390/ijerph192114416>
- Esgi, N. (2016). Development of social media addiction test (SMAT17). *Journal of Education and Training Studies, 4*(10), 174-181.
- Hou, Y., Xiong, D., Jiang, T., Song, L., & Wang, Q. (2019). Social media addiction: Its impact, mediation, and intervention. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace, 13*(1), 4. DOI: <http://dx.doi.org/10.5817/CP2019-1-4>
- Khairunnisa, H., & Putri, A. (2019). Relationship of assertive behaviors and social media addiction among adolescents. *Advances in Social Science, Education and Humanities Research, 304*, 109-112.
- Korniseva, A., & Rudika, L. (2018). Study of the relationship of smartphone addiction, self-esteem and anxiety in adolescents 13-15 years old. *Proceedings of the International Research and Practice Conference "Problems of Optimal Functioning of the Individual in Modern Conditions" of Karazin University, 77-80.*
- Lin, L., Sidani, J., Shensa, A., Radovic, A., Miller, E., Colditz, J., Hoffman, B., Giles, L., & Primack, B. (2016). Association between social media use and depression among U.S. young adults. *Depression and Anxiety, 33*(4), 323–331.
- Makarevičs, V., & Iliško, Dz. (2022a). The connectiveness between assertiveness and dependence on social networks of future teachers (pp.20-26), *Rural Environment. Education. Personality. (REEP). Proceeding of the 15th International Scientific Conference, No. 15.* Jelgava: Latvia University of Agriculture. DOI: 10.22616/REEP.2022.15.002
- Makarevičs, V., & Iliško, Dz. (2022b). The influence of dependence on social networks on the assertive behavior of a person. *Psychology Applications & Developments, 8*, 231-238, Lisbon: Clara Pracana & Michael Wang. DOI: <https://doi.org/10.36315/2022padVIII>
- Sahin, C. (2017). The predictive level of social media Addiction for Life Satisfaction: A Study on University Students. *Turkish Online Journal of Educational Technology, 16*(4), 120-125. Retrieved from: <https://files.eric.ed.gov/fulltext/EJ1160611.pdf>
- Sheinov, V. P. (2021). Zavisimostj ot socialjnih setej i harakteristiki lichnosti: obzor issledovanij. [Social media addoction and personality traits: a survey of researsh]. *Vestnik Rossijskogo universiteta družbi narodov. Serija: Psihologija i pedagogika, 18*(3), 607-630. DOI 10.22363/2313-1683-2021-18-3-607-630
- Sümen, A., & Evgin, D. (2021). Social media addiction in high school students: A cross-sectional study examining its relationship with sleep quality and psychological problems, *Child Indicators Research, 14*, 2265–2283. DOI: <https://doi.org/10.1007/s12187-021-09838-9>

- Tang, C., & Koh, Y. (2017). Online social networking addiction among college students in Singapore: comorbidity with behavioral addiction and affective disorder. *Asian Journal of Psychiatry*, 25, 175-178.
- Wainner, C. N. (2018). Social media addiction and its implications for communication. *Chancellor's Honors Program Projects*. Retrieved from: https://trace.tennessee.edu/utk_chanhonoproj/2168

ANALYSIS OF TOURISTS' ATTITUDE TOWARDS RESPONSIBLE CONSUMPTION IN THE TOURISM SECTOR

Ramutė Narkūnienė

Utena University of Applied Sciences, Lithuania

Ugnė Šinkūnaitė

Utena University of Applied Sciences, Lithuania

Abstract. *In the article, the authors analyze tourists' attitude towards responsible consumption in the tourism sector. The problem of responsible consumption is relevant on a national and international scale. The purpose of the research is to analyze tourists' attitude towards responsible consumption in the tourism sector. The tasks of the research are to carry out a theoretical analysis of tourists' attitude towards responsible consumption in the tourism sector and a research of tourists' attitude towards responsible consumption in the tourism sector. During the research, a quantitative survey (questionnaire survey) was conducted. Data collection methods are analysis of scientific literature and sources, document analysis and questionnaire survey. The article reviews tourists' attitude towards responsible consumption from a theoretical perspective, discusses the benefits of responsible consumption, analyzes tourists' attitude towards responsible consumption in the tourism sector and the tourism institutions attitude towards responsible consumption. It is concluded that most of the respondents try to be responsible consumers during their stay in accommodation establishments. Responsible consumption is mostly motivated by a sense of responsibility, caring for the environment and oneself, and the desire to contribute to positive changes.*

Keywords: *responsible consumption, tourism sector, tourists' attitude.*

Introduction

Due to the influence of the economic, social and political processes of globalization, the tourism sector has become the leading branch of the economy in many countries of the world. The global crisis caused by the COVID - 19 pandemic has slowed down the development of the tourism sector, but the tourism sector is gradually recovering loss (United Nations World Tourism Organization, 2022). In turn, the interest of science, business and other fields in responsible consumption in various sectors, including the tourism sector, is growing. This happens for various reasons: the development of the green movement and responsible consumption, the growth of ecological innovations, etc. Responsible

consumption is behavior that includes responsible use of natural resources, efficient use of organic products, waste sorting and recycling.

Relevance of the topic. The problem of responsible consumption is relevant on a national and international scale. For the EU countries, the topic of responsible consumption is extremely relevant in the transition to a circular economy. Public interest in responsible consumption around the world is revealed by the ratification of the Paris Agreement (adopted in 2016) and the development of the United Nations (hereinafter - UN) Sustainable Development Goals (hereinafter - SDGs, approved in 2015) in which the 17th SDG aim to balance environmental, social and economic aspects of development and efforts are made not only to reduce, but also to eliminate global poverty (UNWTO, 2015). SDG 12 is "Responsible consumption and production" - promoting resource and energy efficiency, sustainable infrastructure and access to basic services, green and decent workplaces and a better quality of life for all. UNESCO defines responsible consumption as the use of services and products that meet 445 basic needs and ensure a better quality of life for people. Choosing to use responsibly reduces the use of natural resources, reduces pollution, conserves energy, and protects workers and consumers. In 2021 on March 25, the European Parliament adopted the *EU Strategy for Sustainable Tourism*, which forms the principles of sustainable, sustainable and responsible tourism sector development. One of the tasks of the *National Progress Plan 2021-2030* envisages better utilization of the potential of the tourism sector for the country's progress - in accordance with the principles of sustainability and applying innovative solutions, digitization opportunities, specializing services for specific markets and target groups. The purpose of this research is to reveal the attitude of tourists towards responsible consumption in the tourism sector.

The scientific problem of this research is formulated as a question - what is the attitude of tourists towards responsible consumption in the tourism sector? Responsible consumers and users not only understand their rights, but also follow social and environmental standards to create a favorable environment for everyone and ensure consumption with minimal environmental impact. The purpose of responsible consumption is to improve life on the planet, to contribute to the quality of life of the world's people and future generations, so it is very important to analyze the attitude of tourists to responsible consumption in the tourism sector, because tourists are often the most consuming part of society.

The **object of the research** is the tourists' attitude towards responsible consumption in the tourism sector.

The **purpose of the research** is to analyze the tourists' attitude towards responsible consumption in the tourism sector.

Research tasks:

1. To carry out a theoretical analysis of tourists' attitude towards responsible consumption in the tourism sector.

2. Conduct a survey of tourists' attitude towards responsible consumption in the tourism sector.

Methodology. During the research, a quantitative survey (questionnaire survey) was conducted. Data collection methods - analysis of scientific literature and sources, document analysis and questionnaire survey. The aim of the scientific literature analysis is to reveal the tourists' attitude towards responsible consumption in the tourism sector in a theoretical aspect. The questionnaire survey was carried out in order to reveal the attitude of tourists towards responsible consumption in the tourism sector and is used when interviewing tourists and was carried out after placing the survey questionnaire on the internet space www.apklausa.lt, distributing the questionnaire in social networks, tourism information centers and other companies in the tourism sector (accommodation companies, etc.) 210 tourists were interviewed.

Analysis of responsible consumption in the tourism sector from a theoretical perspective

Responsible and sustainable consumption by tourists is defined as "environmentally friendly consumption, i.e. purchasing green products or services while travelling" (Lee & Lee, 2015). Nowadays, tourists increasingly demand environmentally friendly products (e.g., green hotels, restaurants, cruise ships, airlines, destinations, resorts, and casinos) and express a desire to engage in responsible and sustainable consumption (Hall, 2013; Ramkissoon, Graham Smith, & Weiler, 2013; Wang, Wang, Wang, Yan & Li, 2018). Responsible and sustainable tourist consumption of products and services, purchasing and consuming them in an environmentally friendly way is a necessary requirement for promoting sustainable development (Han, 2020; Ramkissoon, Weiler, & Smith, 2012; Ramkissoon, Graham, & Weiler, 2013); Wang, Shen, Amy, Song, & Phau, 2020).

Responsible consumption can also be defined as "fair, green, sustainable, rational, ethical consumption. Fair use is associated with the effects of use; green consumption - with the aim of protecting nature; sustainable consumption - with conservation of resources; rational consumption - with minimal consumption; responsible consumption - with the avoidance of harm and includes all the mentioned categories" (Fontenelle, 2010). Smith also identifies conscious, ethical, green consumption (Smith, 2007). Although socially responsible and ethical consumption are not exactly identical, they overlap to some extent (Francois-Lecompte & Roberts, 2006).

Some of the goals or actions of responsible consumption include:
1) Environmental impact, taking into account the product's useful life cycle;
2) Quality of purchased products and services;
3) The time during which non-renewable resources are consumed must be equal to the time of replacement of

renewable resources; 4) Combining the amount of waste and pollution emitted with the absorption capacity of the ecosystems themselves; 5) Products and services whose production process respects the environment and social justice; 6) Reusable purchased products, goods, things; 7) Avoidance of one-time consumption of goods; 8) Avoiding the use of products whose packaging increases environmental pollution and ensuring that reusable, reusable or biodegradable packaging can be returned.

According to Katunian (2016), as the tourism sector expanded, the impact of this phenomenon on the environment at the physical, social, and cultural levels increased. The negative impact on the physical environment (pollution, depletion of natural resources, destruction of the landscape, etc.) is most often noticed and emphasized, but the impact on social and cultural areas is no less significant (Katunian, 2016). The realization that it is necessary to reduce the negative influence of tourism came about in the long run after realizing that only sustainable management of tourism can ensure resources of at least the same, not lower, quality for future generations. Responsible consumption is very important both in the tourism sector and in people's everyday life. The more tourists have a positive attitude towards responsible consumption and travel sustainably in an effort to save nature, the better it will be for the earth and for future generations who will be able to enjoy a clean planet, quality products and services, and an ecological lifestyle.

Quality of life, prosperity and economic growth depend on the ability to live green. In order for consumers to distinguish between services and products that have as little impact on the environment as possible, eco-labelling is used, which promotes balanced provision of services and production and consumption of products. People are increasingly choosing services and goods that are sustainable and protect nature. Among the ecological signs used in Lithuania, such signs as the EU Ecolabel, the Green Key (for hotels), and the Blue Flag (for beaches) should be mentioned. However, regardless of the fact that Europe has the most "green" tourism certification program compared to other regions of the world, it has to be noted that the certification process in Lithuania is only taking the first steps (Narkūnienė, 2022).

The results of the survey of tourists' attitudes towards responsible consumption in the tourism sector

The questionnaire survey was conducted in July - August 2022, after placing the questionnaire on the website www.apklausa.lt. 210 respondents participated in the survey, 82.9 percent of them were women and 17.1 percent men. Most of the respondents belonged to the age group of 19 - 30 year, for the age group - 28.6 percent of respondents, 41 - 50 years old 22.9 percent belonged to the age group,

respondents, 31 - 40 years old for the age group - 21.4 percent, 51 - 60 years old age group - 20 percent, the rest of the respondents indicated another age group. The majority of respondents were salaried workers (65.7 percent), 8.6 percent were studying and working, 7.1 percent were entrepreneurs, 7.1 percent were civil servants. The majority of respondents who took part in the survey had higher university education - 44.3 percent, 28.6 percent had higher non-university education and 25.7 percent had secondary education of respondents Most of the respondents live in the city - 68.6 percent, 17.1 percent live in the big city, 7.1 percent in the town, 7.1 percent in the rural area respondents. According to the place of residence, most of the respondents who took part in the survey belong to Utena county - 77.1 percent, 17.1 percent respondents belong to Vilnius county.

The results of the research showed that 38.6 percent of those surveyed spent their vacation in the territory of Lithuania, 32.9 percent respondents spend their vacation in different places every time (both in Lithuania and in foreign countries), 14.3 percent respondents rest in foreign resorts, and 11.4 percent - near their place of residence. Most of the respondents (82.9 percent) travel independently and plan their trips themselves, 10 percent respondents use the services of travel organizing companies, and 7.1 percent respondents sometimes plan trips themselves, sometimes use the services of travel organizing companies. 52.9 percent of the respondents usually go on vacation during the summer, 42.9 percent travel at any time of the year when they have a vacation, 4.3 percent respondents travel in autumn. Most of the respondents (42 percent) prefer short 2 - 3 day trips to nature, 23.2 percent respondents prefer relaxing on the beach, 18.8 percent for recreation at the resort, and 10.1 percent respondents prefer sightseeing trips, visiting cities in other countries, short trips to Lithuanian resorts, etc.). Summarizing respondent's answers, it can be said that most Lithuanians spent their vacation in Lithuania during the summer, and they plan their trips for several days independently.

Table 1 For which type of tourists do the respondents classify themselves as (when traveling around Lithuania) (compiled by the authors based on the results of the survey)

Tourist type	Percentage expression
Entertainers (rest combined with entertainment)	28
Quietness with the family (priority is given to simple, peaceful rest)	27
Nature lovers (the purpose of the trip is hiking, cycling, visiting natural and cultural objects)	19
"Where everyone is" (choose to rest in popular places)	10
Those looking for quality (the main criterion for choosing trips is quality services)	10
„All Inclusive“	6

Summarizing the information presented in Table 1, it can be said that the majority of respondents classify themselves as entertainers (relaxation is combined with entertainment) - 28 percent, and also a number of respondents choose to spend their travels peacefully with their family and prioritize simple, peaceful recreation (27 percent of respondents). A large number of respondents (19 percent) indicated that they are nature lovers, and the purpose of their trips is hiking, cycling, and visiting natural and cultural objects. The number of respondents classifying themselves as travelers looking for quality (the main criterion for choosing trips - quality services) and "where everyone is" (they choose to rest in popular places) was equally divided – 10 percent each. The smallest part of the respondents (6 percent) indicated that, when vacationing in Lithuania, they choose the "all - inclusive" travel method. Summarizing the answers of the respondents, it can be said that a number of participants like to combine rest with entertainment or simply relax or spend time in nature.

Most of the respondents (78.3 percent) are interested in/know about sustainability, saving/responsible consumption, 10.1 percent respondents stated that they do not know, 11.6 percent of the respondents stated that they are not interested in responsible and sustainable consumption. The majority of respondents (39.1 percent) most often sort waste not during trips, always sort waste - 37.7 percent, sometimes sort - 15.9 percent, and do not sort at all - 7.2 percent respondents. The respondents who took part in the survey indicated that they always consume responsibly and not only during trips - 52.2 percent, not always, but try to consume responsibly - 39.1 percent, in everyday life they consume responsibly, but do not do so during trips - 5.8 percent, never consume responsibly, because it is not important to them - 2.9 percent. The majority of respondents (91.3 percent) think that responsible consumption during travel is important, they do not know if it is important - 7.2 percent, there is no responsible consumption important thing - 1.4 percent respondents. Summarizing the responses of the respondents, it can be seen that the participants are not only aware of and interested in sustainability and responsible consumption, but also often sort waste, always use responsibly, and most importantly, most of the respondents believe that responsible consumption is important.

Table 2 presents research data on the behavior of respondents in applying the principles of responsible consumption during travel and staying at an accommodation enterprise.

Summarizing the information presented in Table 2, it can be said that the majority of the respondents try to be responsible consumers during their stay in accommodation facilities. It could be highlighted that it is very important for respondents that they can contribute to sustainable consumption during travel, and even 94.2 percent of the respondents indicated that, when leaving the room, they always turn off the lights everywhere. The opinion of the respondents about the accommodation establishment, for which ecology and sustainability are very

important, is the most different from the other choices, as a larger part of the respondents (60.9 percent) indicated that they pay attention to it only sometimes and a smaller part indicated that they always do.

*Table 2 Respondents' behavior after staying at an accommodation facility, percent
 (compiled by the authors based on research results)*

Statement	Always	Never	Sometimes
When I leave the room, I always turn off the lights everywhere	94,2	2,9	2,9
I save water in the shower	53,6	20,3	26,1
I use the towel more than once	78,3	4,3	17,4
I refuse the offer to clean the room every day	42,0	20,3	37,7
When there is no need, I turn off the heating or cooling of the room	65,2	5,8	29,0
I sort the trash during my stay	42,0	13,0	44,9
If the accommodation facility provides catering services, I choose dishes made from local products	36,2	13,0	50,7
I choose an accommodation facility for which ecology and sustainability are very important	17,4	21,7	60,9

Most of the respondents (94.2 percent) indicated that when they have to rest in nature, they always clean up the rest place after themselves (they collect their own garbage, household waste, etc., they also indicated that sometimes they have to clean up the garbage left by someone else when they arrive (2.9 percent), and never and sometimes do not clean - 1.4 percent of respondents.

In order to determine the causes that influenced reasons would encourage the respondents to consume responsibly, most of them indicated that the feeling of responsibility for what is happening and will happen in the future (26 percent) would be the most encouraging. A similar number of respondents (24 percent) indicated that taking care of themselves and the environment would encourage responsible consumption the most. 18 percent of respondents' desire to contribute to positive changes in the environment would encourage them to consume responsibly. The answers of the respondents were almost equally divided - the feeling of guilt due to the damage caused to the environment and people (13 percent) and the fear of negative consequences (water pollution, lack of resources, etc.) - 12 percent respondents' answers. The majority of tourists (60.9 percent)

only sometimes choose an accommodation facility for which ecology and sustainability are very important. Only 6 percent of respondents indicated that they would be encouraged by penalties for non-sustainable consumption. Other respondents indicated that such reasons could be elementary decency, etc. Summarizing the responses of the respondents, it can be observed that responsible consumption is most encouraged by a sense of responsibility, care for the environment and themselves, and the desire to contribute to positive changes, while guilt and fear of negative consequences are no less encouraged, while the least respondents would be encouraged to use responsibly by punishment.

The majority of respondents (39.1 percent) stated that on average they spend is 501-1000 EUR per year on trips, 34.8% spend up to 500 EUR of respondents, 13 percent allocate 1001-1500 EUR, and 13 percent allocate 1501 EUR and more respondents.

The research showed that tourists positively evaluate responsible consumption in the tourism sector. Tourists know and are interested in sustainable consumption and consume responsibly not only during travel, but try to do it always because it is important to them, and to live sustainably in this way they are motivated by a sense of responsibility and guilt for the future.

Conclusions

1. Responsible consumption is an effort not only to reduce consumption in all areas of consumption, but also to consider every choice. Every tourist takes responsibility for his choices, which can have a positive or negative impact on both nature and other people. The development of the tourism sector has positive and negative effects on the physical environment (pollution, depletion of natural resources, destruction of the landscape, etc.), but as society changes, more and more efforts are being made to ensure that this sector is used responsibly and sustainably.
2. The research showed that tourists are not only aware of and interested in sustainability and responsible consumption, but also often sort waste and always try to use it responsibly. Most of the respondents try to be responsible consumers during their stay in accommodation establishments. Responsible consumption is mostly motivated by a sense of responsibility, caring for the environment and oneself, and the desire to contribute to positive changes. The majority of tourists only sometimes choose an accommodation facility for which ecology and sustainability are very important.

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List of References

- Fontenelle, I. A. (2010). Global responsibility through consumption? Resistance and assimilation in the anti-brand movement. *Critical perspectives on international business*. Vol. 6, No. 4, p. 256-272.
- Francois-Lecompte, A., & Roberts, J. A. (2006). Developing a measure of socially responsible consumption in France. *Marketing management Journal*, Vol. 16, No. 2, p. 50 - 66.
- Hall, C. M. (2013). Framing behavioral approaches to understanding and governing sustainable tourism consumption: Beyond neoliberalism, “nudging” and “green growth”? *Journal of Sustainable Tourism*, 21(7), p. 1091-1109.
- Han, H. (2020). Theory of green purchase behavior (TGPB): A new theory for sustainable consumption of green hotel and green restaurant products. *Business Strategy and the Environment*, 29(6), p. 2815-2828.
- Katunian, A. (2016). Sustainable Development Concept of Tourism Management. In Žuromskaitė, B., Gražulis, V., Jagminas, J., Katunian, A., Kripaitis, R. Arimavičiūtė, M., Vijeikis, J., Svetikienė, I., & Survila, A. (Ed). *Tourism: Development, challenges, perspectives*, p. 137-154. Mykolas Romeris University. Vilnius. Public institution Registry Center.
- Lee, H. S., & Lee, H. J. (2015). Convergence factors of affecting prehospitalization of tuberculosis patients. *Journal of Digital Convergence*, 13(5), p. 259-267.
- Narkūnienė, R. (2022). Modeling the development trends of the Lithuanian tourism sector by increasing the competitiveness of tourism regions in the context of sustainable development. Doctoral dissertation (social sciences and management). Vilnius. Mykolas Romeris University. Retrieved from: https://www.mruni.eu/wp-content/uploads/2022/02/Ramute-Narkuniene_disertacija_MRUweb.pdf
- Ramkissoon, H., Weiler, B., & Smith, L. D. H. (2012). Place attachment and pro-environmental behaviour in national parks: The development of a conceptual framework. *Journal of Sustainable Tourism*, 20(2), p. 257-76.
- Ramkissoon, H., Graham Smith, L. D., & Weiler, B. (2013). Testing the dimensionality of place attachment and its relationships with place satisfaction and pro-environmental behaviors: A structural equation modelling approach. *Tourism Management*, 36, p. 552-566.
- Smith, N. C. (2007). Consumers as drivers of corporate responsibility. *The Oxford Handbook of Corporate Social Responsibility*, p. 281–302. Oxford University Press Inc., NY.
- United Nations World Tourism Organization. Retrieved from: <https://www.unwto.org/>
- Wang, H., Shen, M., (Amy) Song, Y., & Phau, I. (2020). Do up-displayed eco-friendly products always perform better? The moderating role of psychological distance. *Journal of Business Research*, 114 (March 2019), p. 198-212.
- Wang, S., Wang, J., Wang, Y., Yan, J., & Li, J. (2018). Environmental knowledge and consumers’ intentions to visit green hotels: The mediating role of consumption values. *Journal of Travel and Tourism Marketing*, 35 (9), p. 1261-1271.

ROBEŽSARGU PROFESIONĀLĀS SAGATAVOŠANAS KVALITĀTES NODROŠINĀŠANAS AKTUALITĀTES UN MEHĀNISMI

Topicalities and Mechanisms for Assuring Quality of Border Guards' Professional Training

Ivars Zālītis

Daugavpils Universitāte, Latvija

Abstract. *The topicality of the research is determined by the present day challenges within the frame of the EU border security field and space of professional education, which directly project onto the quality requirements for professional training of employees of Latvian law enforcement institutions.*

Research aim: on the basis of the analysis of quality management aspects during the educational process of professional training in law enforcement education institutions of the Baltic countries, to develop and approbate a model for establishing the basic principles of creating quality management systems (QMS) and methodology of the use of this model; to determine the most topical and effective basic principles of developing QMS in education establishments of law enforcement institutions. To achieve the aims of a quantitative-qualitative research, the theoretical (analysis) and empirical (data collection, synthesis and modelling, data processing) methods have been applied. Research results: a) the main problems in the field of quality management of border-guard professional training have been identified and recommendations for their solution have been put forward; b) the model, methodology and instruments for a practical application of the model have been approbated; c) the most topical basic principles of developing QMS in education establishments of law enforcement institutions have been formulated. The scientific novelty of the research lies in the conceptual understanding of competencies for quality assurance of border guard professional training as well as in creating a model for establishing the most effective basic principles of developing QMS in education institutions.

Keywords: *border guard professional training, quality management systems.*

Ievads

Introduction

Rakstā atspoguļotais pētījums ir īstenots promocijas darba (tematiski vienota zinātnisko publikāciju kopa) “Robežsargu profesionālās sagatavošanas kvalitātes vadība” ietvaros un ir veltīts robežsargu profesionālās sagatavošanas kvalitātes vadības aspektiem un pilnveidošanas iespējām (Zālītis, 2021). Svarīgākais saistošais posms starp profesionālās sagatavošanas mērķiem un rezultātiem ir profesionālās izglītības mācību darbība un tās process (turpmāk – mācību

process), bet mācību procesa kvalitāte, un, attiecīgi, tās vadība, ir noteicošie faktori, kam ir jānodrošina profesionālās sagatavošanas īstenošanas rezultātu atbilstība izvirzītajiem mērķiem un uzdevumiem. Savukārt, pamatattiecība par mācību procesa kvalitātes vadības nodrošināšanu ir izglītības iestāžu kompetencē. Pamatojoties uz augstākminēto pētījuma galvenais virziens tika orientēts uz profesionālās izglītības mācību procesa kvalitātes vadības aspektiem izglītības iestādēs, kas sagatavo darbiniekus tiesībsargājošo institūciju, tajā skaitā – robežsardzes, vajadzībām (turpmāk - tiesībsargājošo institūciju izglītības iestādes) un, attiecīgi, pētījuma objekts ir mācību procesa kvalitātes vadība tiesībsargājošo institūciju izglītības iestādēs.

Pētījuma praktisko un teorētisko aktualitāti nosaka:

- jauni, iepriekš nepieredzēti izaicinājumi Eiropas Savienības (ES) dalībvalstu robežsargu profesionālajai sagatavotībai aktuālās ģeopolitiskās situācijas apstākļos;
- ES un Latvijas valsts noteiktās prioritātes un uzstādījumi attiecībā uz profesionālās izglītības kvalitātes nodrošināšanas mehānismu veicināšanu;
- sistēmiskas un zinātniski pamatotas pieejas nepieciešamība izglītības kvalitātes mehānismu nodrošināšanai izglītības iestādēs;
- pētījumu par izglītības iestāžu kvalitātes vadības sistēmu (KVS) izveides pamatprincipu noteikšanu un izvēli faktiskā neesamība (Zālītis, 2021).

“Pētījuma aktualitāti reģionālajai attīstībai nosaka vairāku izglītības iestāžu (Daugavpils Universitāte, Rēzeknes Tehnoloģiju akadēmija, Valsts robežsardzes koledža, Valsts policijas koledža (Latgales filiāle)) esamība un darbība Latgales reģionā realizējot attiecīgās profesionālās izglītības programmas un sagatavojot personālu Latvijas valsts tiesībsargājošo institūciju vajadzībām” (Zālītis, 2021, 31).

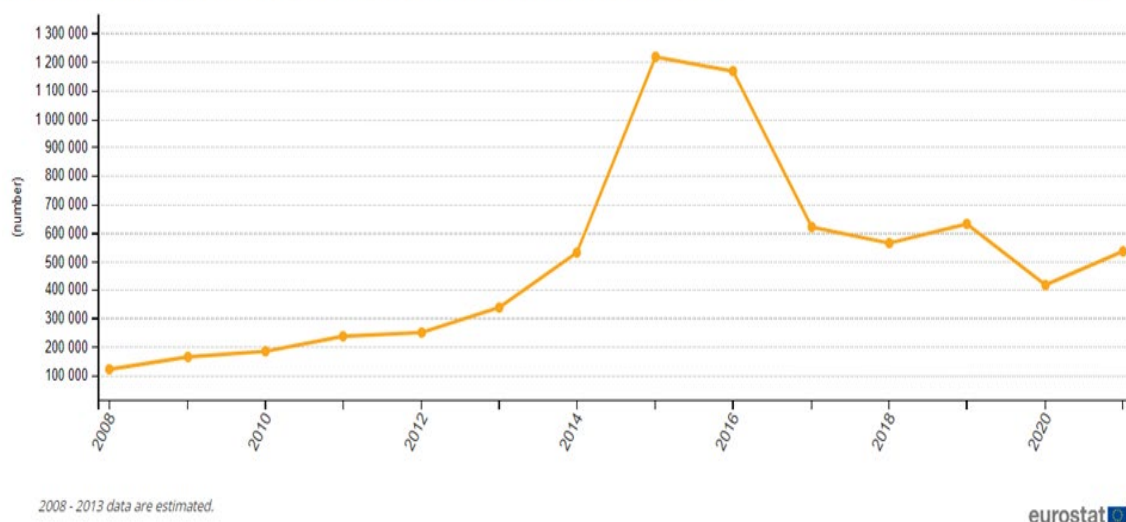
Promocijas darba mērķis ir, pamatojoties uz profesionālās sagatavošanas mācību procesa kvalitātes vadības aspektu analīzi Baltijas valstu tiesībsargājošo institūciju izglītības iestādēs, izstrādāt un aprobēt modeli KVS izveides pamatprincipu noteikšanai un tā pielietošanas metodiku, noteikt aktuālākos un efektīvākos KVS izveides pamatprincipus tiesībsargājošo institūciju izglītības iestādēs. Kvantitatīvi kvalitatīvā pētījuma mērķu sasniegšanai izmantotas teorētiskā un empīriskās metodes, savukārt raksta **mērķis** ir aktualizēt pētāmās tēmas nozīmi ES un Latvijas drošības un izglītības sistēmām, analizēt kompetences robežsargu profesionālās sagatavošanas sistēmas satura kontekstā, atreferēt veiktā pētījuma konceptu un metodoloģiju, apkopot galvenos rezultātus.

Pētījuma tēmas aktualitāte ES un Latvijas iekšējās drošības un robežsargu profesionālās izglītības kvalitātes nodrošināšanas kontekstā
Topicality of the research theme in the context of the quality assurance of the EU and Latvian internal security and border guards' professional education

Pētījuma aktualitāti nosaka mūsdienu starptautisko attiecību sarežģītumu un konfliktsituāciju radītie izaicinājumi ES robežu drošības jomai un tanī skaitā valsts militarizēto (bruņoto) struktūru personāla profesionālās sagatavotības līmenim, kas tieši projicējas uz prasībām robežkontroles veikšanu nodrošinošo institūciju (turpmāk – robežkontroles institūcijas) darbinieku profesionālās sagatavošanas vadības kvalitātei.

Pētījums tika uzsākts apstākļos, ko ietekmēja notikumi uz ES dienvidu robežām, kad kopš 2014.-2015. gadiem saasinājās migrantu krīze uz ārējām ES robežām Vidusjūras reģionā, pakārtoti izraisot masveidā patvērumu meklētāju pieteikšanos ES valstu iekšienēs. Tieši 2014. gadā tika sasniegts jauns patvēruma meklētāju skaita rekords – aptuveni 600 000 cilvēku. Bet 2015. un 2016. gados jau tika fiksēti virs 1,2 miljona patvērumu meklētāju pieteikšanās gadījumi. Nākamajos piecos gados statistika attiecībā uz patvēruma meklētāju skaitu saglabājās salīdzinoši zemākā, bet tomēr stabili augstā līmenī – ap 400-700 tūkstoši pieteikumu gadā (1.att.).

First-time asylum applications (non-EU) in the EU Member States, 2008–2021



1.attēls. Patvēruma meklētāju skaits Eiropas Savienības valstīs 2008.–2021.
(Eurostat, 2003)

Figure 1 The number of asylum seekers in the countries of the European Union within the period of 2008 – 2021
(Eurostat, 2003)

Savukārt, 2022.gada traģiskie notikumi, saistītie ar Krievijas Federācijas militāru agresiju pret Ukrainu, radīja jaunus pārbaudījumus un izaicinājumus ES

valstu ārējai un iekšējai drošībai. Nepilna gada laikā 7,98 miljoni Ukrainas iedzīvotāju ir bēgusi no kara, šķērsojot robežas un atstājot savas valsts teritoriju, 4,94 miljoniem no tiem meklējot patvērumu Eiropas valstīs (Apvienoto Nāciju Augstā komisāra bēgļu jautājumos birojs [UNHCR], 17.01.2023).

Papildus slodzi tiesībsargājošo institūciju darbiniekiem, pirmkārt robežsargiem, rada un augstas prasības to profesionalitātei izvirza arī cīņa ar nelegālo migrāciju. 2021.gadā ģeopolitiskā situācija veidojās tā, ka nelegālās migrācijas spiediens tiešā veidā skāra arī ES austrumu robežas valstis, pirmkārt – Lietuvu, tad Poliju un Latviju, kad vairāku simtu nelegālo robežšķērsotāju plūsmas no Baltkrievijas sāka veidot saspringtas situācijas pierobežā un robežkontroles dienestu institūciju funkciju izpildē. Salīdzinoši liels nelegālo robežšķērsotāju skaits Baltijas reģionam un ar to saistītā problemātika spieda valstu valdības izsludināt ārkārtas stāvokļus pierobežu pašvaldību teritorijās un ieviest īpašos robežapsardzības režīmus. Savukārt, ES ārējās robežas nelegāli šķērsojošo migrantu skaits 2022.gadā salīdzinoši ar 2021.gada rādītājiem ievērojami palielinājās. Eiropas Robežu un krasta apsardzes aģentūras (turpmāk - FRONTEX) publiski paziņotie statistiskie dati liecina, ka 2022.gada ES ārējo robežu nelegāli šķērsoja apmēram 330.000 cilvēku, kas ir par 64% vairāk nekā 2021.gadā. Tas ir ievērojamākais nelegālo ieceļotāju skaits kopš 2016.gada (FRONTEX, 2023).

Nelegālā imigrācija ir viens no lielākajiem riskiem ES valstu, un Latvijai tostarp, iekšējai drošībai, jo nelegālie migranti daudzos gadījumos ir iesaistīti cilvēku un ieroču tirdzniecībā, narkobiznesā, akcīzes preču kontrabandā u. c. Daļa nelegālo migrantu neoficiāli iesaistās darba tirgū, strādājot bez atbilstošām atļaujām un neregistrēti. Tas sekmē ēnu ekonomikas pieaugumu un korupcijas palielināšanos (Vilks, 2016). Jāatzīmē, ka pienākumu pildīšanā ārkārtas apstākļos īpašu nozīmi iegūst darbinieku profesionālās sagatavotības līmenis un kvalitāte. Pieaug kļūdu nozīme praktiskajā darbībā un atbildība par tām. Atbilstība profesionālās kompetences kopuma prasībām iegūst nozīmīgāku un pilnvērtīgāku papildījumu praktiskās darbības novērtējuma griezumā.

Līdz ar to par vienu no jauniem aktuāliem uzdevumiem ES robežkontroles institūcijām kļuva nepieciešamība celt personāla rīcībspējas kapacitāti, kā arī pilnveidot un standartizēt personāla profesionālās sagatavošanas kvalitāti ar mērķi nodrošināt darbinieku spēju efektīvi rīkoties jauno izaicinājumu apstākļos gan pildot dienesta pienākumus savās valstīs, gan darbojoties starptautiskajās misijās un operācijās. Pētījuma aktualitāti robežsargu profesionālās sagatavošanas vadības kvalitātes kontekstā balsta FRONTEX 2019.gadā izstrādātā “Tehniskā un operatīvā stratēģija Eiropas integrētajai robežu pārvaldībai” (turpmāk – Stratēģija), kas izvirzīja uzdevumus ES dalībvalstīm izstrādāt un piemērot kvalitātes nodrošināšanas mehānismus, kas attiecas uz apmācības saturu un nodrošināšanu, pasniedzējiem, apmācāmajiem un apmācības vidi (FRONTEX, 2019). Līdz ar to tiek plānots rezultāts, ka “kvalitātes nodrošināšanas mehānismi

valsts līmenī sekmēs pienācīgu un salīdzināmu kompetenču līmeni”, kas nodrošinās, ka “pastāvīga apmācības novērtēšana un uzlabošana efektīvi palielinās cilvēkresursu rezervju spēju izpildīt uzticētos uzdevumus ES ārējo robežu aizsardzības jomā” (FRONTEX, 2019, 77).

Arī Latvijas Republikas (LR) izglītības jomu regulējošo normatīvo aktu un plānošanas dokumentu telpā pēdējā laikā tiek pievērsta arvien lielāka uzmanība izglītības kvalitātes nodrošināšanas sistēmu aspektiem. Izglītības likuma (LR Saeima, 1998) grozījumi (LR Saeima, 2021) noteica valsts sistēmas izglītības kvalitātes nodrošināšanai saturu un uzdevumus, kā arī atbildīgās institūcijas par izglītības kvalitātes izglītības iestādē nodrošināšanu. Savukārt LR Ministru kabinets (MK) ar 2021.gada 22.jūnija rīkojumu Nr.436 “Par Izglītības attīstības pamatnostādņem 2021.-2027. gadam” (turpmāk – Pamatnostādnes) līdz ar definēto virsmērķi nodrošināt kvalitatīvas izglītības iespējas visiem Latvijas iedzīvotājiem ir izvirzījis četrus savstarpēji saistītus izglītības attīstības mērķus, vienu no tiem formulējot kā ilgtspējīgu un efektīvu izglītības sistēmas un resursu pārvaldību (LR MK, 2021). Vienlaikus Pamatnostādnes iezīmē, ka nākotnē Latvijas izglītības politikas risinājumiem ir jābūt balstītiem uz datu analīzi un pētniecību un Latvijas izglītībā tiek nodrošināta labi organizēta pārvaldība un kompetenta vadība (LR MK, 2021).

Pamatnostādnes arī nosaka izglītības kvalitātes vadības sistēmas satura struktūru īstenojamo izglītības programmu kvalitātes un atbilstības noteiktiem standartiem nodrošināšanai un paredz, ka par vienu no izglītības kvalitātes vadības sistēmas pamatelementiem jāklūst izglītības iestādes iekšējai kvalitātes nodrošināšanas sistēmai (LR MK, 2021), taču nesniedz ieskatu vadoties pēc kādiem pamatprincipiem un ar kādām metodēm ir izveidojamas izglītības iestāžu iekšējās kvalitātes nodrošināšanas sistēmas.

Apzinot faktisko situāciju Latvijas, Lietuvas un Igaunijas izglītības iestādēs, kas realizē attiecīgas izglītības programmas un sagatavo personālu tiesībsargājošajām institūcijām, autors konstatēja, ka pamatā tiek pielietoti KVS izveides šādi trīs varianti - ārpalpojuma ietvaros izveidotas KVS (piemēram, ISO 9000), izglītības iestādes patstāvīgi izveidotas KVS un variants, kad KVS kā vienota sistēma izglītības iestādē nav izveidota un apstiprināta, bet tiek izmantota KVS piekritīgu elementu kopa (1.tab.).

Faktiskās situācijas apzināšanas gaitā iegūtā informācija un praktiskā pieredze liecināja, ka tiesībsargājošo institūciju izglītības iestādēs Baltijā, t.sk. Latvijā, KVS izstrādes praksē, nosakot to izveides pamatprincipus, netiek pielietoti zinātniski pamatoti kritēriji, bet tiek piemēroti pārsvarā uz subjektīviem pamatojumiem un administratīviem vai politiski angažētiem lēmumiem balstīti KVS izstrādes pamatprincipi un metodes. Līdz ar to, veidojās riski gan attiecībā uz valsts resursu nelietderīgu iesaisti un izmantošanu, gan arī profesionālās izglītības valstī, t.sk. robežapsardzības jomā, kvalitātes ilgtspējību kopumā (Zalitis, Davidova, & Ignatjeva, 2020a).

1.tabula. Baltijas valstu tiesībsargājošo institūciju izglītības iestādēs pielietojamo KVS izveides varianti (autora veidots)

Table 1 Versions for the development of QMS used in law enforcement education institutions of the Baltic countries (created by the author)

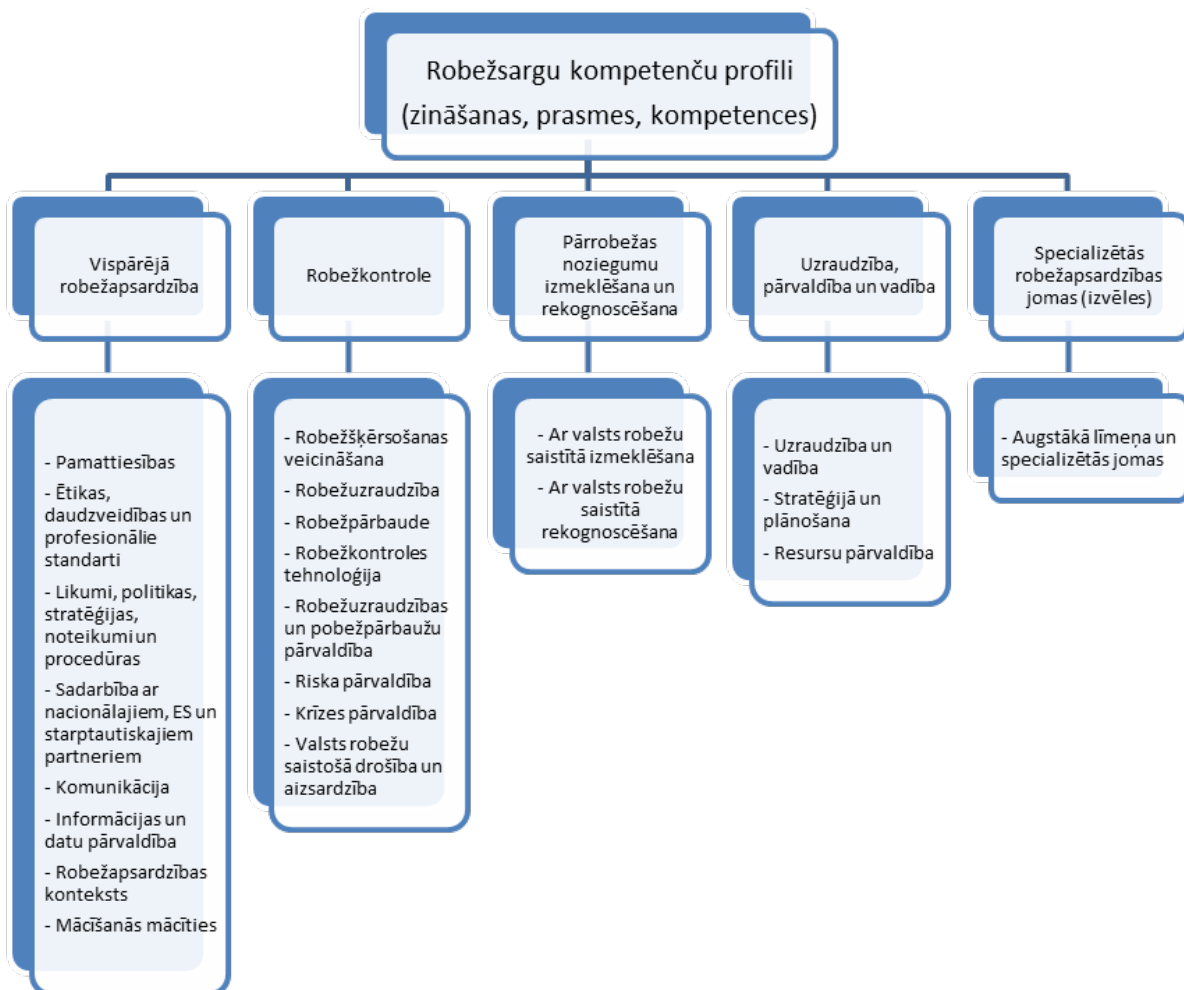
Tiesībsargājošo institūciju izglītības iestādēs Baltijas valstīs	Pielietojamo KVS izveides varianti			
	Ārpalpojuma ietvaros izveidota KVS (piemēram, ISO 9000)	Izglītības iestādes patstāvīgi izveidota KVS	KVS kā sistēma nav izveidota, tiek izmantota atsevišķu elementu kopa	Kopā
Pētījumā apzinātas izglītības iestādes	2	3	4	9
Pētījumā iekļautās izglītības iestādes	1	1	3	5

Neskatoties uz to, ka tiesībsargājošo institūciju darbinieku profesionālās izglītības procesu un profesionālās sagatavošanas kopumā kvalitātes jautājumi ir relatīvi aktuāli un ar zināmu regularitāti tiek pētīti visā pasaulē (Indrikovs, 2007; Kratoski & Das, 2007; Balendr, 2018; Peres, 2019; Valk & Kratovičs, 2021 u.c.), robežsargu profesionālās sagatavošanas kvalitātes vadības un standartizācijas jautājumu aktualizācija ES kopumā, un Latvijas valstī tostarp, ir samērā jauna parādība, līdz ar ko augstākminētie jautājumi un to problemātika gan teorētiski, gan praktiski ir salīdzinoši maz pētīti. Savukārt, KVS izveides un funkcionēšanas jautājumi tiesībsargājošo institūciju izglītības iestādēs, t.sk. KVS izveides pamatprincipu izvēles un noteikšanas kontekstā, līdz šim pētīti faktiski nav.

Robežsargu profesionālās sagatavošanas mērķu, satura un izglītības kvalitātes nodrošināšanas kompetenču konceptuālā izpratne
Conceptual understanding of competences for assuring goals, content and education quality in border guards' professional training

Eiropas Padome un Komisija ir akcentējuši profesionālās izglītības un apmācības būtisko lomu nodrošinot cilvēkiem kompetences un kvalifikāciju, kas atbilst darba tirgus strauji mainīgajām vajadzībām (EU Council and Commission, 2004). Profesionālās izglītības politiku, mērķus, uzdevumus un saturu Latvijas valstī regulē attiecīgie normatīvie akti - Profesionālās izglītības likums (LR Saeima, 1999) un pakārtotie Ministru kabineta noteikumi par profesionālās izglītības un valsts arodizglītības standartiem (LR MK, 2001, 2014, 2020). Profesionālās izglītības nepieciešamības nosacījumus LR tiesībsargājošo institūciju darbiniekiem regulē “Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonu ar speciālajām dienesta pakāpēm dienesta gaitas likums” (LR Saeima, 2006). ES prasības robežsargu profesionālajai kompetencei ir noteiktas FRONTEX izstrādātajā Nozares kvalifikācijas ietvarstruktūrā robežapsardzībai (NKI) (Sectoral Qualifications Framework for Border Guarding (SQF)) (FRONTEX, 2013a, 2013b). Kā

robežsargu profesionālo kompetenču galvenajā atskaites punktā, NKI ir ietverti visi kvalifikācijas līmeņi, kas iegūti vispārējā, profesionālajā, akadēmiskajā izglītībā un robežsargu apmācībā (FRONTEX, 2013a). Kompetenču profili veido Eiropas atsauci robežsargu profesijas standartiem un tie tika apstiprināti visā ES kā būtiski un specifiski robežapsardzībai, neatkarīgi no valsts organizatoriskajām sistēmām un struktūrām. Kompetenču profili identificē, definē un apraksta robežsargu dienestu un uzdevumus visos līmeņos un visās jomās. Tie parāda robežapsardzības jomu skartās kompetences, ir sakārtoti atbilstoši NKI sadaļām un sniedz pilnīgu priekšstatu par robežsargu dienestu visā ES, definējot zināšanas, prasmes un kompetences, kas nepieciešamas, lai izpildītu robežsargu uzdevumus (piemērojami darba vai dienesta vietai). Robežsargu kompetenču profilu kopums NKI kontekstā strukturizēts pēc tematiskajām jomām un atspoguļots 2.attēlā.



2.attēls. ES robežsargu kompetenču profilu kopuma tematiskā struktūra (autora veidots)

Figure 2 The thematic structure of the EU border guard competence profiles

(created by the author)

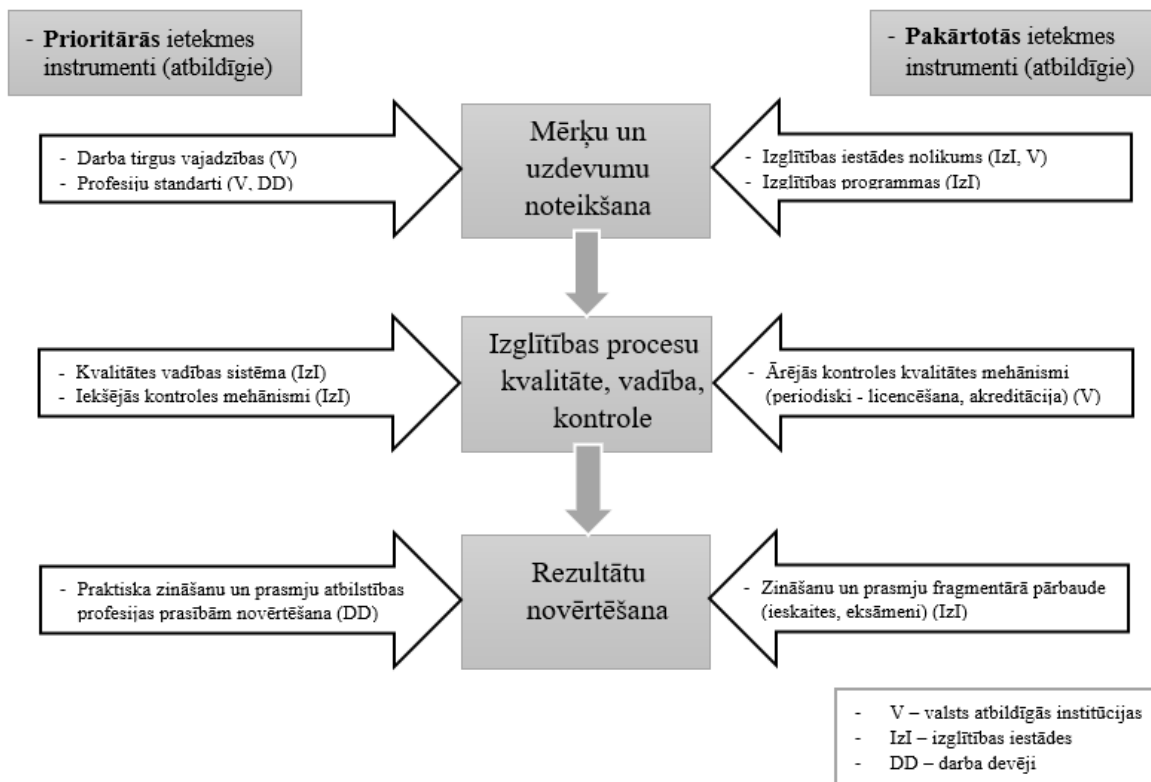
Savukārt, nacionālās prasības robežsargu profesionālo kompetenču saturam Latvijā reglamentē Valsts robežsardzes inspektora (LR Izglītības un zinātnes ministrijas Valsts izglītības satura centrs [LR IZM VISC]), 2009), Valsts robežsardzes jaunākā virsnieka (LR IZM VISC, 2010) un Valsts robežsardzes vecākā virsnieka (LR IZM VISC, 2004) profesijas standarti, kas nosaka šo kategoriju robežsargiem nepieciešamo spēju, prasmju un zināšanu klāstu, kā arī to pienākumus un uzdevumus.

Profesiju standartos noteikto zināšanu, prasmju un kompetenču kopumu darba devēju institūcijām nepieciešamajā līmenī nākamajiem un esošajiem darbiniekiem ir jānodrošina robežsargu profesionālās sagatavošanas sistēmai. Personāla profesionālās sagatavošanas sistēmas pasākumu komplekss sevī iekļauj šādus posmus: institūcijas darbinieku atlase, pieņemšana dienestā (darbā), profesionālā apmācība (t.sk. sākumapmācība darba vietā, nosūtīšana nepieciešamās profesionālās izglītības iegūšanai, profesionālās kvalifikācijas celšanas (tālākapmācības) organizēšana un nodrošināšana, zināšanu un iemaņu atbilstības novērtēšana), kā arī profesionālās attīstības motivēšana, izaugsmes un karjeras vadīšana (Zālītis, Zukova, & Madzule, 2016).

Robežsargu profesionālās sagatavošanas sistēmas posmu kvalitātes nodrošināšanā tiek iesaistītas triju kategoriju instances: attiecīgās atbildīgās valsts institūcijas, izglītības iestādes, kas realizē profesionālās izglītības, profesionālās tālākizglītības vai profesionālās pilnveides programmas un darba devēju institūcijas savas kompetences ietvaros. Redzējumā, kas balstās uz normatīvo aktu analīzi un autora personīgo darba pieredzi visu triju augstāk minēto kategoriju instancēs, to kompetenču un ietekmes uz profesionālās izglītības kvalitāti sadalījums dažādos robežsargu profesionālās izglītības kvalitāti nodrošināšanas posmos ir relatīvi atšķirīgs. Autors šo kompetenču realizācijas instrumentus profesionālās izglītības kvalitātes nodrošināšanas kompetenču konceptuālā struktūrā (3.att.) iedala noteicošās (Prioritārās) ietekmes un sekundārās (Pakārtotās) ietekmes kategorijās.

Autora redzējumā valsts tautsaimniecības interesēm atbilstoša būtu sistēmiski funkcionējoša kārtība, kad darba tirgus vajadzības un, attiecīgi, darba devēji ir tie, kas pēc būtības nosaka profesionālajai izglītībai un tās programmām faktiskās prasības un līdz ar to arī attiecīgus mērķus un uzdevumus, kas, savukārt, tiek projicēti izglītības iestāžu izstrādājamajos plānošanas un normatīvajos dokumentos un praktiskajā darbībā. Augstākminētais saskan ar Pamatnostādnēs iezīmēto, ka Latvijas valsts izglītības sistēmā arvien aktuālāks kļūst jautājums, kā profesionālo izglītības programmu absolventiem nodrošināt darbam nepieciešamo kompetenču apguvi (LR MK, 2021). Pamatnostādnēs tiek akcentēts ka arī darba devēji norāda uz kvalificēta darbaspēka trūkumu un jauniešu zināšanu un prasmju neatbilstību tautsaimniecības attīstības vajadzībām, līdz ar ko tiek izvirzīts uzdevums nodrošināt kvalitatīvu profesionālo izglītību, saskaņojot apgūstamās prasmes un mācību rezultātus ar darba tirgus prasībām

(LR MK, 2021). Lai gan Profesionālās izglītības likums (LR Saeima, 1999) nosaka, ka profesionālās izglītības iestādes pamatuzdevums ir profesionālās izglītības programmu īstenošana, šī raksta autors un citi pētnieki (Siliņa, 2019 u.c.) saredz profesionālās izglītības iestādes funkcijas relatīvi plašāk, t.sk. uzskatot, ka tajās ietilpst arī prioritārais uzdevums - sagatavot darbaspēku atbilstoši darba tirgus pieprasījumam. Vadoties no augstākminētā autors secina, ka profesionālās sagatavošanas rezultātu un līdz ar to arī profesionālās izglītības kvalitātes galvenie vērtētāji ir nosacītais darba tirgus un tieši darba devēji.



3.attēls. *Profesionālās izglītības kvalitātes nodrošināšanas kompetenču konceptuālā struktūra (autora veidots)*

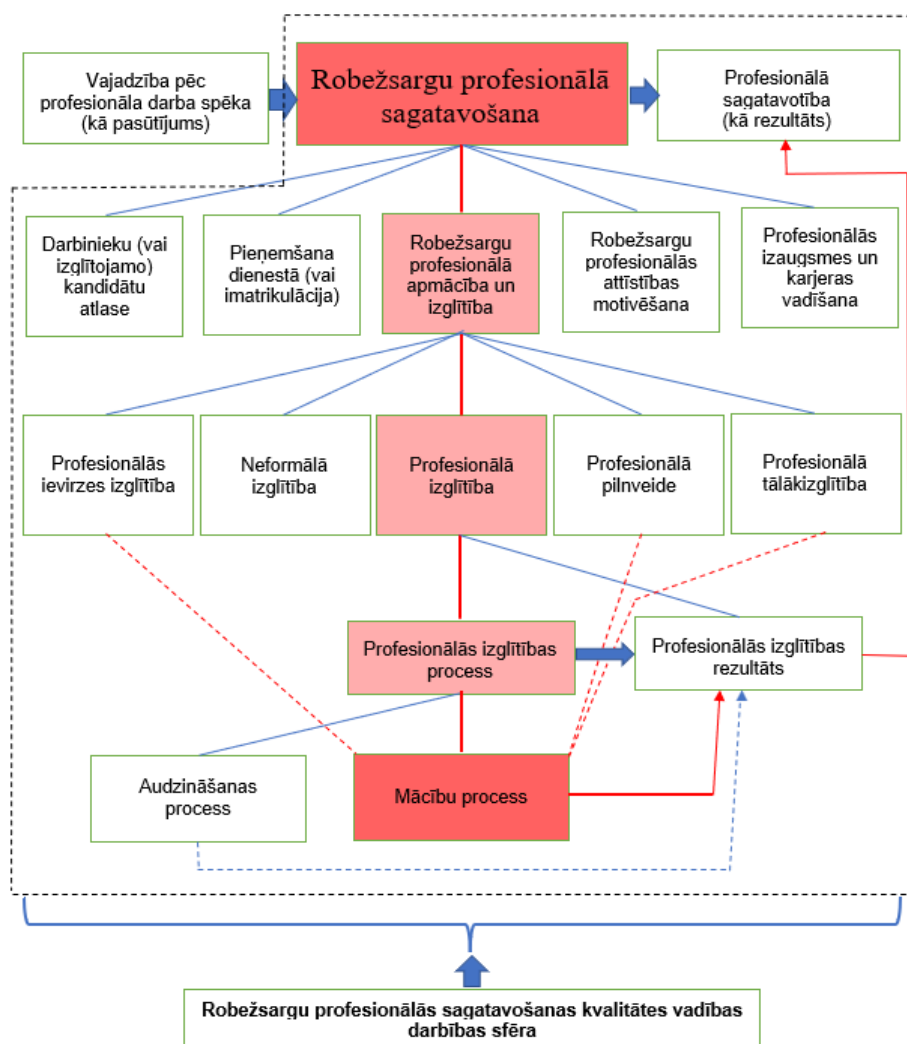
Figure 3 *The conceptual structure of competencies for the quality assurance in professional education (created by the author)*

Bet kurš ir tas noteicošais faktors, kas nodrošina izglītības rezultātu kvalitāti? Ņemot vērā teorētiskās pieejas un Latvijas izglītības telpas specifiku, LR Izglītības un zinātnes ministrijas “Starpziņojumā par jēdziena ‘izglītības kvalitāte’ definīciju un to raksturojošiem kvalitatīvajiem un kvantitatīvajiem rādītājiem” (LR IZM, 2019) tiek akcentēts, ka, lai sasniegtu izvīzītos izglītības rezultātus un nodrošinātu mācību kvalitāti un drošu vidi, būtiska loma ir izglītības vadībai un izveidotajai organizācijas kultūrai izglītības iestādēs un ka kvalitatīvas mācības vistiešāk ietekmē izvīzīto izglītības mērķu sasniegšanu. Arī zinātnieku aprindās pastāvošie viedokļi, ka kvalitatīva mācīšana tiek uzskatīta par svarīgu studentu mācīšanās priekšnoteikumu (Scheerens & Bosker, 1997; Prosser, 2013 u.c.), norāda uz mācību procesa kvalitātes prioritāro nozīmi izglītības mērķu

sasniegšanā, jo, lai izglītības iestāde nodrošinātu atbilstošu speciālistu sagatavošanas kvalitāti, ir nepieciešams sasniegt augstu mācību procesa kvalitāti. Savukārt, mācību procesa kvalitāti nodrošinošas mācību vides izveide ir attiecīgās nozares institūcijas un konkrētas izglītības iestādes kompetencē un atbildībā.

Pētījuma koncepts un metodoloģija *Research concept and methodology*

Iepriekš izklāstītie zinātnieku un IZM pētījumu secinājumi saskan ar šī raksta autora viedokli, ka sasniedzamo profesionālās izglītības kvalitātes mērķu kontekstā noteicošā ir mācību procesa kvalitāte, kam jānodrošina izglītojamo atbilstošus profesionālo sagatavotību un praktiskās rīcībspējas kapacitāti, līdz ar ko būtiska loma ir profesionālās izglītības mācību procesa kvalitātei un kvalitātes vadības nodrošināšanai.

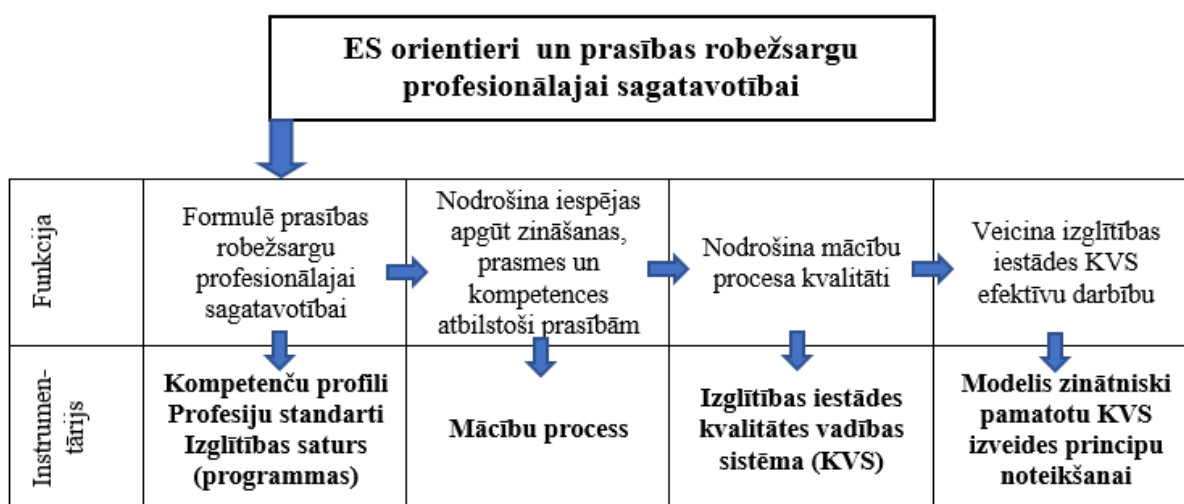


4.attēls. Pētījuma virziena koncepts robežsargu profesionālās sagatavošanas sistēmas elementu mijiedarbības ietvara kontekstā (autora veidots)

Figure 4 The concept of the research direction within the context of the frame of interaction between the elements of the border guards' professional training system (created by the author)

Pamatojoties uz augstākminēto, autors izstrādāja pētījuma virziena koncepta shēmu robežsargu profesionālās sagatavošanas sistēmas elementu mijiedarbības ietvara kontekstā (4.att.). Analizējot robežsargu profesionālās sagatavošanas sistēmu un tās elementu mijiedarbību, un balstoties uz to, kā objektu, uz kuru ir vēršama izglītības kvalitātes vadības nodrošināšanas mehānismu darbība noteikto ES un nacionālo prasību robežsargu profesionālo kompetenču jomā sasniegšanai, tika izveidots pētījuma koncepts un tā galvenais virziens ir orientēts uz profesionālās izglītības mācību procesa kvalitātes vadības aspektiem tiesībsargājošo institūciju izglītības iestādes.

Nosakot un analizējot robežsargu profesionālās sagatavošanas vadības galvenās funkcijas un to pakārtoto praktisko secību, autors izstrādāja robežsargu profesionālās sagatavotības kvalitātes nodrošināšanas konceptuālo shēmu (5.att.), norādot arī instrumentāriju, kam jānodrošina shēmā iekļauto funkciju realizēšana.



5.attels. *Robežsargu profesionālās sagatavotības kvalitātes nodrošināšanas konceptuālā shēma (autora veidots)*

Figure 5 *The conceptual scheme of quality assurance in border guards' professional training (created by the author)*

Par noteicošo mehānismu, kas nodrošina mācību procesa kvalitāti, shēmā ir noteikta izglītības iestādes KVS, bet par instrumentāriju, kas nodrošina KVS efektīvu funkcionēšanu, tiek uzskatīta nepieciešamība izmantot attiecīgu modeli zinātniski pamatotu KVS izveides efektīvāko pamatprincipu noteikšanai.

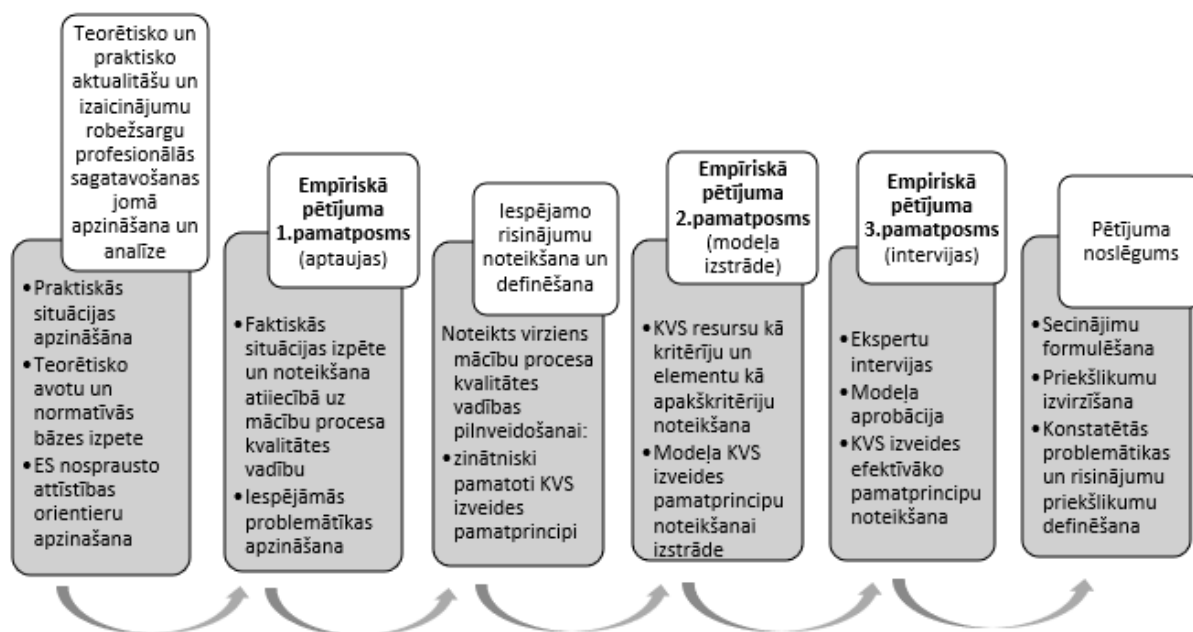
Pamatojoties uz to, ka neeksistē izglītības kvalitātes novērtēšanas un nodrošināšanas sistēmas izveides universāli mehānismi un reti ir sastopami pētījumi, kas pēta un vērtē KVS izveides izvēles pamatprincipus, autors secināja, ka pastāv praktiskā aktualitāte izstrādāt teorētiskās un metodoloģiskās pieejas un risinājumus tiesībsargājošo institūciju izglītības iestāžu KVS izveidošanas pamatprincipu efektīvai un zinātniski pamatotai izvēlei.

No teorijas analīzes un secinājumiem, ka mācību procesa izglītības iestādē kvalitātes vadības nodrošināšanā noteicoša loma ir attiecināma uz efektīvi funkcionējošas KVS esamību un pilnvērtīgu darbību, izriet praktiskā aktualitāte zinātniski pamatotai pieejai KVS izglītības iestādēs, kā profesionālās izglītības kvalitātes nodrošināšanas mehānisma, izveides pamatprincipu noteikšanai un, respektīvi, attiecīgā pētnieciskā instrumentārija – modeļa efektīvāko KVS izveides pamatprincipu noteikšanai, izstrādei. Vadoties no augstākminētā autors veidoja pētījuma koncepta paradigmu (6.att.), uz kuras pamata tiek noteikts mērķis: balstoties uz profesionālās sagatavošanas mācību procesa kvalitātes vadības aspektu analīzi Baltijas valstu tiesībsargājošo institūciju izglītības iestādēs, izstrādāt un aprobēt modeli KVS izveides aktuālāko pamatprincipu noteikšanai un tā pielietošanas metodiku, ar kuru palīdzību ir iespējams noteikt aktuālākos un efektīvākos KVS izveides pamatprincipus tiesībsargājošo institūciju izglītības iestādēs.



6. attēls. *Pētījuma koncepta paradigma* (autora veidots)
Figure 6 *The paradigm of a research concept* (created by the author)

Atbilstoši noteiktam pētījuma mērķim tika veidota pētījuma konceptuālā struktūra (7.att.), kurā katra nākamā posma mērķa un uzdevumu noteikšana izrietēja un praktiska realizācija varēja īstenoties pēc iepriekšējā posma noslēgšanas un rezultātu analīzes.



7.attēls. *Pētījuma konceptuālā struktūra (autora veidots)*

Figure 7 *The conceptual structure of the research (created by the author)*

Pētījuma sākumposmā autors veica teorētisko un praktisko aktualitāšu un izaicinājumu robežsargu profesionālās sagatavošanas jomā apzināšanu un analīzi.

Empīriskais pētījums ir realizēts trijos pamatposmos:

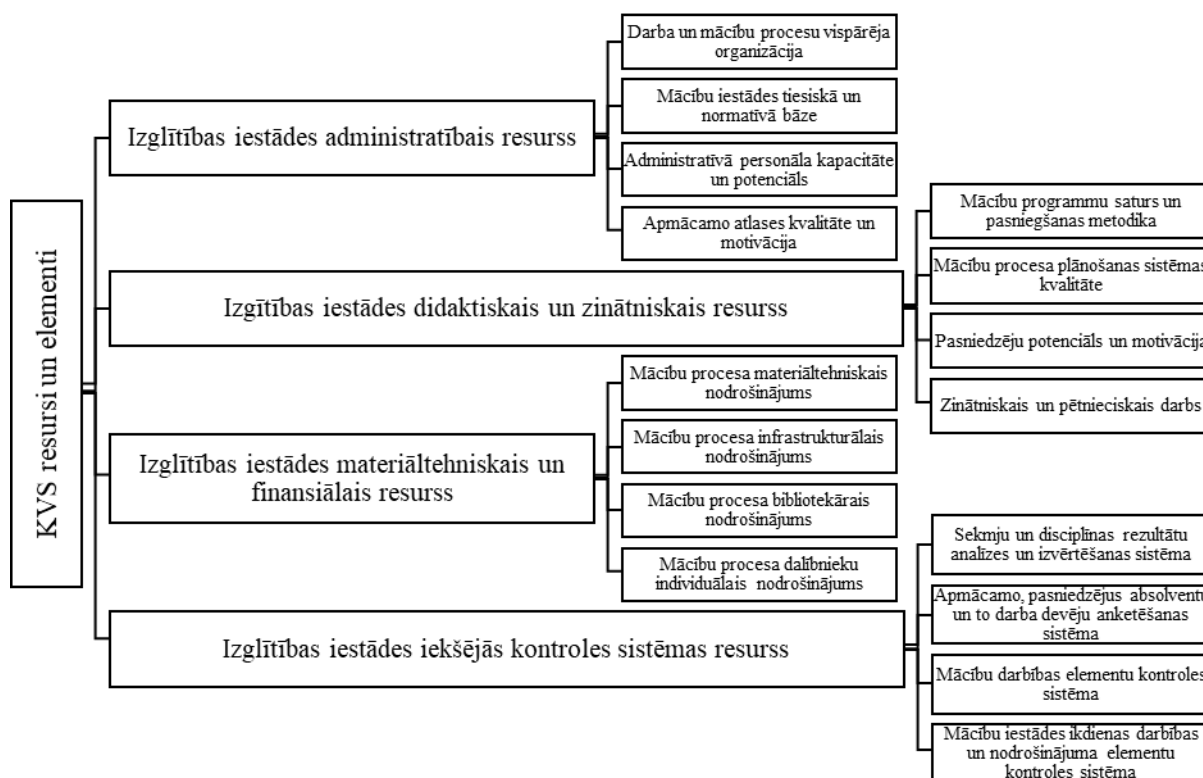
Pirmajā pamatposmā tika veikta aptauja, kurā par pētījuma bāzi kalpoja izglītības procesa visu kategoriju dalībnieku (izglītojamie, pasniedzēji, administrācija), kā arī absolventu un darba devēju pārstāvji Baltijas valstu attiecīgā profila izglītības iestādēs (Zālītis, 2021).

Aptaujā piedalījās četru kategoriju 2264 respondenti - tiesībsargājošo institūciju darbinieku profesionālās sagatavošanas mācību procesa dalībnieku visu segmentu pārstāvji – piecu izglītības iestāžu, kurās gatavo darbiniekus tiesībsargājošajām institūcijām, izglītojamie un pasniedzēji (t.sk. administrācijas pārstāvji) no Lietuvas, Latvijas un Igaunijas, kā arī minēto izglītības iestāžu absolventi un to darba devēju pārstāvji. Pēc anketu kvalitātes pārbaudes, lai novērstu nejaušās un sistēmiskās reģistrācijas kļūdas, pētījuma datu kopu veidošanā izmantoti 1324 respondentu sniegtie vērtējumi (Zālītis & Davidova, 2020). Saskaņā ar statistikas praksē noteiktiem izlašu apjomiem respondentu ģenerālajai kopai pētījuma galējais sērijveida (klasteru) izlases saturs nodrošināja pētījuma galarezultātu reprezentativitāti, jo pie pieļaujamās pētījuma kļūdas 5% izlases apjoms virs 400 vienībām nodrošina pētījuma rezultātu reprezentativitāti bezgalīgam ģenerālās kopas apjomam (Mārtinsone & Pipere, 2011).

Faktiskās situācijas izpētes gaitā attiecībā uz mācību procesa kvalitātes vadības nodrošināšanu, autors konstatēja zināmu problemātiku mācību procesa organizēšanas, plānošanas, nodrošināšanas un norises kvalitātes vadības aspektos

un nepilnvērtīgu efektivitāti iekšējo kontroles sistēmu darbībā (Zalitis et al., 2020a; Zālītis, 2021, 30-31). Kā viens no iespējamajiem noteicošajiem cēloņu faktoriem relatīvas problemātikas esamībai tika noteikta zinātniskās pieejas neesamība kvalitātes vadības sistēmu izglītības iestādēs izveides pamatprincipu noteikšanā (Zālītis, 2021).

Otrā pamatposma ietvaros tika izstrādāts hierarhiju modelis (turpmāk – Modelis) un tā pielietošanas metodoloģija ar zinātniskiem pētījumiem pamatotu efektīvāko pamatprincipu noteikšanai KVS izveidei izglītības iestādēs (Zālītis, 2021). KVS pamatresursu (turpmāk - resursu) un pamatelementu (turpmāk - elementu) kopas struktūra (8.att.) veidojamā Modeļa ietvaros ir atlasīta un komplektēta pamatojoties uz starptautiski atzīto KVS konceptuālo modeļu (ISO, CAF, EFQM, TQM) komponentu (elementu, kritēriju un apakškritēriju) analīzi un izvērtēšanu attiecībā uz piemērotību pētījumā iekļauto izglītības iestāžu specifikai un prioritātēm.



8.attēls. KVS resursu un elementu kopas struktūra (autora veidots)

Figure 8 The structure of the QMS resources and elements (created by the author)

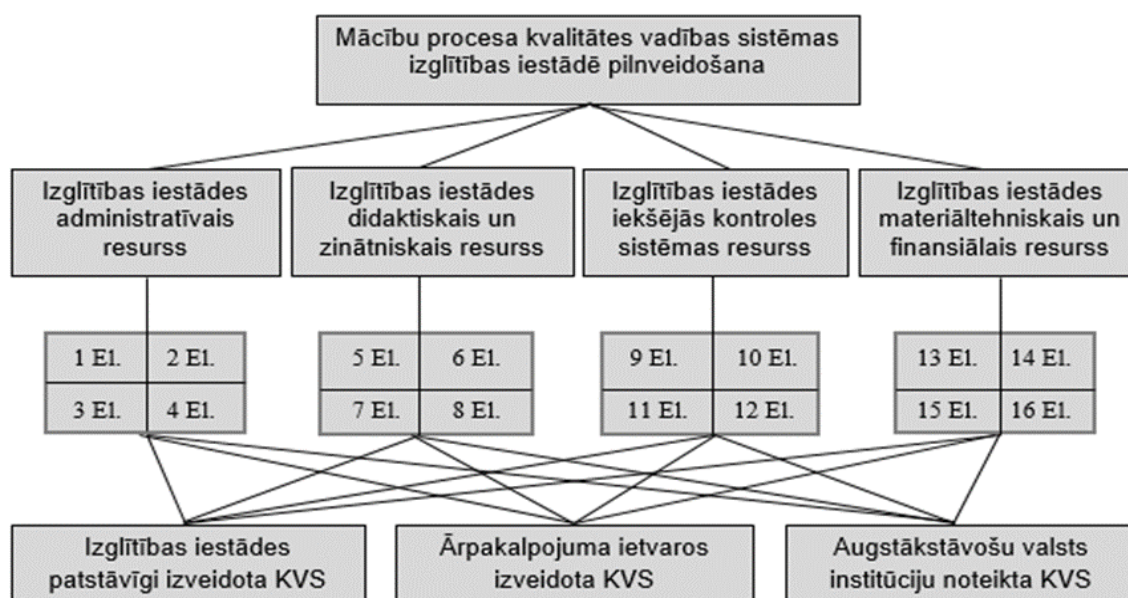
Modelis tika veidots ar priekšnosacījumu, ka KVS resursu un elementu mijiedarbība tiek vērtēta atbilstoši kritērijam “Ietekme uz mācību procesa kvalitāti” un ka Modeļa izmantošanas procesa gaitā iegūtos datus būs iespējams vērtēt un analizēt ar hierarhiju analīzes metodi (Zalitis, Davidova, & Glaudins, 2020).

Izglītības iestāžu KVS izveides pamatprincipu variantu alternatīvas tika formulētas trijās versijās:

“1) Izglītības iestādes patstāvīgi, administratīvi neatkarīgi izveidota kvalitātes vadības sistēma;

2) Ārpakalpojuma ietvaros izveidota kvalitātes vadības sistēma (piemēram, izmantojot ISO sēriju standartus, vai citus);

3) Augstākstāvošu valsts institūciju noteiktā kvalitātes vadības sistēma (piemēram, pēc valdības, attiecīgas ministrijas vai hierarhiski augstākas valsts pārvaldes iestādes nosacījumiem izveidota KVS vai tās elementi - struktūra, saturs, procesi)” (Zalītis, Davidova, & Ignatjeva, 2020b, p. 770). Modeļa darbības konceptuālā struktūrshēma atspoguļota 9.attēlā.



9.attēls. *Kvalitātes vadības sistēmas hierarhiskā modeļa darbības struktūrshēma* (Zalītis, Ignatjeva, Davidova, & Kokina, 2020)

Figure 9 *The structural scheme of the hierarchical model activity in the quality management system* (Zalītis, Ignatjeva, Davidova, & Kokina, 2020)

Izstrādātais Modelis pēc savas saturiskās būtības ir piemērojams, pirmkārt, KVS izveides pamatprincipu noteikšanai tiesībsargājošo iestāžu izglītības iestādēs. Pie tam, pie nepieciešamības, atkarībā no valsts iestādes vai izglītības iestādes īpašās specifikas, ir iespējams aizvietot atsevišķus apakškritērijus ar citiem, konkrētai iestādei aktuālākiem KVS elementiem. Viennozīmīgi šāda darbība būtu veicama, piemērojot doto modeli (kas principiāli ir iespējams) attiecībā uz izglītības iestādēm, kas nav saistītas ar tiesībsargājošo iestāžu dienesta specifiku (Zalītis, Davidova, & Gludins, 2020).

Trešā pamatposma gaitā, veicot četru kategoriju ekspertu tiesībsargājošo institūciju darbinieku profesionālās sagatavošanas jomā intervēšanu, tika veikta izstrādātā Modeļa praktiskā aprobācija, kuras rezultātā noteikti aktuālie efektīvākie KVS izveides pamatprincipi (Zālītis, 2021). Informanti iespējami

līdzīgās proporcijās pārstāvēja izglītības iestādes un tiesībsargājošās institūcijas, kuru vajadzībām augstākminētās izglītības iestādes apmāca un sagatavo personālu (Zalitis, Davidova, & Ignatjeva, 2020b). Proporcijas arī maksimāli tika ievērotas atlasot ekspertus lēmumu pieņemšanas kompetenču līmeņu (stratēģiskie un taktiskie) griezumā (2.tab.).

2. tabula. Intervijas informantu sadalījums kategoriju un valstiskas piederības griezumā (autora veidots)

Table 2 The distribution of interview informants according to categories and national identity (created by the author)

Intervijas informantu kategorijas						
Pēc valstiskās piederības	Pēc ekspertu lēmumu statusa līmeņa			Pēc ekspertu institucionālās piederības		
	Stratēģiskais	Taktiskais	Kopā	Tiesībsargājošā institūcija	Izglītības iestāde	Kopā
Latvija	4	4	8	3	5	8
Lietuva	3	3	6	2	4	6
Igaunija	3	3	6	3	3	6
Kopā:	10	10	20	8	12	20

Pētījuma ietvaros veiktas ekspertu strukturētā tipa intervijas personīgā veidā, izdiskutējot pētījumā izvirzītos jautājumus un fiksējot uz praktisko pieredzi balstītos ekspertu viedokļus un vērtējumus. Interviju datu fiksēšana un turpmākā analīze tika veikti balstoties uz amerikāņu matemātiķa profesora T.Saati izstrādāto hierarhiju analīzes metodi (Saaty, 1980), t.i. pāru salīdzināšanas metodi, kam tika sagatavoti trīs jautājumu bloki, kas pakārtoti pētījuma ietvaros izstrādātā Modeļa struktūrai (Zalitis, Ignatjeva, Davidova, & Kokina, 2020).

Intervijas gaitā tika iegūti dati, kas ļāva pēc ietekmes uz mācību procesa kvalitāti novērtēt: a) izglītības iestāžu KVS resursus, kā kritērijus; b) KVS elementus, kā apakškritērijus; c) KVS izveides pamatprincipu variantus, kā izvēles alternatīvās (Zalitis, Ignatjeva, Davidova, & Kokina, 2020).

Pētījuma trešā pamatposma galvenie “rezultāti liecina, ka izglītības iestādes patstāvīgi, neatkarīgi no ārējas administratīvās vai politiskās ietekmes izstrādātā unikālā KVS būs efektīvākā attiecībā uz mācību procesa kvalitāti, kas pamatojās ar izstrādātās KVS paredzamo sākotnējo piemērotību tieši konkrētās izglītības iestādes specifikai un prognozējamām pilnveidošanas fleksibilitātes iespējām” (Zalitis, Ignatjeva, Davidova, & Kokina, 2020; Zālītis, 2021, 31). Savukārt, relatīvi visaugstākā efektivitāte būs panākama, ja izglītības iestādes KVS tiks izveidota kombinēti izmantojot pamatprincipus, kas pētījuma rezultātā tiek noteikti kā efektīvākie attiecībā uz katru konkrētu mācību procesa kvalitātes nodrošināšanas sistēmas resursu (Zalitis, Ignatjeva, Davidova, & Kokina, 2020; Zālītis, 2021).

Secinājumi **Conclusions**

1. Pētījuma, kas uzsākts 2016.gadā, temata aktualitāte mūsdienu dinamisko pārmaiņu un izaicinājumu apstākļos raksturojās ar jaunām prasībām drošības un profesionālās izglītības jomas institūcijām, pēdējo gadu laikā ir augusi un atspoguļojās gan ES, gan LR plānošanas dokumentos un normatīvajos aktos.
2. Profesionālās sagatavošanas prioritārais uzdevums un kvalitātes rādītājs ir spēja sagatavot darbaspēku atbilstoši darba tirgus pieprasījumam un darba devēju noteiktām prasībām darbinieku kompetencēm, līdz ar ko tieši nosacītais darba tirgus un darba devēji ir galvenie vērtētāji profesionālās sagatavošanas rezultātiem un profesionālās izglītības kvalitātei.
3. Lai izglītības iestāde nodrošinātu atbilstošu speciālistu sagatavošanas kvalitāti, ir nepieciešams sasniegt augstu mācību procesa kvalitāti, savukārt, mācību procesa kvalitāti nodrošinošas mācību vides izveide ir attiecīgās nozares institūcijas un konkrētas izglītības iestādes kompetencē un atbildībā.
4. Profesionālās izglītības mācību procesa kvalitātes vadība un tās īstenošanai izveidotās KVS ir tie mehānismi, kuriem ir jānodrošina profesionālās sagatavošanas rezultātu atbilstība noteiktiem mērķiem un uzdevumiem.
5. Zinātniskās pieejas trūkums KVS izveides pamatprincipu noteikšanā un izvēlē ir viens no noteicošajiem negatīvās ietekmes faktoriem, kas ir par iemeslu pētījuma ietvaros konstatētai problemātikai mācību procesa kvalitātes vadības nodrošināšanā tiesībsargājošo institūciju izglītības iestādēs.
6. LR normatīvā bāze nosaka aktualitāti uz pētījumiem balstītiem politiskiem un vadības lēmumiem izglītības jomā, bet KVS izveides un funkcionēšanas jautājumi tiesībsargājošo institūciju izglītības iestādēs, t.sk. KVS izveides pamatprincipu izvēles un noteikšanas kontekstā, līdz šim pētīti faktiski nav.
7. Galvenais pētījuma rezultāts ir metodoloģiskā instrumentārija izstrāde Modeļa izveidošanai un praktiskajai pielietošanai, novērtējot KVS resursus un elementus atbilstoši ietekmei uz mācību procesa kvalitāti, kas dod iespēju tiesībsargājošo institūciju izglītības iestādēm izmantot Modeli objektīvai un zinātniski pamatotai alternatīvas izvēlei KVS izveides pamatprincipu noteikšanai.
8. Pētījuma gaitā veiktās Modeļa aprobācijas rezultātā tika pārbaudīti un apstiprināti tā praktiskās pielietošanas iespējas un funkcionalitāte, kā arī noteikti aktuālie, pētījuma veikšanas laika posma kontekstā, efektīvākie KVS izveides pamatprincipi tiesībsargājošo institūciju izglītības iestādēs.
9. Konstatēts, ka relatīvi visaugstākā efektivitāte attiecībā uz mācību procesa kvalitāti, kā profesionālās sagatavošanas kvalitātes nodrošināšanas pamatfaktoru, būs panākama izglītības iestādes KVS izveides procesā kompleksi izmantojot pamatprincipus, kas pētījuma rezultātā tiek noteikti kā

efektīvākie attiecībā uz katru konkrētu mācību procesa kvalitātes nodrošināšanas sistēmas resursu.

Summary

The research described in the paper has been conducted within the frame of the doctoral thesis “Quality management of border guards’ professional training” and is focused on the exploration of topicalities and opportunities for improving the quality management of border guards’ professional training. During the research, which in the aspect of the QMS activity assessment in law enforcement education institutions of the three Baltic countries has been done in a complex way for the first time:

- the structure and elements of border guards’ professional training have been identified and the interaction between them has been studied within the context of determining the research direction;
- the conceptual structure of competencies for quality assurance in professional training education has been analyzed;
- the actual situation and existence of problems as to the quality aspects of providing a professional training educational process as well as its practical implementation in the law enforcement institutions of the Baltic countries included in the research have been analyzed and identified;
- the fact that one of the most essential prerequisites for the educational process quality assurance is the creation and introduction of QMS in education institutions, including also those which implement professional education programs and prepare employees for law enforcement institutions, has been established;
- the research instruments for identifying the most effective basic principles of creating QMS in education institutions (further – Model) and evaluation of QMS resources and elements in respect of their impact on the educational process quality have been developed;
- Model and the methodology of its use have been worked out, which gives education institutions a theoretical and practical opportunity to objectively establish the basic principles for the development of QMS and creates a platform for the choice of a scientifically valid alternative;
- the most topical and effective basic principles for the development of QMS in law enforcement education institutions have been determined by applying Model and methodology of its use worked out within the frame of this research.

On the whole, the research outcomes provide a scientifically valid frame for the action of law enforcement institutions and other education institutions involved in implementing programs on public and human security (border guards including), by establishing the basic principles for creating QMS and indicating

priority directions in the organization and development of education institutions' activities, creating a favorable environment for assuring quality of staff's professional training in line with landmarks and requirements set by the EU for the border guards' professional training in the member states.

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Literatūra *References*

- Apvienoto Nāciju Augstā komisāra bēgļu jautājumos birojs [UNHCR]. (2023). *Operational Data Portal* [Data file]. Retrieved from: <https://data.unhcr.org/en/situations/ukraine>
- Balendr, A. (2018). Current status and prospects for the quality assurance in Border Guards Training: European experience. *Comparative Professional Pedagogy*, 8(4), 20-25.
- EU Council and Commission. (2004). *Education & Training 2010. The success of the Lisbon Strategy hinges on urgent reforms: Joint interim report of the Council and the Commission on the implementation of the detailed work programme on the follow-up of the objectives of education and training systems in Europe*. Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv:OJ.C_.2004.104.01.0001.01.ENG&toc=OJ:C:2004:104:TOC
- EUROSTAT. (2023). *Statistics Explained*. [Data file]. Retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Annual_asylum_statistics&oldid=584073
- FRONTEX. (2013a). *Sectoral Qualifications Framework for Border Guarding*, Vol. I, Warsaw: Frontex.
- FRONTEX. (2013b). *Sectoral Qualifications Framework for Border Guarding* Vol. II, Warsaw: Frontex.
- FRONTEX. (2019). *Tehniskā un operatīvā stratēģija Eiropas integrētajai robežu pārvaldībai*. Pieejams: <https://op.europa.eu/en/publication-detail/-/publication/2123579d-f151-11e9-a32c-01aa75ed71a1/language-lv/format-PDF/source-116973902#>
- FRONTEX. (2023). *EU's external borders in 2022: Number of irregular border crossings highest since 2016*. Retrieved from: <https://frontex.europa.eu/media-centre/news/news-release/eu-s-external-borders-in-2022-number-of-irregular-border-crossings-highest-since-2016-YsAZ29>
- Indrikovs, Z. (2007). Policijas darbiniekiem nepieciešamās profesionālās izglītības minimālās prasības: nacionālie likumdošanas akti un Eiropas Savienības valstu prakse. Gram.: *Policijas augstākās izglītības vadības problēmas: starptautiskā zinātniski praktiskā konference* (30-41). Rīga: Latvijas Policijas akadēmija.
- Kratcoski, P.C., & Das, D.K. (2007). *Police Education and Training in a Global Society*. Lanham, USA: Lexington Books.

- LR Izglītības un zinātnes ministrija. (2019). Starpziņojums par jēdziena “izglītības kvalitāte” definīciju un to raksturojošiem kvalitatīvajiem un kvantitatīvajiem rādītājiem 01.10.2019. *IZM ESF Projekts Nr. 8.3.6.2/17/I/001 Izglītības kvalitātes monitoringa sistēmas izveide un īstenošana*. Pieejams: <https://www.izm.gov.lv/lv/media/4717/download>
- LR IZM Valsts izglītības satura centrs. (2004). Profesijas standarts. Valsts robežsardzes vecākais virsnieks. *Metodiskie materiāli un reģistri*. Pieejams: <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/ps0277.pdf>
- LR IZM Valsts izglītības satura centrs. (2009). Profesijas standarts. Valsts robežsardzes inspektors. *Metodiskie materiāli un reģistri*. Pieejams: <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/ps0049.pdf>
- LR IZM Valsts izglītības satura centrs. (2010). Profesijas standarts. Valsts robežsardzes jaunākais virsnieks. *Metodiskie materiāli un reģistri*. Pieejams: <https://registri.visc.gov.lv/profizglitiba/dokumenti/standarti/ps0452.pdf>
- LR Ministru kabinets. (2001). *Noteikumi Nr.141 par pirmā līmeņa profesionālās augstākās izglītības valsts standartu*. Pieejams: <https://likumi.lv/ta/id/6397>
- LR Ministru kabinets. (2014). *Noteikumi Nr.512 par otrā līmeņa profesionālās augstākās izglītības valsts standartu*. Pieejams: <https://likumi.lv/ta/id/268761>
- LR Ministru kabinets. (2020). *Noteikumi Nr. 332 par valsts profesionālās vidējās izglītības standartu un valsts arodizglītības standartu*. Pieejams: <https://likumi.lv/ta/id/315146>
- LR Ministru kabinets. (2021). *Rīkojums Nr. 436 par Izglītības attīstības pamatnostādņem 2021.-2027. gadam*. Pieejams: <https://likumi.lv/ta/id/324332-par-izglitibas-attistibas-pamatnostadnem-2021-2027-gadam>
- LR Saeima. (1998). *Izglītības likums*. Pieejams: <https://likumi.lv/ta/id/50759>
- LR Saeima. (1999). *Profesionālās izglītības likums*. Pieejams: <https://likumi.lv/doc.php?id=20244>
- LR Saeima. (2006). *Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonu ar speciālajām dienesta pakāpēm dienesta gaitas likums*. Pieejams: <https://likumi.lv/ta/id/138750>
- LR Saeima. (2021). *Grozījumi Izglītības likumā*. Pieejams: <https://likumi.lv/ta/id/322560-grozijumi-izglitibas-likuma>
- Mārtinsone, K., & Pipere, A. (red.) (2011). *Ievads pētniecībā. Stratēģijas, dizaini, metodes*. Rīga: RaKa.
- Peres, A. (2019). Skills for borders – a quality assurance model for European Border and Coast Guard training. In *INTED2019 Proceedings* (2080-2090). DOI: 10.21125/inted.2019.0583
- Prosser, M. (2013). Quality teaching quality learning. In: *D. J. Salter (Ed.), Cases on Quality Teaching Practices in Higher Education*. Vancouver: IGI Global.
- Saaty, T.L. (1980). *The Analytic Hierarchy Process*. New York: McGraw Hill.
- Scheerens, J., & Bosker, R. (1997). *The Foundations of Educational Effectiveness*. Oxford: Pergamon.
- Siliņa, S. (2019). *Izglītības kvalitātes nodrošināšanas vadība profesionālās izglītības iestādē X*. Rīga: Latvijas Universitāte, Pedagoģijas, psiholoģijas un mākslas fakultāte.
- Valk, A., & Kratovičs, M. (2021). We collaborate with everyone, but with some more than others: Evidence of stakeholder collaboration among internal security professional higher education institutions. *Empirical Research in Vocational Education and Training*, 13(4). DOI: <https://doi.org/10.1186/s40461-021-00110-6>
- Vilks, A. (2016). Nelegālā migrācija drošības nodrošināšanas kontekstā. *Socrates*, 1(4), 36–45. Pieejams: https://dspace.rsu.lv/jspui/bitstream/123456789/986/1/16-091_Socrates_4_2016_04_Vilks_036-045_.pdf

- Zalitis, I., & Davidova, J. (2020). Mācību procesa kvalitātes monitoringa praktiskās pielietojanas izvērtējums tiesībsargājošo institūciju profesionālās izglītības iestādēs. Grām.: V.Meņšikovs (zin. red.), *Starptautiskās zinātniskās konferences "Sociālās zinātnes reģionālajai attīstībai 2020" materiāli, 1* (72-85). Daugavpils: Akadēmiskais apgāds "Saule". Pieejams: https://du.lv/wp-content/uploads/2022/11/SZF-krajums_I_Sociologijas-aktualitates_2021.pdf
- Zalitis, I., Davidova, J., & Glaudins, R. (2020). A model for establishing the basic principles of creating a quality management system in law enforcement education institutions. *EDULEARN20 Proceedings: 12th International Conference on Education and New Learning Technologies*, 2886-2894. IATED Academy. DOI: 10.21125/edulearn.2020.0866
- Zalitis, I., Davidova, J., & Ignatjeva, S. (2020a). Quality aspects of planning, organization and implementation of a study process in the border guard and police education institutions of the Baltic states. *ICERI2020 Proceedings: 13th International Conference of Education, Research and Innovation*, 4419-4428. IATED Academy. DOI: 10.21125/iceri.2020.0976
- Zalitis, I., Davidova, J., & Ignatjeva, S. (2020b). The evaluation of internal control elements in the quality management system of education establishments at law enforcement institutions. *Society. Integration. Education: Proceedings of the International Scientific Conference, volume VI*, 767-780. Rēzekne: Rēzekne Academy of Technologies. DOI: 10.17770/sie2020vol6.5024
- Zalitis, I., Ignatjeva, S., Davidova, J., & Kokina, I. (2020). The basic principles of designing a quality management system in education institutions of professional field of police and border guards. *EDULEARN20 Proceedings: 12th International Conference on Education and New Learning Technologies*, 3765-3773. IATED Academy. DOI: 10.21125/edulearn.2020.1033
- Zalitis, I., Zukova, M., & Madzule, I. (2016). Quality assurance in border guards education: Challenges and topical issue. *Public Security and Public Order*, 17, 290–305.
- Zālītis, I. (2021). Robežsargu profesionālās sagatavošanas kvalitātes vadības izaicinājumi un risinājumi. *Daugavpils Universitātes Humanitāro un sociālo zinātņu institūta Sociālo zinātņu fakultātes 16.starptautiskās zinātniskās konferences "Sociālās zinātnes reģionālajai attīstībai 2021" tēzes*, (30-31). Daugavpils: Daugavpils Universitātes Akadēmiskais apgāds „Saule”. Pieejams: https://old.du.lv/wp-content/uploads/2021/06/Socialas-zinatnes-regionalajai_Tezes_2021_JAUNS.pdf

HOW EMOTIONS ARE DEVELOPED: INSIGHTS FROM VYGOTSKY' AND LEONTIEV'S WORKS

Andreas Ahrens

Hochschule Wismar University of Applied Sciences: Technology, Business and Design,
Germany

Jelena Zascerinska

Hochschule Wismar University of Applied Sciences: Technology, Business and Design,
Germany

Daria Filimonova

Babel Idiomias, Spain

Anastasija Bikova

Centre for Education and Innovation Research, Latvia

Abstract. *Teacher and learners' emotions are a significant factor that influences the implementation of adult education. The research aim is to explore the works of Vygotsky and Leontiev for modelling the development of emotions in adult education. Theoretical analysis aimed at theory building about emotion development in adult education was applied to the present research. Exploratory type of research was implemented and described in this paper. The present work reflects the insights from the theory of Activity by Leontiev, and the theories of Interiorization, Cultural-historical Activity, and Concept Formation by Vygotsky. The research results in conclusions that teacher's and learners' emotions develop in adult education through the educational process. The educational process is gradually implemented in certain sequence. The educational process starts from teaching and external emotions in Phase 1, moves to peer-learning and quasi-emotions in Phase 2, and proceeds further to learning and internal emotions in Phase 3. The inter-connections between intrapersonal and interpersonal levels of emotions were described. The research allows building a theory on emotion development. The research limitations were identified. Directions of further work were proposed.*

Keywords: *development of the system of external and internal perspectives, educational process, emotion development, emotions of teachers and learners, interpersonal perspective, intrapersonal perspective, quasi-emotions.*

Introduction

Each single step in adult education is accompanied by teachers' and learners' emotions (Ahrens & Zascerinska, 2023). The individual's emotions

from the intrapersonal perspective can be different and even contradictory in one and the same situation (Ahrens & Zascerinska, 2022). This complexity of individual's emotions in adult education is increased in a class by different and contradictory emotions between the teacher and learners or from the interpersonal perspective. The problem related to teachers' and learners' emotions in a class in adult education enables the research questions:

- Are there any inter-connections between the intrapersonal and interpersonal perspectives related to emotions?
- How are emotions developed?
- How to organise the development of emotions in a class?

The research aim is to explore the works of Vygostky and Leontiev related to the development of emotions in adult education.

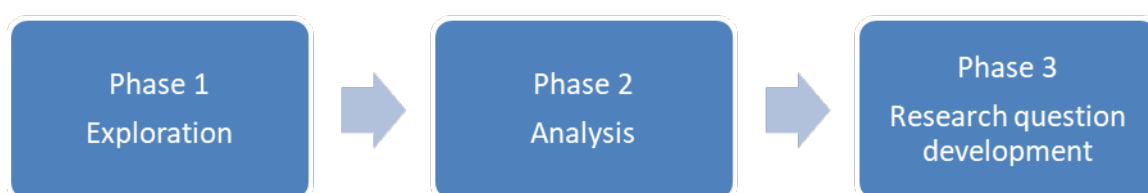
The present work intends to contribute to building the theory on the development of emotions.

Methodological Approach

Theory-building is important because it provides a framework for analysis, facilitates the efficient development of the field, and is needed for the applicability to practical real-world problems (Wacker, 1998). Theory-building research deals with the detailed definition of concepts, the outline the domain, search and description of existing relationships aimed at explaining the reasons and procedures of the intertwined relationships, and finally the occurrence of specific phenomena is estimated (Wacker, 1998).

The present research builds the theory on the basis of the System-Constructivist Theory (Ahrens, Zascerinska, & Aleksejeva, 2021). In the present work, researchers' experience is the key factor in the process of theory building (Maslo, 2007). It means that with the enrichment of researchers' experience, the built theories can be advanced.

The exploratory method for theory building is applied within the boundaries of this work. The exploratory method of analysis in the present work means tends to obtain insights on under-explored phenomenon in order to base the foundation for further investigations. The exploration is implemented in three phases reflected in Figure 1.



*Figure 1 The phases of the implementation of the exploratory method
(created by the authors)*

The exploratory method was selected for implementation in this work. One of the reasons was that the exploratory method does not prescribe a framework to follow (Ahrens, Foerster, Zaščerinska, & Wasser, 2020). This lack of formal structures allows researchers to be flexible in developing their own procedures (Ahrens, Foerster, Zaščerinska, & Wasser, 2020).

A methodological approach describes the implementation of research practices and procedures within a set of defined theoretical principles (Zaščerinska, Ahrens, & Bassus, 2015; Ahrens & Zaščerinska, 2016). Principles are defined as the synergy of beliefs and assumptions that directs researcher in expressing his/her attitude to the world, implementation of his/her actions based on the accepted behaviour's norms (Ahrens & Zascerinska, 2015).

The methodological approach in this work is implemented in accordance with the development of the system of external and internal perspectives (Zaščerinska, 2010). The law of development, also known as interiorization, was defined by Vygotsky (Vigotskis, 2002). The methodological approach of this work stems from Vygotsky's law of development (Ahrens & Zascerinska, 2022).

The methodology implies not only the differentiation of the perspectives but also their synergy (Zascerinska, Aleksejeva, Zascerinskis, & Abjalkiene, 2022). Figure 2 illustrates that the methodology of the present approach proceeds in three phases.

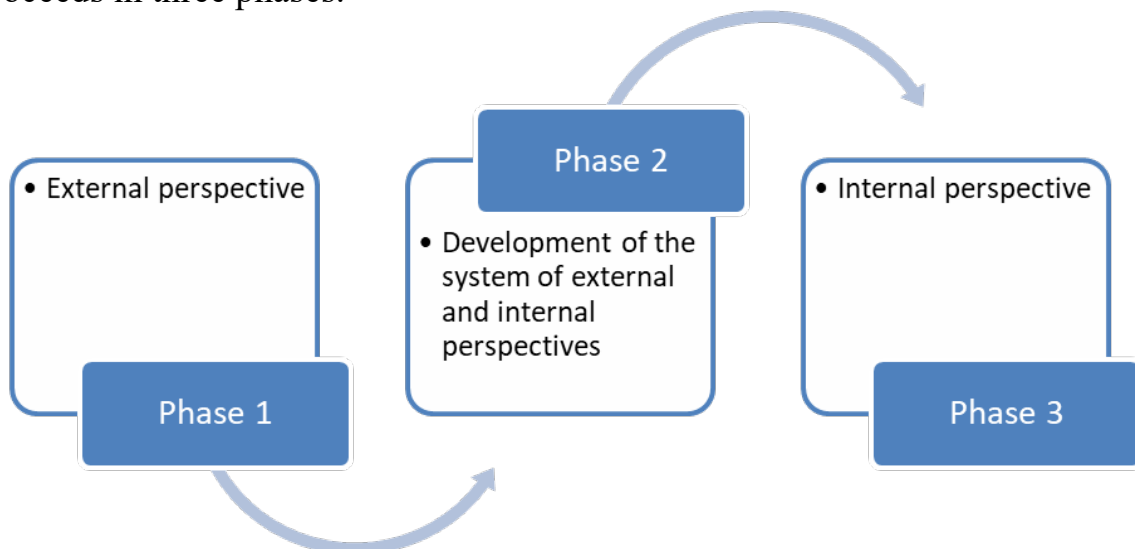


Figure 2 The phases of the implementation of the methodological process of the research (created by the authors)

Research Results

Individual's emotions can change from one emotion to another, as shown in Figure 3, fast, just in seconds (Ahrens & Zascerinska, 2022).

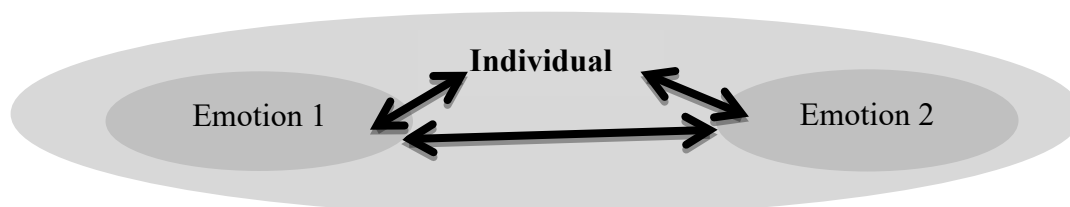


Figure 3 *The intrapersonal perspective on individual's emotions (created by the authors)*

Teachers' and learners' emotions, being the “mechanism” of activity's movement (Leont'ev, 1978), drive the educational process (Ahrens & Zascerinska, 2022) in adult education. Consequently, teachers' and learners' emotions are the key factor that impacts teachers' and learners' motivation to continue the educational process (Ahrens & Zascerinska, 2022).

All these complications, related to teachers' and learners' emotions from both – intrapersonal and interpersonal - perspectives, create a chaotic situation in a class in adult education.

The three research questions formulated in the Introductory section of this paper were analysed on the basis of the synergy between

- the methodological background defined as the System-Constructivist Theory, and
- the methodological approach known as the development of the system of external and internal perspectives.

The results of the analysis presented in this part of the paper contribute to

- on the one side, answering three research questions, and
- on the other side, showing the inter-connectedness of three research questions.

Question 1: *Are there any inter-connections between the intrapersonal and interpersonal perspectives related to emotions?*

Many researchers (Rimé, Bouchat, Paquot, & Giglio, 2020) acknowledge the existence of intrapersonal and interpersonal perspectives or levels of emotions. The intrapersonal level of emotions refers to the internal processes (Schwartz-Mette, Lawrence, Shankman, Fearey, & Harrington, 2021) or, in other words, perspective, and the interpersonal level relates to the social perspective. In other words, the external perspective accentuates social interaction while the internal perspective accentuates cognition (Zascerinska, 2011b). However, mostly the intrapersonal and interpersonal levels of emotions are separately discussed by many scientists, for example Burkitt (2021), Messina, Calvo, Masaro, Ghedin, & Marogna (2021).

Against this prevailing opinion about two separate levels of emotions, the application of the development of the system of external and internal perspectives to the establishment of the relationships between the intrapersonal and interpersonal levels of emotions allows determining that the intrapersonal and interpersonal levels of emotions are interconnected. Moreover, the intrapersonal and interpersonal levels of emotions are defined to the unity. Figure 4 represents the intrapersonal and interpersonal levels of emotions as their unity.

Figure 4 reveals that emotions can be structured into three inter-connected levels:

- The interpersonal perspective,
- The unity of interpersonal and intrapersonal perspectives, and
- The intrapersonal perspective.

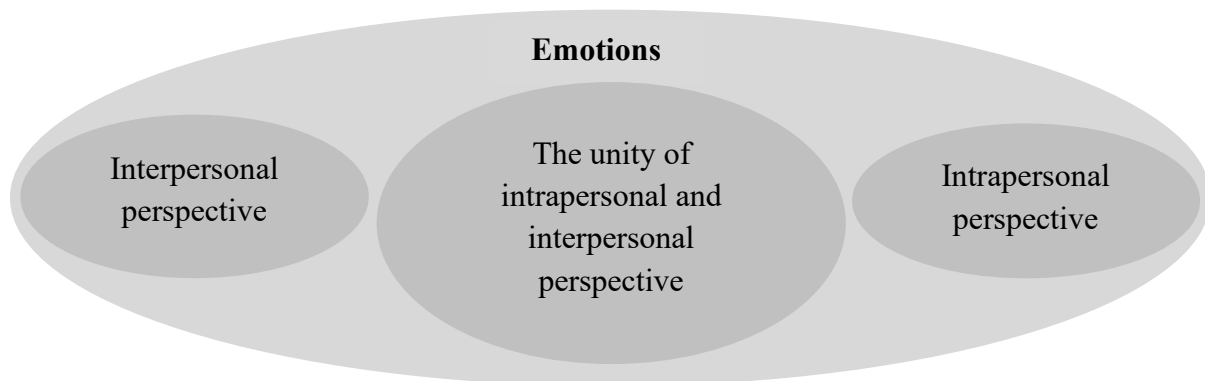


Figure 4 The relationships between the intrapersonal perspective, the interpersonal perspective, and their unity (created by the authors)

When considering emotions within the methodological approach of the present work (the development of the system of external and internal perspectives), the following terminology could be adopted:

- The interpersonal level means the external perspective,
- The unity of interpersonal and intrapersonal levels relates to the unity of external and internal perspectives, and
- The intrapersonal level is regarded as the internal perspective.

Question 2: *How are emotions developed?*

This work implies that individuals, including teachers and learners, are born with different emotional abilities (Ahrens & Zascersinska, 2022) or, in other words, emotions are innate. Thus, the situation can be observed when ‘emotionless’ people talk about people who do not show or do not hide very well their emotions (Ahrens & Zascersinska, 2022).

During their lifespan, individuals develop their emotions. It is worth noting that the terms “made”, “constructed”, ”developed”, “manufactured”, “learned” and similar are referred synonymously in this research.

The process of emotion development has been investigated by some researchers. Thus, Holodynski discussed emotional development according to the age groups (Holodynski, 2013). He outlined such age groups as neonate, infant, preschooler, child, and adult (Holodynski, 2013). The process of emotion development by Holodynski is structured further into milestones and relevant mechanisms described in the internalisation model (Holodynski, 2013). Another researcher Barrett (2018) proposes that individuals develop their emotions by learning from their own actions (Westlund, 2021).

Analysis of the process described by other researchers directed the researchers of this paper to outline the features required for the process of emotion development. Table 1 presents the relationships between the analysed theories and process features.

*Table 1 Features of the process of emotion development
(Ahrens, Zašcerinska, Lange, & Aļeksejeva, 2021)*

Theory	Feature	A short description of the feature
System Constructivist Theory	System process	The process properties are connected
System Constructivist Theory	Complex process	The process elements are bounded
Activity Theory	Linear process	The process is implemented in phases
Interiorization Theory	Cyclic process	The process can occur again
Cultural-historical Activity Theory	Process is of social nature	The process changes in and by society
Concept Formation Theory	Process if of bi-modal nature	The process proceeds within the external and internal perspectives

Based on our findings reflected in Table 1, the process of emotion development is structured in phases. The inter-connections between the intrapersonal and interpersonal levels of emotions demonstrated in Figure 5 allow identifying three phases in the process of emotion development. There are two assumptions formulated by Leont'ev (Leont'ev, 1978) that help identifying the directions of the emotions process of emotion development:

- Emotions are relevant to the social activity and not to individual actions or operations that realize it.
- As a result, emotions are not subordinated to activity but appear to be its result and the “mechanism” of its movement.

Accordingly to Leont'ev (Leont'ev, 1978), the process of emotion development starts from social activity or the external perspective and moves to individual actions or the internal perspective. The process of emotion development proceeds in three phases as depicted in Figure 5:

- From the external perspective or external emotions in Phase 1,

- Though the unity of the system of the external and internal perspectives or quasi-emotions in Phase 2, and
- To the internal perspective and internal emotions in Phase 3.

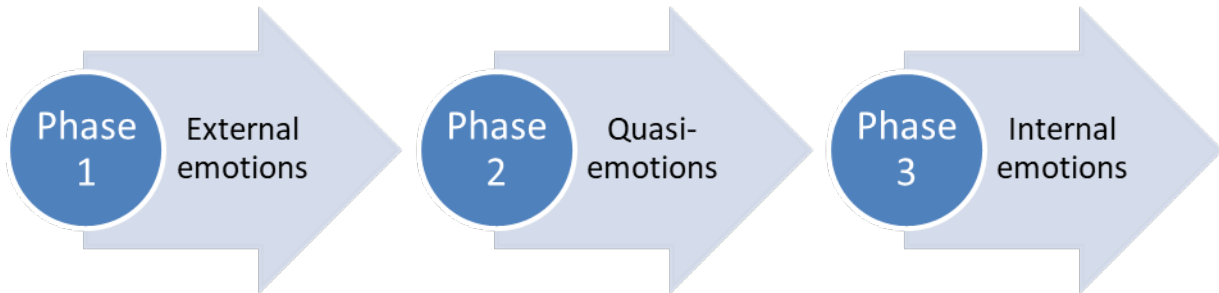


Figure 5 *The process of emotion development* (created by the authors)

It should be highlighted that in contrary to the definition of quasi-emotions as “second-order” beliefs (Dos Santos, 2017), the present work defines quasi-emotions as assymetrical, in flux at various stages and can be interpreted differently at different points in time (Robbins, 2007).

Question 3: *How to organise the development of emotions in a class?*

Adult education is considered to be the process (Zascerinska et al., 2015). The process underlying adult education is well know as the educational process (Ahrens, Zaščerinska, Lange, & Aļeksejeva, 2021). Structuring of the educational process within the methodological approach of this work (the development of the system of the external and internal perspectives) and the process of emotion development allows determining that the organisation of the development of emotions in the educational process outlined in Figure 6 gradually proceeds from teaching, on the one hand, and external emotions, on the other hand, thorough peer-learning, on the one hand, and quasi-emotions, on the other hand, to learning, on the one hand, and internal emotions, on the other hand.

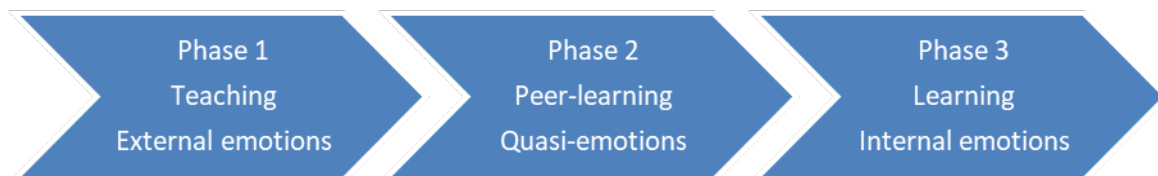


Figure 6 *The process of emotion development in a class* (created by the authors)

Teaching in Phase 1 starts with the preparation of the learners for the process of emotion development, with the schedule of the procedure of emotion development, provision of teaching/learning class with the equipment, setting the purpose, identification of a problem, etc (Zaščerinska, 2011a). Then, Peer-learning in Phase 2 is aimed at doing an exercise and making a decision

(Zaščerinska, 2011a). Learning in Phase 3 focuses on the assessment of individual results and evaluation of individual achievements. Such organisation of the educational process allows learner to move gradually from the external regulation and evaluation in Phase 1 of emotion development through mutual evaluation in Phase 2 to the individual's self-control and self-assessment in Phase 3 (Zaščerinska, 2011a).

Phases in the educational process aimed at emotion development are implemented separately from each other (Zaščerinska, 2011a). The implementation of the following phase is based on the achieved results in the previous phase. Each phase can be repeated until the desired result is achieved.

Conclusions

The theoretical analysis carried out with the present work allows building a theory on emotion development.

The implemented theoretical research allowed for a theoretical finding that emotions are innated. Individuals, including teachers and learners, can be born with different emotional abilities. Consequently, some individuals are more emotional, the others are less emotional.

Intrapersonal and interpersonal levels of individual's emotions are interconnected. Intrapersonal level accentuates cognition, and interpersonal level accentuates social interaction. Both intrapersonal and interpersonal levels of emotions are linked by the unity of both levels as shown in Figure 4.

Individuals' emotions are developed during the lifespan. Both teachers and learners develop their emotions in the educational process implemented within adult education. The educational process encompasses the development of the system of the external and internal perspectives:

- Teaching is identified to be the external perspective or social interaction,
- Peer-learning represents the unity of both perspectives, and
- Learning relates to the internal perspective or cognition.

The educational process is delivered in certain sequence: the educational process

- starts from teaching and external emotions in Phase 1,
- moves to peer-learning and quasi-emotions in Phase 2, and
- proceeds further to learning and internal emotions in Phase 3.

The educational process has to include all the three phases in the proposed sequence in order to reach the objectives of emotion development.

The present work is limited by the implementation of only theoretical analysis. If empirical studies could be carried out, other results could be obtained.

Implications for emotion development in adult education imply the organisation of teacher training on emotion development in adult education as the teacher role in their learners' emotion development is crucial. Teachers' emotions drive the educational process as the teacher plays the cornerstone role in the educational process in adult education. Teaching learners' with different emotional abilities, complicated by their (teacher and learners) multi-cultural backgrounds, has to be thoroughly prepared by the teacher.

Future work could focus on the investigation of the role and impact of quasi-emotions in emotion development. Implementation of empirical studies is proposed for future research. Teacher training course on emotion development will be elaborated.

Acknowledgement

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List of References

- Ahrens, A., & Zascierinska, J. (2023). Teachers' Emotional Experience in Online Classes in Adult Education in Selected European Countries. ICPMT 2023: 17. International Conference on *Pedagogical Methodology and Technology February 06-07, 2023* in Paris, France. Retrieved from: <https://waset.org/pedagogical-methodology-and-technology-conference-in-february-2023-in-paris> (accepted for publication).
- Ahrens, A., & Zascierinska, J. (2022). The Emotions in light of the Work by Vygotsky and Leontiev: notions, features and functions. *Regional Formation and Development Studies*, No. 2 (37), pp. 7-18. DOI: <https://doi.org/10.15181/rfds.v37i2.2417>
- Ahrens, A., & Zašcerinska, J. (2015). Principles of Sampling in Educational Research in Higher Education. Proceedings of the International Scientific Conference *Society, Integration, Education, Volume 1* Higher Education Pedagogy, May, 22nd-23rd, 2015, p. 25-35. DOI: <http://dx.doi.org/10.17770/sie2015vol1.310>
- Ahrens, A., & Zašcerinska, J. (2016). Methodology of Sampling in Educational Research in Higher Education. In: Linda Daniela and Lucija Rutka (Eds). Selected Papers of Association for Teacher Education in Europe Spring Conference 2015, pp. 22-31. Cambridge Scholars Publishing.
- Ahrens, A., Foerster, M., Zašcerinska, J., & Wasser, I. (2020). European Accreditation Agency's View on Kazakhstan's Engineering and Information Technology Higher Education. *SOCIETY. INTEGRATION. EDUCATION Proceedings of the International Scientific Conference, Volume V*, May 22nd-23rd, 2020. pp. 15-25. DOI: <http://dx.doi.org/10.17770/sie2020vol1.4861>
- Ahrens, A., Zascierinska, J., & Aleksejeva, A. (2021). Fostering External and Internal Sustainability within the English for Academic Purposes Course in the Covid-19 Pandemic. *Education. Innovation. Diversity*, 2(2), 6-15. DOI: <https://doi.org/10.17770/eid2021.1.5412>

- Ahrens, A., Zašcerinska, J., Lange, C., & Aleksejeva, L. (2021). "A Comparative Analysis of Processes of Conceptual Change for the Enhancement of Implementation of Green Energy Education and Training," *International Journal of Information and Education Technology (IJJET)* vol. 11, no. 1, pp. 47-51, 2021. DOI: 10.18178/ijjet.2021.11.1.1488
- Barrett, L. F. (2018). *How emotions are made*. Pan Books.
- Burkitt, I. (2021). The Emotions in Cultural-Historical Activity Theory: Personality, Emotion and Motivation in Social Relations and Activity. *Integr. psych. behave*, 55, 797–820.
- Dos Santos, M. (2017). Walton's Quasi-Emotions Do Not Go Away, *The Journal of Aesthetics and Art Criticism*, Volume 75, Issue 3, August 2017, p.265–274, DOI: <https://doi.org/10.1111/jaac.12385>
- Holodynski, M. (2013). The Internalization Theory of Emotions: A Cultural Historical Approach to the Development of Emotions. *Mind, Culture, and Activity*, 20(1), 4–38.
- Leont'ev, A.N. (1978). *Activity, Consciousness, and Personality*. Prentice-Hall. 8 p., Retrieved from: <http://marxists.org/archive/leontev/works/1978/ch5b.htm>
- Maslo, E. (2007). Transformative Learning Space for Life-Long Foreign Languages Learning. In: D. Cunningham, D. Markus, J. Valdmanis et al. (Eds). *International Nordic-Baltic Region Conference of FIPLV Innovations in Language Teaching and Learning in the Multicultural Context*, p. 38-46. Rīga: SIA "Izglītības solī".
- Messina, I., Calvo, V., Masaro, C., Ghedin, S., & Marogna, C. (2021). Interpersonal Emotion Regulation: From Research to Group Therapy. *MINI REVIEW* article *Front. Psychol.*, 30 March 2021, Sec. Psychology for Clinical Settings, DOI: <https://doi.org/10.3389/fpsyg.2021.636919>
- Rimé, B., Bouchat, P., Paquot, L., & Giglio, L. (2020). Intrapersonal, interpersonal, and social outcomes of the social sharing of emotion. *Curr Opin Psychol.*, 31, p.127-134. DOI: <https://doi.org/10.1016/j.copsyc.2019.08.024>
- Robbins, D. (2007). Vygotsky's and Leontiev's Non-classical Psychology Related to Second Language Acquisition. *International Nordic-Baltic Region Conference of FIPLV Innovations in Language Teaching and Learning in the Multicultural Context* 15-16th June, 2007, Riga, Latvia 2007, p. 49-52.
- Schwartz-Mette, R. A., Lawrence, H. R., Shankman, J., Fearey, E., & Harrington, R. (2021). Intrapersonal Emotion Regulation Difficulties and Maladaptive Interpersonal Behavior in Adolescence. *Res Child Adolesc Psychopathol*, 49(6), 749-761. DOI: <https://doi.org/10.1007/s10802-020-00739-z>
- Vigotskis, L. (2002). *Domāšana un runa [Thinking and Speech]*. Rīga: EVE. (in Latvian).
- Wacker, J. G. (1998). A definition of theory: research guidelines for different theory-building research methods in operations management. *Journal of Operations Management*, Volume 16, Issue 4, p. 361-385. DOI: [https://doi.org/10.1016/S0272-6963\(98\)00019-9](https://doi.org/10.1016/S0272-6963(98)00019-9)
- Westlund, K. (2021). *My problems with the Constructed Theory of Emotions*. Retrieved from: <https://illis.se/en/constructed-theory-of-emotions/>
- Zascerinska, J., Aleksejeva, A., Aleksejeva, L., Glonina, O., Zascerinskis, M., & Andreeva, N. (2015). Non-Formal Adult Education in Latvia: Focus Group Interview. In O. Clipa & G. Cramariuc (eds.). *Educatia in societatea contemporana. Aplicatii*, p. 287-294. Iasi, Romania: Editura LUMEN.
- Zascerinska, J., Aleksejeva, A., Zascerinskis, M., & Abjalkiene, I. (2022). A Cross-Sectoral Approach to STEM Education: A Multi-Perspective Design. *SOCIETY. INTEGRATION. EDUCATION* Proceedings of the International Scientific Conference. Volume I, May 27th, 2022, p. 846-856. DOI: <https://doi.org/10.17770/sie2022vol1.6817>
- Zašcerinska J. (2011a). How to Teach Content: Existing Concepts and Prospects for Development. In: Stasys Vaitekūnas (Ed), *Association for Teacher Education in Europe*

ATEE Spring University 2011 *Changing Education in a Changing Society, Volume 1*, p. 134-149. Klaipeda University, Lithuania.

Zaščerinska, J. (2011b). Language Acquisition and Language Learning: Developing the System of External and Internal Perspectives. *In: Zuģicka I., sast. Daugavpils Universitātes 52.starptautiskās zinātniskās konferences materiāli// Proceedings of the 52nd International Scientific Conference of Daugavpils University*, p. 412-417. Daugavpils: Daugavpils Universitātes Akadēmiskais apgāds „Saule”, Latvia.

Zaščerinska, J. (2010). Conditions, Criteria, Indicators and Levels of Forming Communicative Competence. *Proceedings of International Scientific Conference Society, Integration, Education of Rezekne Higher Education Institution*, February 19–20, 2010, 411–420. Rēzekne: Rēzeknes Augstskolas Izdevniecība.

Zaščerinska, J., Ahrens, A., & Bassus, O. (2015). Effectiveness of Empirical Analysis of E-Business Application: An Approach to Sampling in Educational Research. *Proceedings of the 8th International Conference on Engineering and Business Education* 8-9 October 2015, Østfold University College, Fredrikstad, Norway, p. 104-109. Published by University of Wismar, Germany.

MEASURES MOTIVATING TEACHERS: A STUDY IN VILNIUS CITY MUNICIPALITY

Gintautė Zibeniene

Mykolas Romeris University, Lithuania

Irena Zemaitaityte

Mykolas Romeris University, Lithuania

Dangis Gudelis

Mykolas Romeris University, Lithuania

Andrius Stasiukynas

Mykolas Romeris University, Lithuania

Abstract. *Recently, there has been significant conversation surrounding the issue of a lack of teachers and the difficulties in retaining them. One question being asked is how to make teaching positions more appealing in order to attract educators. This is a concern in multiple countries, specifically in Lithuania, where there is a lack of educators in schools, and a higher proportion of older teachers compared to the European average (per Eurostat data). Although Lithuanian municipalities pay a monthly bonus of €300-500 in the first year and provide housing benefits to attract teachers, these measures do not sufficiently motivate teachers.*

The aim of this paper is to highlight the measures that motivate teachers to work as teachers in relation to the recognition of teachers' competence, communication and cooperation.

The authors of the article conducted a study to find out what motivates teachers to do pedagogical work (Stasiukynas, Zemaitaityte, Gudelis, Zibeniene, 2020). The paper presents results of the part of this large study, which involved 873 teachers.

In April and May of 2020, a survey of teachers in the city of Vilnius was conducted using the online survey platform Qualtrics. The research adhered to principles of ethical scientific conduct. Participants were given the freedom to participate and withdraw at any time, were informed of the study's purpose, data usage, and their anonymity was protected. The researchers also committed to upholding ethical standards and safeguarding participants from any potential harm.

The survey data analysis showed that teachers considered working collaboratively with their peers within the educational institution as a crucial factor in motivating them in their teaching roles.

Leisure time with colleagues in joint outings outside the educational institution and the opportunity to meet colleagues from different countries to share good practices were also highly rated by respondents. Reducing the administrative burden on teachers and protecting and safeguarding teachers' rights were also highlighted as important motivational factors. In order to retain already working teachers and attract new ones, teachers expressed the

expectation that confidence in teachers' opinions and professional competence would be increased.

Keywords: *communication and cooperation, educational institution, motivating measures, motivation, teachers,*

Introduction

Various European countries are facing the problem of teacher shortages and ageing. According to Eurostat data, in 2018, in European countries, out of 5.2 million teachers, as many as 39% were over the age of 50, and in Lithuania it is more than 52% (Teacher ES. Eurostat, 2020). At the European level, solutions are being sought to attract teachers and keep them in the education system, how to motivate them. Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030) contains 5 strategic priorities, one of them: Strategic priority 3: Enhancing competences and motivation in the education profession. „Teachers, trainers, educational and pedagogical staff and education and training leaders, at all levels, are at the heart of education and training. To support innovation, inclusion, quality and achievement in education and training, educators must be highly competent and motivated, which requires a range of professional learning opportunities and support throughout their careers“ (Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030)., 2021, p. 6). Pauwels, Van Loon, Tanghe, and Schelfhout (2022) highlight the importance of studying the motivations of teachers, particularly in light of the teacher shortage crisis. Their study specifically examines the motives of student teachers in secondary education teacher training programs and how these motivations may change throughout their education. This research is particularly relevant given the ongoing discussions about teacher shortages and the motivations behind teaching as a profession among education policymakers and the general public. We notice what, in particular, education politicians and the public are discussing the problems of teacher shortages and what motivates pedagogical work.

The study aimed to uncover the factors that drive educators in their teaching profession, and a large number of teachers were surveyed as part of this research (Stasiukynas, Zemaitaityte, Gudelis, & Zibeniene, 2020). The article presents the findings of this study, in which 873 educators participated, with the goal of determining which elements, such as recognition of competence, communication, collaboration, and the characteristics of educational institutions in the Vilnius Municipality, are most motivating for teachers. A quantitative survey was organized, a questionnaire survey of teachers of general education schools was conducted from April to May of year 2020 by the help of electronic survey tool ‘Qualtrics’.

Theoretical framework

In the scientific literature of education and in society, there is a lot of discussion about the problems of lack and motivation of teachers, what to do to make it attractive for teachers to work in an educational institution. In Europe, and particularly in Lithuania, there is a significant shortage of teachers, particularly those over the age of 50 (Teacher ES. Eurostat, 2020). This shortage is exacerbated by the fact that relatively few graduates of primary teacher education institutions actually go on to work in their field. To try to address this problem, municipalities in Lithuania offer incentives such as monthly bonuses and housing benefits, but these measures have not been effective in motivating enough teachers to join the profession (Education and Training Monitoring Bulletin Lithuania, 2019).

Different theories have been used to understand what factors motivate teachers, whether they work in secondary schools or universities. Studies have been conducted to investigate the various aspects of teacher motivation and how they relate to job satisfaction and performance (Toropova, Myrberg, & Johansson, 2020; Skaalvik & Skaalvik, 2014; Guerriero, 2017; Thoonen, Slegers, Oort, Peetsma, & Geijsel, 2011; Han & Yin, 2016). This study utilizes F. Herzberg's theory of hygienic and motivational factors to develop the research instrument.

The motivation of teachers is studied in various aspects, in connection with a specific theory of motivation or not. The study examines various factors that motivate teachers in the context of a specific motivation theory proposed by F. Herzberg. (Herzberg, 2013). The research utilizes a survey instrument designed based on Herzberg's typology of hygienic and motivational factors. Hygienic factors refer to the work environment and are necessary to prevent dissatisfaction, but do not necessarily lead to increased motivation. These factors include: 1) administrative policies, 2) working conditions, 3) compensation, 4) relationships with managers, colleagues, and subordinates, and 5) level of direct control. Motivational factors, on the other hand, are related to the nature and content of the work and can lead to increased motivation and satisfaction. These factors include: 1) success, 2) career and professional development, 3) recognition, 4) responsibility, and 5) opportunities for creativity and subject development.

T. Pauwels et al. studied the motives of students of pedagogy and educators who began to work, chose the motives distinguished by W. Meeus, M. Baeten, L. Coertjens: subject orientation; work perspective; work dynamic; educational orientation; pupil orientation; idealism; combination possibilities (Pauwels et al., 2022; Meeus, Baeten, & Coertjens, 2015). The research found that individuals starting their education in teaching tend to have an idealized view of the profession, and also discovered distinctions in attitudes, showing that factors such as "career outlook, subject focus, educational focus, student focus, and idealism

are less significant motivators for students who are already working compared to those who are not currently employed in the field" (Pauwels et al., 2022, p. 13).

The authors of the literature review have identified various theories surrounding the motivation of teachers. According to Canrinus, Helms-Lorenz, Beijaard, Buitink and Hofman, the main motivating factors for teachers include factors such as salary, bonuses, opportunities for career advancement, respect, a positive and creative work environment, and positive feedback from superiors. (Canrinus et al., 2011; p.115–132).

Research part

Survey organization and sampling.

The teachers of Vilnius city were surveyed through an electronic survey tool Qualtrics in April-May 2020. The study was conducted in accordance with ethical principles, ensuring that participants were informed of the purpose of the study, able to withdraw at any time, and guaranteed anonymity. The survey link was distributed to all teachers in the city through email by the employees of the Vilnius City Municipality Administration. 1660 teachers began filling out the questionnaire, but after removing incomplete responses, a final database of 873 fully completed responses was obtained. The survey's precision level is 95% with a 3% allowance for inaccuracies. The demographic information of the survey participants is outlined in Table 1.

Table 1 Sociodemographic characteristics of respondents (Zibeniene et al., 2022)

	N = 873	Percent
Type of educational institution		
gymnasium	344	39.4
primary school	118	13.5
progymnasium	289	33.1
primary school	122	14.0
Pedagogical work experience (years)		
up to 5 years	88	10.1
6-10 years	60	6.9
11-15 years	101	11.6
16-20 years	97	11.1
21-25 years	157	18.0
26 years and more	370	42.4
Position		
teacher	141	16.2
senior teacher	399	45.7
teacher methodologist	278	31.8
teacher expert	31	3.6
other	24	2.7

Age			
	26-30 years	49	5.6
	31-35 years	65	7.4
	36-40 years	78	8.9
	41-45 years	140	16.0
	46-50 years	169	19.4
	51 years and older	372	42.6
Gender			
	woman	802	91.9
	man	71	8.1
Distance (km) from the place of residence to the main place of work			
	up to 1 km	91	10.4
	1 - 5 km	241	27.6
	6 - 10 km	293	33.6
	11 km and more	248	28.4
The work is going on			
	on foot	149	17.1
	in your car	418	47.9
	public transport	286	32.8
	taxi	5	.6
	by bicycle	5	.6
	scooter	1	.1
	by other means	9	1.0

The study participants were primarily female (91.9%). They were also varied in age, but the largest group was those 51 years or older (42.6%). In terms of length of teaching experience, the majority had been working for 26 years or more (42.4%). The majority of respondents worked in gymnasiums and pre-gymnasiums (39.4% and 33.1%, respectively) and were primarily male teachers and teacher methodologists (45.7% and 31.8%, respectively).

Research instruments.

The research used a questionnaire that included 18 questions on a ranking scale, where participants were asked to rank 5 options for motivating teachers and their motivational measures from 1 (most preferred) to 5 (least preferred). Additionally, there were 4 Likert scale questions where participants were asked to rate the motivational factors of teachers on a scale of 1 (most motivating) to 5 (least motivating). The questionnaire also included a standard section for socio-demographic information.

Respondents were not allowed to select multiple options with the same ranking for the ranking scale questions, but could assign the same score for different factors when answering the Likert scale questions. To minimize missing

data, participants were required to answer at least one option in order to move on to the next page of the survey.

The answers to the ranking scale questions were analyzed by calculating and comparing the sums and averages of the scores assigned to each option. Non-parametric tests were used to determine if there were any significant differences between the rankings of similar options. The data was also examined for trends among different groups of participants (such as gender, length of service, and type of educational institution) using averages and non-parametric tests.

The questionnaire was designed by distinguishing relevant blocks of questions, such as demographic information and factors related to the teacher's work environment and salary. The theory of external and internal motivational factors by F. Herzberg was used to guide the formation of the question blocks, and the structure of the questionnaire was later refined based on the research goals and the characteristics of the participants.

Research ethics

The research was conducted in accordance with ethical principles, and all participants were informed of the purpose of the study and how their data would be used. They were also guaranteed anonymity.

Results

The motivating factors of educators were found to be linked with being acknowledged for their abilities. Participants in the survey were asked to select and prioritize five motivating factors related to their decision-making capabilities, participation in school governance, and other such factors. Additionally, factors related to communication and collaboration with colleagues were also taken into consideration.

The summarized results of the ranking of these factors are presented in Table 2.

The proposal that received the most positive feedback was the creation of a system that would grant teachers more rights in their interactions with parents and would clearly define unacceptable behavior from parents. Additionally, the respondents felt they would be motivated by the formation of a permanent group of teachers focused on addressing issues related to teacher well-being and making proposals to school and city administration, with financial compensation for their participation in the group. The least popular proposal among the respondents was that the group's focus would be on introducing new subjects or educational initiatives.

Table 2 The motivating factors of teachers (related to the recognition of the competence of the teacher) (compiled by the authors)

Factors of motivating pedagogues associated with the recognition of the competence of the teacher	Average N=873	Rank scoring total
an order to ensure the teacher's greater rights in communicating with the parents (e.g. to clarify which actions of the parents of the students are inappropriate, etc.)	3.11	2711
a permanent, paid committee of teachers to initiate questions related to the teachers' well-being of teachers	2.67	2331
a permanent, paid committee of teachers as an advisory voice to the Administration of Vilnius City Municipality to solve teachers' issues	2.45	2136
introduction of changes and innovations in Vilnius schools, only after prior discussion with representatives of Vilnius teachers	2.36	2060
constantly functioning, paid subject groups of teachers to initiate subject innovations in Vilnius	2.29	1999
a permanent, paid group of teachers to initiate educational innovations in Vilnius	1.97	1724
Other	0.15	134

The motivating factors of educators are associated with the recognition of the competence of the teacher. The participants selected five key motivators that pertain to interacting and working together with their colleagues and then assigned them a level of importance.

The summarized results of the ranking of these factors are presented in table 3.

Table 3 The motivating factors of teachers (related to communication and cooperation with colleagues) (compiled by the authors)

Factors of motivating pedagogues, related to communication and cooperation with colleagues	Average N=873	Rank scoring total
cooperation between teachers in an educational institution	2.69	2351
leisure time with colleagues at joint external events outside the educational institution	2.62	2284
the opportunity to meet colleagues from educational institutions from different other countries at joint cultural-professional events, events for the exchange of good practices, through the mediation of the Administration of Vilnius City Municipality	1.79	1565
the opportunity to meet colleagues from various Lithuanian educational institutions at joint cultural-professional and good practice exchange events	1.71	1491

the possibility for the teacher to have an adviser-consultant (e.g. from a general list compiled by the Vilnius City Municipality Administration) on various issues related to pedagogical activity	1.58	1381
the opportunity to meet colleagues from various educational institutions in Vilnius at joint cultural-professional and good practice exchange events	1.58	1375
cooperation between teachers in urban methodological and other similar subject groups	1.57	1367
leisure with colleagues at joint events in an educational institution	1.29	1129
other	0.17	152

Comparing with each other the motivating factors related to communication and cooperation with colleagues (see Table 2), respondents awarded the highest-ranking scores to such a factor as teacher-to-teacher cooperation in an educational institution. Leisure with colleagues at joint external events outside the educational institution and the opportunity to meet colleagues from educational institutions of various other countries at joint cultural-professional, good practice exchange events, mediated by the Administration of Vilnius City Municipality, were also highly appreciated. Fewer rank scores were allocated to the opportunity for the teacher to have an adviser-consultant on various issues related to pedagogical activity, to meet with colleagues from various Vilnius educational institutions at joint cultural-professional, good practice exchange events, for cooperation between teachers in city methodological and other similar subject groups (the differences between the assessments of these answer options were not statistically significant), the opportunity to spend leisure time with colleagues at joint events in an educational institution. T. Mitchell has noted that school communities are important in many aspects: quality of learning, innovation, change, good, motivating for positive change, good well-being of community members, the community must be collaborative, collaborative, supportive of each other (characterized by good relationships), learning (Mitchell, 2020).

The factors of motivation of educators are associated with the signs of educational institutions. Respondents were also asked to choose and rank the most motivating factors for pedagogical work related to the characteristics of educational institutions (see Table 4). The highest number of ranking scores was given to reduce the administrative burden on the teacher's activities. The second choice of the respondents was the defence and enforcement of teacher rights, in third place in terms of the amount of ranking points is the increase of confidence in the opinion and competence of the teacher. Slightly less scores were given to such signs as a benevolent, realistically cooperative school community and a reduction in control of the teacher's performance.

Table 4 The motivating factors of teachers (related the signs of educational institutions)
(compiled by the authors)

Factors of motivation of educators are associated with signs of educational institutions	Average N=873	Rank scoring total
reducing the administrative burden ("paperwork") in the teacher activities	2.80	2443
defending and ensuring the rights of the teacher, not only duties	2.59	2260
increasing confidence in the opinion and competence of the teacher	2.30	2006
a benevolent, realistically cooperative school community	2.21	1925
using control over the teacher's performance	2.16	1886
promoting learning and personal development	1.30	1133
learning with and from others	0.67	586
openness of the educational institution to the world	0.40	352
focus	0.30	262
reflexivity	0.21	185
other	0.07	57

Also, the respondents compared with each other motivating factors related to various features of the management and organizational culture of educational institutions ("administrative changes"). The best ratings were received by statements about the head of the educational institution listening to the school community and effective administration ("transparent, simple, unburdening, convenient administration, effective distribution of resources and their economical use"). The top five statements that received the most rank scores also included statements about the transparency of the formation of posts ("I know in advance what kind of post I will work in the coming school year"), ensuring that a full-time position will be formed for each teacher, creativity and the will to act ("the development of ideas, experimentation, the courage to take risks, to make difficult decisions and perseverance in their implementation") received lower scores.

Conclusions

When researching the tools that motivate educators, it is associated with the recognition of the competence of the educator, communication, cooperation and signs of the educational institution, it was revealed these motivating factors of teachers:

- the constant, clear support of the teacher by the school administration and the creation of a safe well-being through the application of the existing clear rules, a procedure that would ensure the broader teacher rights in communicating with parents, would clearly define which actions of the parents of the students would be inappropriate;
- a permanent working group of teachers has been set up to consider issues related to the well-being of teachers and submit relevant proposals to school administrations and the Administration of Vilnius City Municipality;
- more regular practices and opportunities for cooperation between teachers in an educational institution, systematic joint exit events or opportunities to meet colleagues from various educational institutions of other countries at joint cultural-professional, good practice exchange events, through the mediation of the Administration of Vilnius City Municipality;
- more liberal management and easier paperwork, where the teacher's administrative burden is reduced through the preparation of various reports, clear support in defending the rights of the teacher, securing them, and trusting the opinion of the teachers.

Teacher-to-teacher cooperation, favorable conditions for recreation, leisure, lower documentary reporting load – these aspects that motivate educators are not new, they are also revealed in the research of other authors. The survey results indicate that teachers place a high value on having support from school administration in their interactions with parents, and that they are motivated by having clearly defined rights and procedures in place for addressing and resolving conflicts with parents. This suggests that teachers may feel stress or tension when they feel unsupported by the school administration in these types of situations.

List of References

- Bitinas, B., Rupšienė, L., & Žydžiūnaitė, V. (2008). *Qualitative Research Methodology*, Part I. Klaipėda.
- Council Resolution on a strategic framework for European cooperation in education and training towards the European Education Area and beyond (2021-2030)*. (2021). Retrieved from: [https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021G0226\(01\)&from=EN](https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32021G0226(01)&from=EN)
- Education and Training Monitoring Bulletin Lithuania*. (2019). Retrieved from: https://ec.europa.eu/education/sites/default/files/document-library-docs/et-monitor-report-2019-lithuania_en.pdf
- Guerriero, S. (2017). Teacher motivation, responsibility, pedagogical knowledge and professionalism: A new era for research. *In Pedagogical knowledge and the changing nature of the teaching profession*, 171–191. OECD.
- Han, J., & Yin H. (2016). Teacher motivation: Definition, research development and implications for teachers. Ed. M. Boylan. *Cogent Education*, 3(1), 1217819.
- Herzberg, F. (2003). One more time: How do you motivate employees? *Harvard Business Review*, 81(1), 87–96.

- Meeus, W., Baeten, M., & Coertjens, L. (2015). Motives of masters for the teaching profession: Development of the MMTP questionnaire. *Educatio Resourse*, 1–8.
- Mitchell, T. (2020). School and Community Relations in the Kansans Can School Redesign Project. *Educational Considerations*, 46(2), article 8, 1-13.
- Pauwels, K., Van Loon, H., Tanghe, E., & Schelfhout, W. (2022) Motives of Student Teachers in Academic Teacher Education for Secondary Education: Research in Flanders (Belgium) on the Motivation to Become and to Remain a Teacher. *Education Sciences*, 12, 724, 1-19. DOI: <https://doi.org/10.3390/educsci12100724>
- Skaalvik, E. M., & Skaalvik, S. (2014). Teacher self-efficacy and perceived autonomy: Relations with teacher engagement, job satisfaction, and emotional exhaustion. *SAGE journals*, 114(1), 68–77.
- Stasiukynas, A., Zemaitaityte, I., Gudelis, D., & Zibeniene, G. (2020). *Vilnius city teacher's motivation research report*. Vilnius.
- Teacher ES. Eurostat. (2020). Retrieved from: <https://ec.europa.eu/eurostat/web/products-eurostat-news/-/edn-20201005-1>
- Toropova, A., Myrberg, E., & Johansson, S. (2020). Teacher job satisfaction: The importance of school working conditions and teacher characteristics. *Education Review*, 73(1), 71–97.
- Zibeniene, G., Gudelis, D., Zemaitaityte, I., & Stasiukynas, A. (2022). Factors Increasing Teachers' Motivation: The Case of Vilnius City Municipality. *Viešoji politika ir administravimas*. Kaunas: Kauno technologijos universitetas. Mykolo Romerio universitetas, 21(3), 280-291.

NEED ASSESSMENT FOR DESIGNING TRAINING COURSE FOR PARENTS IN PREVENTING VIOLENCE AGAINST CHILDREN

Jolanta Pivoriene

Mykolas Romeris University, Lithuania

Brigita Kairiene

Mykolas Romeris University, Lithuania

Agata Katkoniene

Mykolas Romeris University, Lithuania

Abstract. Lithuania prohibited by law any kind of violence against children, however, reported cases as well as previous and resent representative research show that the problem still exists. The state takes various measures to prevent violence against children, and parents' training is one of such possibilities, however, the parental training in Lithuania is not effective and one possible reason could be that various courses are not based on parents' needs. The goal of this article is to present data of need analysis which was done as a prerequisite for training course development. The article is based on qualitative study by interviewing parents about their knowledge, perceptions and need for training. Research participants have knowledge about violence against children, they name and discuss physical violence, corporal punishment, neglect, emotional abuse, sexual abuse, however, do not differentiate them strictly. They see the need of parental training in preventing violence against children. The most wanted topics are reasons of the violence, knowledge about child development as they understand that children in different development stages have different needs and parents' reactions to misbehaviour should be adequate to the development stage. Also, general topic of parenting – what does it mean, how to become a good mother/farther – is named during interviews.

Keywords: children's rights, corporal punishment, need for training, parental training, violence against children, violence prevention.

Introduction

With the advent of the Convention on the Rights of the Child (1989), the child became the holder of rights. As stated by Brennan and Noggle (2007), the rights of children generate at least two distinct sorts of moral obligations. The first is the obligation we all have to refrain from violating those rights. The second are the duties that at least some people have to protect and promote those rights. Where the first sort of duties applies equally to all persons, the second

sort of duties may be less evenly distributed, generating stronger obligations, for example, for those in a direct custodial or stewardship role - parents, teachers, grandparents, community leaders, and so on (Brennan & Noggle, 2007). Article 5 of the Convention on the Rights of the Child defines a special relationship between a child and his or her parents, giving parents the right of first refusal and the responsibility for raising and educating their children. These special obligations correspond to the specific needs of children, and are the basis of parents' authority and the right to exercise that authority in accordance with the dictates of their consciences except in cases of abuse and neglect (Moschella, 2014).

The protection of children from all forms of violence is a fundamental right enshrined in the UN Convention on the Rights of the Child and, despite the efforts of countries around the world, its enforcement is still relevant (Global status report on preventing violence against children, 2020). A 2017 UNICEF report indicates that globally, 3 in 4 children aged 2 to 4 worldwide experience violent discipline by their caregivers on a regular basis; around 6 in 10 are punished by physical means; based on data from 30 countries, 6 IN 10 children aged 12 to 23 months are subjected to violent disciplinary methods; among children this age, almost half experience physical punishment and a similar proportion are exposed to verbal abuse; slightly more than 1 in 4 caregivers say that physical punishment is necessary to properly raise or educate children (A familiar face: violence in the lives of children and adolescents, 2017).

In 2015, the United Nations adopted a new framework of global Sustainable Development Goals (SDGs) to pave the way for sustainable, inclusive and balanced growth, shared prosperity and decent work for all (Transforming Our World: the 2030 Agenda for Sustainable Development, 2015). The 2030 Agenda represents a commitment to eliminate violence against children as expressed in Target 16.2, “end abuse, exploitation, trafficking and all forms of violence against and torture of children”, Target 5.2, “eliminate all forms of violence against all women and girls in the public and private spheres, including trafficking and sexual and other types of exploitation” and Target 16.1, “significantly reduce all forms of violence and related death rates everywhere” (Transforming our world: the 2030 Agenda for Sustainable Development, 2015). The Seven Strategies to End Violence Against Children (INSPIRE) (INSPIRE: Seven strategies for ending violence against children, 2016) contributed to the implementation of the SDGs Target 16.1 and the Convention on the Rights of the Child, which obliges States Parties to take all appropriate legislative, administrative, social, and educational measures to protect children from all forms of violence while in the care of parents, legal guardians, or any other person who has the care of the child. The INSPIRE package includes seven strategies that together provide an overarching framework for ending violence against children. One of INSPIRE's strategies

calls for laws banning violent punishment of children by parents, teachers or other caregivers. In order to implement the law preventing violence against children, the INSPIRE strategy – Parent and caregiver support, which aim helping parents and caregivers to understand the importance of positive, non-violent discipline in child development and of close, effective parent-child communication reduces harsh parenting practices, creates positive parent-child interactions and helps increase bonding between parents or other caregivers and children – all factors that help prevent violence against children (INSPIRE: Seven strategies for ending violence against children, 2016).

Lithuania is one out of 65 world's countries which ban all forms of violence against children (Country Report for Lithuania, 2020) and embedded that in the law (Republic of Lithuania Law, 1996), however, reported cases as well as previous and resent representative research show that the problem still exists: 53% of Lithuanian parents use corporal punishment (Jusienė, 2006), 52% agree that moderate physical punishment is an appropriate educational tool (Navaitis, Kairienė, &

Gaidys, 2015), 25% support hard parenting style (Daraškevičienė, 2018), 68% tolerate spanking a child's hands to protect him/her from dangerous behaviour such as fire, 36% slapping a child's hands to punish bad behaviour, 23% picking up and shaking a misbehaving child in a shop (Lietuvos Respublikos vaiko teisių apsaugos ir įvaikinimo tarnyba, 2019). According to the data of the Department of Statistics of the Republic of Lithuania, in 2021, 5,801 crimes due to domestic violence were registered, including 768 child victims of domestic violence crimes, almost 87% of whom were victims of their parents or foster parents (Statistics Lithuania Department, 2022). It should be noted that violence in the home or in other environments has a particular impact on a child's health and well-being throughout his or her lifetime, regardless of whether he or she is directly abused or whether he or she witnesses domestic violence in a violent environment, and it is therefore imperative to provide the child himself or herself as well as the family members of the victims of domestic violence with the appropriate social, comprehensive and specialised services.

States took various measures to prevent violence against children, and parents' training is one of such possibilities. Parenting training aims to prevent and resolve children's social, emotional, and behavioural problems by enhancing parents' knowledge, skills, and confidence (Sanders, Kirby, Tellegen, Jamin, & Day, 2014). In Lithuania, positive parenting training can be organised in several ways: individual counselling, group sessions or individual training (Jonynienė 2010). However, the parental training in Lithuania is mostly focused on vulnerable families but not to general parents' population, there are plenty of positive parenting courses, but very few people attend them voluntary (most attendees should follow the course due to reported problems in the family), existing courses are not effective (Lietuvos Respublikos Vaiko..., 2022). One

possible explanation could be that the development of these courses was not based on the real needs of families.

The goal of this article is to present data of need analysis which was done as a prerequisite for training course development. The article is based on qualitative study by interviewing parents about their knowledge, perceptions and need for training.

Methodology

The research was a part of international project “Digitised Education of Parents for Children Protection Project - DEPCIP (Project no 2019-1-TR01-K204-077577) with the aim to explore, describe and understand the parents’ knowledge, perceptions and beliefs regarding violence and punishment against children and their need for preventive education in Turkey, Italy, Greece, Lithuania and Spain. A qualitative study applying one-to-one semi-structured interviews with 12 parents in each country (n=60) was conducted. Using thematic analysis 7 thematic areas were formulated. This article presents national data of Lithuania, including 3 thematic areas which are relevant to the topic of the paper.

The purposive sampling applying heterogeneity principle was used for reaching research participants. The heterogeneity inclusion criteria were: age, gender, place of residence, education, number of children, age and gender of children, (non) or vulnerability of family (see Table 1).

Table 1 Demographic characteristics of research participants (created by the authors)

No	G	Age	Place of residence	Education	No. of children	Age and gender of children
1	F	55	Deprived urban	Upper secondary	4	16M, 12M, 11F, 8M
2	F	42	Affluent rural	Master	2	11F, 7M
3	F	48	Deprived rural	Upper secondary	3	27F, 22F, 6F
4	M	46	Affluent rural	Bachelor	2	16M, 13F
5	M	42	Affluent urban	Master	6	2M, 6F 10F, 13F, 15F, 17M
6	M	52	Affluent urban	Master	3	16 M, 23M, 24F
7	F	33	Affluent rural	Bachelor	1	7F
8	F	31	Affluent urban	Bachelor	2	4M, 4F
9	F	22	Affluent urban	Secondary	1	1,7M
10	F	49	Affluent urban	Master	2	7F 24F
11	F	39	Affluent urban	Bachelor	2	3M 16M
LT 12	F	46	Affluent urban	Master	2	18F 21F

Ethical principles of confidentiality and free will of participation were followed.

The main limitation of the study is language. The interviews were done in Lithuanian language and analysis in English languages. As the terms: violence, abuse, neglect and maltreatment are sensitive for translation, in Results part they are used as they were spoken by research participants in their answers, even if researchers have seen that these terms are used not properly. It should be also admitted that concepts “violence” and “abuse” have very slight difference in everyday spoken Lithuanian, and only experts differentiate their meanings.

Results

THEMATIC AREA - Knowledge about violence against children - consists of these categories: *Physical violence and corporal punishment, Neglect, Emotional abuse, Sexual abuse* (see Table 2).

Table 2 *Knowledge about violence against children* (created by the authors)

Category	Codes	Quotation
Physical violence and corporal punishment	Serious bodily injury	An average of 20 children are killed in Lithuania every year (6) completely injured and he becomes disabled (7)
	Physical violence and corporal punishment are the same	Physical punishment and physical violence I would say the same thing (5) When a child is beaten as a means of upbringing for misbehaviour. For me, this is violence. For those who beat, it is an educational tool (9)
	Circle of violence	That violence fuels a circle of violence (5) they bring such a family model in building their family. It's like a vicious circle (7)
	Physical and emotional violence go together	psychological violence also goes hand in hand (7) they are suppressed in such ways - physical punishment, beatings, psychological violence in the same way (8)
Neglect	Leaving minor alone	there are no parents, the door is not closed and there is no food at home (4) mother and father are absent, the child is left unattended (6)
	Not meeting physiological needs	complete neglect of the child, the child must sleep on the ground, next to the dog stumble, windows close, barely nailed (7) undressed, unfed or does not have any items there (8)
	Not meeting emotional needs	waiting for mom to come, she didn't call. This is horrible (1)

		Dissatisfaction with emotional needs when people do not respond to a child cuddle (8)
Emotional abuse	Recognizable, conscious as violence, punishment and/or educational tool	Can ignore, may not speak. May humiliate. May not allow something, demand (4) raised voice, aggressive tone, intimidation, threats, scare (6) banning something, it is training like a dog (10)
	Tacit (not recognizable, unconscious)	some people don't even realize how often they use that psychological violence against their children (8) physical it is somehow easier for you to see, you may help one way or another, and emotional is not, because it is a long process and the consequences are not immediately apparent (12)
Sexual abuse	In contact	rape (8) coercion (8)
	Contactless	jeering, bullying on those topics, all sorts of drollery, jokes (4) demonstration of any kind of images of a sexual, erotic nature - movies, photos, posters or something else for children (8)

Participated parents describe *Physical violence and corporal punishment* as serious bodily injury, say that physical violence and corporal punishment is the same, physical and emotional violence go together, they know circle of violence. *Neglect* for research participants is leaving minor alone, not meeting physiological, emotional and social needs. *Emotional abuse* could be recognizable, e. g. conscious as violence, punishment and/or educational tool or tacit, e. g. not recognizable, unconscious. *Sexual abuse* was not dominant category, parents differentiate among in contact and contactless sexual abuse.

THEMATIC AREA - Perceptions and beliefs about punishment - consists of these categories: *Opinion about punishment, Effectiveness of a punishment, Reasons for using punishment, Reaction to public punishment/violence, How people s/he knows punish a child* (see Table 3).

Table 3 *Perceptions and beliefs about punishment* (created by the authors)

Category	Codes	Quotation
Opinion about punishment	Categorically negative about physical punishment	For me, it has to do with humiliation. You humiliate that human, break into his space and it's wrong, injustice of some kind (5) This is unacceptable and incomprehensible to me; I am very much against any physical cause of pain (9) Negative, absolutely negative (12)
	Opinion about non-physical	individual thing, situational thing, that if you don't do something, then we don't do something too, we can't

	punishment varies depending on situation	do it (5) The rule that should be clear to the child in advance - what to do, what will happen next (8)
	Punishment with condition	It seems to me that children need punishment, it can't be that they don't have them, that I'm just beautiful and good. There must be some consequences, as there are consequences in life. At first you have to talk so that they understand, but if they don't understand, then what do I know (2) If they don't manage - don't drive them, there would be punishment and it would be a lesson for the next time (5) penalties are non-degrading, logical, beneficial and not fearful for children (7)
Effectiveness of a punishment	Effective if it is as an agreement or rule (agreed in advance – everyday duties, when it relates with safety, intervene other's people rights)	I think the best punishment is to sit down with the whole family, and discuss with the whole family to get that child to think they did the wrong thing (1) we have certain arrangements already, such as that we go to the store and buy only one item (8)
	Not effective if it associated with violence (what is difference between violence and punishment – hypothetical questions with no answers in participants stories)	to take away a child's phone - is it punishment here or is violence here any? Snoop, I do not know. Where is the line between punishment and violence? In general, I would punish you as if I were God and I will punish you here. I don't even know where that limit is, it's probably very fragile (8) This is such a very slippery question. And I think [sometimes] we're punishing, not even thinking we're punishing (12)
Reasons for using punishment	Experience of violence in childhood	applying the same methods that were applied to them (5) It's just their family model that they got in their family when they were kids (7) himself was beaten, just passing from generation to generation (9)
	Challenges in reconciliation of work and family	stress, long working hours, parents' employment, non-provision of kindergarten places, coercion of certain educational burdens on parents (6) time management (11) Fatigue, a stay tired (12)
	Nonproper expression of emotions (helplessness/stress /uncontrollability)	If you do not knock on the child. If you can not somehow otherwise. Very often, those punishments are used not because the child has committed a crime, but because their [parents] selfishness is lingering. Because it's so comfortable for him, and no matter how better for the child (3)

		parents are tired, overwhelmed, feel inadequate, stressful to them (6) they lose self-control, unable to control themselves (8)
	Not knowing how to behave in a specific situation/ not knowing, lack of alternatives	Parents who do so are very upset and apparently unprepared for parenthood (6) it seems to them this is the only way of upbringing (7) we do not have this knowledge and we do not have these skills (10)
Reaction to public punishment/ violence	Intervenes personally or calls to institutions if perceives action as a violence	I would intervene. I don't know, probably automatically, I wouldn't even think if its necessary. There are all sorts of ways, not necessarily moralizing (3) it is necessary to intervene, if it is necessary to save the life and health of a child, it is necessary to intervene in the same way (6) if [a child] is beaten, yes (12)
	Notifies the responsible authorities	unless there is a very sharp case where you see it, then call [for help] (5) I would jump and defend and stand in the middle and not let and call the police (8) I'll just let certain authorities know that you don't really care for children (11)
	Intervenes personally if action is not so dangerous	Depends probably on the situation. In one case, I would probably somehow try to say, react, that this is not right (5) assess the situation, think, to get closer to a person and talk (7)
	Doesn't know how would react	Depends probably on the situation (5) I would say yes, but I don't know (2)
How people s/he knows punish a child	Violence as a punishment	We saw for ourselves how they once hitted their youngest daughter in front of us (5) he was punished in such a way that he was left alone (6) struck through the ear, she even deafened (10)
	Punishments with no violence	it can be said that you will clean up the house alone and no one will help you (1) negotiates, restricts the computer, does not allow to go somewhere or does not take from somewhere (5)

Research participants' *opinion about punishment* is categorically negative when it comes to physical punishment, opinion about non-physical punishment varies depending on situation, they also talk about punishment with condition. *Effectiveness of a punishment* could be effective if it is as an agreement or rule (agreed in advance – everyday duties, when it relates with safety, intervene other's people rights) or not effective if it associated with violence (what is difference between violence and punishment – hypothetical questions with no answers in participants stories). *Reasons for using punishment* are: experience of

violence in childhood, challenges in reconciliation of work and family, nonproper expression of emotions (helplessness/stress/uncontrollability), not knowing how to behave in a specific situation/ not knowing, lack of alternatives, differences in parenting and inconsistency.

Reaction to public punishment/violence vary: research participants intervene personally or calls to institutions if perceives action as a violence, intervene personally if action is not so dangerous. Others don't know how would react and explains that it would depend on situation.

In describing *how people s/he knows punish a child*, answers are that they exercise violence (physical, sexual, neglect), use violence as a punishment (corporal punishment, leaving a child alone) or punish without violence (use rules).

THEMATIC AREA - Needs for training - consists of two categories: *Content, Methods* (see Table 4).

Table 4 *Needs for training* (created by the authors)

Category	Codes	Quotation
Content	Knowledge about violence (reasons)	when that person experiences violence, what are the consequences (5) topics include violence against children and sexual violence (6)
	Knowledge about child development (various needs in different development stages)	what exactly are children of that age; as they understand; as they see everything (7) go through that child's development, explain how one should react in one situation or another (9) what to do with teens (10)
	Parenting	yoga training should be something for everyone so as not to get out of that patience and not overwhelm (2) Really all violent punishments - to train parents in such a way that they pursue such a family model that the child is seen as an equal personality (6) what it means to be a parent (11)
Methods	Consulting on parenting in searching effective ways of a child education	What are the other ways of upbringing and how are they effective (7) other solutions to deal with those situations (9)
	Psychological support	Need knowledge of self-control. That would be the main topic (4) how parents may deal with their own emotional state at that moment (7) how to control yourself (10)

		to know yourself well and when you know yourself better, it is easier for you to react to those children as well (11)
	Sharing of parenting experience	Maybe not learn, but talk and understand. The same should talk to each other. Such groups for experienced [parents] but not trainings (4) parental conversations, sharing experiences (12)
	Lecturing by competent experts	experts may also be present (6) must be a solid professional and the methodology he uses himself (10)

Discussing about the *content* of the training research participants list these topics: knowledge about violence (its reasons), knowledge about child development (various needs in different development stages) and parenting. For *methods* they suggest lecturing by competent experts, consulting on parenting in searching effective ways of a child education, psychological support, sharing of parenting experience, practicing/exercising.

Conclusions

Research participants have knowledge about violence against children, they name and discuss physical violence, corporal punishment, neglect, emotional abuse, sexual abuse, however, do not differentiate them strictly, for example, they use terms physical violence and corporal punishment, psychological and emotional abuse, neglect and maltreatment synonymously. Parents in their stories provided personal experience as well as observations of others' parents behaviours and opinions. Usually, they talk about others' as negative examples, they do not notice positive behaviour or talks of other parents.

Research participants see the need of parental training in preventing violence against children. The most wanted topics are reasons of the violence, knowledge about child development as they understand that children in different development stages have different needs and parents' reactions to misbehaviour should be adequate to the development stage and restraint techniques or deal with emotional state. Also, general topic of parenting – what does it mean, how to become a good mother/farther – is named during interviews.

Putting national data in international data context it should be admitted that Lithuanian parents named less possible training topics than general sample of five countries. The list consisted of following topics: what is violence against children, what falls within the sphere of violence against children, reasons leading to violence, effects of violence on children, how to deal with conflicts between siblings, how to control and manage children' anger, strategies for dealing with difficult parenting situations, listening and communication skills, children development stages, management of feelings and negative moments,

emotional intelligence, how to build positive relation with children, bullying, cyberbullying, sexuality, children's rights, bullying problems, prevention measures and tools (based on unpublished Report).

Based on this research data the project Consortium developed training course for parents in English (Digitised Education of Parents for Children Protection (depcip.com)), also each country adjusted the content and methods to national context and are planning training in national language.

List of References

- A familiar face: violence in the lives of children and adolescents. (2017). New York: United Nations Children's Fund.
- Brennan, S., & Noggle, R. (2007). *Taking Responsibility for Children*. Waterloo, Ont: Wilfrid Laurier University Press. Retrieved from: <https://web-p-ebscobhost-com.skaitykla.mruni.eu/ehost/detail/detail?vid=7&sid=fe7323a8-02ca-4e8e-a1f8-c91882a84e2c%40redis&bdata=JnNpdGU9ZWhvc3QtbGl2ZQ%3d%3d#db=e000xww&AN=201193>
- Convention on the Rights of the Child. (1989). Retrieved from: <https://www.ohchr.org/EN/ProfessionalInterest/Pages/CRC.aspx>
- Country Report for Lithuania. (2020). Global Initiative to End All Corporal Punishment of Children. Lithuania | Global Initiative to End All Corporal Punishment of Children (endcorporalpunishment.org)
- Daraškevičienė, A. (2018). Vaiko auklėjimas šiuolaikinėje Lietuvoje: tėvų požiūris. *Lithuanian Ethnology: Studies in Social Anthropology & Ethnology / Lietuvos Etnologija: Socialinės Antropologijos ir Etnologijos Studijos*, 18, 109–128.
- Global status report on preventing violence against children*. (2020). Retrieved from: <https://etalpykla.lituanistikadb.lt/object/LT-LDB-0001:J.04~2018~1575914432894/J.04~2018~1575914432894.pdf>
- INSPIRE: Seven strategies for ending violence against children*. (2016). Geneva: World Health Organization. Retrieved from: <https://inspire-strategies.org/sites/default/files/2020-06/9789241565356-eng%20%283%29.pdf>
- Jonygienė, J. (2010). Tėvystės įgūdžių lavinimo programų efektyvumo veiksnių apžvalga. *International journal of psychology: a biopsychosocial approach*, (5), 119-137. Retrieved from: <https://etalpykla.lituanistikadb.lt/object/LT-LDB-0001:J.04~2010~1367176909319/J.04~2010~1367176909319.pdf>
- Jusienė, R. (2006). Fizinį bausmių taikymas šeimoje ugdant vaikus: tėvų požiūris ir galimos priežastys. *Socialinis darbas*, 5(1), 63–71.
- Lietuvos Respublikos Vaiko teisių apsaugos ir įvaikinimo tarnyba. (2019). Retrieved from: <https://vaikoteises.lt/naujienos/aktualu/visuomene-vis-dar-toleruoja-smurta-pries-vaikus-net-68-proc-apklaustuju-pasisako-uz-fizines-bausmes.html>
- Lietuvos Respublikos Vaiko teisių apsaugos kontrolierius. (2022). *Vaiko teisių apsaugos kontrolieriaus 2021 metų veiklos ataskaita*. Retrieved from: <http://vtaki.lt/lt/administracine-informacija/veiklos-ataskaitos>
- Lietuvos statistikos departamentas. (2022) Retrieved from: <https://osp.stat.gov.lt/pradinis>
- Moschella, M. (2014). Natural Law, Parental Rights and Education Policy. *American Journal of Jurisprudence*, 59(2), 197–227. Retrieved from: <https://doi-org.skaitykla.mruni.eu/10.1093/ajj/auu010>

Pivoriene et al., 2023. Need Assessment for Designing Training Course for Parents in Preventing Violence Against Children

- Navaitis, G., Kairienė, B., & Gaidys, V. (2015). Fizinių bausmių vaikystėje sąsajos su laimingumu suaugus. *Pedagogy Studies / Pedagogika*, 120(4), 116–129. Retrieved from: <https://doi-org.skaitykla.mruni.eu/10.15823/p.2015.042>
- Sanders, M. R., Kirby, J. N., Tellegen, C. L., & Day, J. J. (2014). The Triple P-Positive Parenting Program: A systematic review and meta-analysis of a multi-level system of parenting support. *Clinical psychology review*, 34(4), 337-357. Retrieved from: <https://www.sciencedirect.com/science/article/abs/pii/S0272735814000683>
- Transforming our world: the 2030 Agenda for Sustainable Development. (2015). Retrieved from: <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/291/89/PDF/N1529189.pdf?OpenElement>

LEARNING SOCIETY: HOW DOES OLDER PEOPLE'S LEARNING CONTRIBUTE TO ITS ADVANCEMENT?

Irena Žemaitaitytė
Mykolas Romeris University, Lithuania

Abstract. *The article discusses the characteristics of the formation of a learning society and the learning opportunities for older adults. As international documents note, the aim of adult education and lifelong learning is to equip adults of all ages with the necessary skills to exercise and realize their rights and control their destinies. It promotes the personal and professional development of adults, the increased involvement of adults in the creation of learning communities and sustainable environments. Adult education is therefore becoming a crucial tool for reducing poverty, improving health and well-being and contributing to the creation of a sustainable learning society. Scientific literature, document analysis and secondary data analysis reveal that for construction of a learning society in Lithuania older people should be actively encouraged to join the learning process.*

Keywords: *learning society, older adults, Third Age University.*

Introduction

Continuous societal alterations determine the need for adults to progress steadily and to develop their ability to harmonize with the changing requirements and environments. European Commission notes (2021) that lifelong learning is a priority for everyone in a rapidly changing world. Parallel rapid demographic changes encourage numerous organizations around the world to pay more attention to the ageing population by discussing the agenda for active ageing. World Health Organization (WHO) has highlighted the need for countries to invest into the maintenance of strategic policies to answer the needs of ageing populations and to ensure healthy and active ageing in separate states" (Strategy and Action Plan..., 2012). While analysing active ageing the issue of the active engagement in learning of older people comes to view. Thus, although the learning society has been the subject of discussion for longer than a few decades, recently there emerges a need for linking two significant aspects of society: keeping older people active in an ever-ageing society for as long as possible, and developing a learning society. This is approached through active encouragement of older adults to participate in learning, and, simultaneously, augmenting numbers of learners in society.

The aim of this paper is to explore the role of older adults` learning for development of the learning society in Lithuania. The paper is based on secondary data analysis, including legal documents (EU and national programmes and strategies), research results (national and international levels), statistical data (population of older adults) and other data (results of national surveys).

Construction of a Learning Society

One of the most important modern life features is the need for continuous learning: the pace of life is accelerating, knowledge and skills once acquired are rapidly becoming obsolete, professional and personal life are constantly innovating, so there is a need to relearn to be able of applying these innovations in our daily activities. Over the past few decades, continuous adult learning and the pursuit of new knowledge, skills and competences has become one of the greatest educational challenges in Europe and in the world. The importance of lifelong learning as the democratization of education was reiterated at the Seventh UNESCO Conference in Morocco in 2022. UNESCO documents underline that the purpose of adult education and lifelong learning is to equip people with the necessary skills to exercise and realize their rights and control their destinies. It promotes the personal and professional development of adults, the increased involvement of adults in the creation of learning communities and sustainable environments. This makes it a crucial tool for reducing poverty, improving health and well-being and contributing to a sustainable learning society. The "Lithuania 2030" Strategy mentions lifelong learning as one of the key factors in ensuring that Lithuanian society is prepared for global change and enabling the development of a learning society. Although Lithuania is among the leaders in the EU in terms of tertiary education completion, the country is far behind in terms of the proportion of adults participating in trainings, with a rate of 7.2% in 2021 according to Eurostat data compared to a European average of 12%.

When analysing if Lithuanian society is a learning society, it is important to define how we understand "learning society" and what features allow us to identify one or another society as a learning society. Fullan (1998) names creation of a learning society as the highest goal of education. In his view, the most important features of a modern society are inseparable from learning, education and knowledge. Giddens (1992) highlights the need to combine intellectual development, which he calls education for understanding, with social development. The ability to speculate and generate ideas, and to work collaboratively with others, is recognised by both educators and businesses as essential for the future of the world. Scientists (Fullan, 1998; Boud, 2000; (Hakkinen et al, 2017) believe that the development of a learning society is an

ultimate goal for society as a whole, as this cannot be achieved by any single education system. Active engagement in learning activities, he believes, must take place in all organisations and institutions (not just educational organisations) if it is to make a difference in society as a whole. Ranson (1994) instructs against creating a learning society as just one separate component of a new moral and political order. Only when the value and processes of learning are at the centre of political strategy will it be possible to create the conditions under which each individual can develop his or her own capacities and institutions can change with the times. The changes of the last decades require constant updating of learning content and assessment, blurring of boundaries between cultures and languages; the need for new skills and knowledge in the world of work is imperative. In particular, it is important to move away from passivity and inertia. The aim is to actively engage adults of all ages in learning processes.

An ageing society and Third Age University

In recent decades, the proportion of older people in the total population has been rising. And this process is accelerating inexorably. According to projections by Eurostat, the European Union's statistical office, the number of people aged 65 and over will double by 2060 compared to the number of people of working age. The ageing population and the growing disparity between the working and retirement age groups are posing a challenge to a wide range of public and private sector sectors. As societies age, researchers are increasingly focusing on creating the conditions to help older people remain active and full members of society. One way of creating such conditions is through the establishment of training facilities for older people.

One of the main institutions focusing on promoting learning for older people is the Universities of the Third Age. Third Age University (TAU) is a provider of non-formal adult education and continuing education, a unit of a university, which provides non-formal education and continuing education for older people, meeting their knowledge, competence development and cultural needs (NSE Law).

According to statistics data in Lithuanian in 2021 there were 45 Third Age Universities organised into the National Association of TAU, which brought together around 16 000 older people. According Jarvis and Griffin (2003), Third Age University is not a regular university (it possesses no campus), but rather a growing voluntary association that provides adult education to its members, as well as an opportunity for them to come together to form groups of different interests and to teach and learn from each other. The basic principle of this educational institution is that it allows the teacher and the learner to exchange activities. In some activities, the same person acts as a teacher and in other, the

same person acts as a learner. The classes are mostly organised in different locations and are not certified.

The main objectives of non-formal education at the University of the Third Age:

- to empower individuals to meet their independent learning needs;
- to develop personal creative abilities and skills;
- to encourage individuals to become active citizens of a democratic society;
- to develop personal cultural interests (Analysis of the functioning of the TAU system, 2012).

Third Age University is actively involved in finding a solution to one of the fundamental objectives of adult education in society: to enable older people to adapt to a changing environment and to meet people`s personal needs for socialisation, communication, learning and cognition. According to researchers (D'Orazio & Florenzano, 2000; De Camillis, 2000; Gustaitienė & Benevičienė, 2014, Žemaitaitytė, 2016), Third Age University, in comparison with other adult non-formal education institutions, is a rather specific educational institution, where people from a certain age group study. Therefore, working with this age group requires specific andragogical knowledge. On the other hand, like entire adult non-formal education, it is a voluntary and non-compulsory activity which is as attractive to people as it corresponds to their interests. Third Age University learners are active, curious, oriented not to the formal educational, but rather cognitive growth goals and possibilities in meeting new people. Third Age University empowers older people to remain active members of society, enrich their leisure time; for those in employment conditions, it helps to adjust to new developments in the labour market. TAU is particularly active in the development of digital competences for older people and in their absence, it is quite difficult to get by in today's world. When participating in Third Age University activities, older adults not only learn new things but also, they have the opportunity to share their own life experiences, which opportunity is of equal importance. This form of education/learning helps older people to review critically and assess their personal life circumstances, to identify new opportunities and to contribute to constructive changes in society. In Lithuania, TAU is often seen as an institution for the self-realisation and cooperation of older people, with a spectrum of institutional objectives, not limited solely to the augmentation of academic knowledge, but also engaged in the development and education of artistic and creative self-expression.

Older people`s learning research

When analyzing the needs and opportunities for adult learning in Lithuania, and the reasons for no acceleration in the number of learners, researchers are

increasingly focusing on aspects of the teaching and learning process for older people.

The study "Analysis of the performance of the Third Age University system" (2012) carried out in 2012 revealed that older adults (70% of respondents, 480 respondents in total) are motivated to study at a Third Age University by the desire to improve themselves and broaden their horizons. The researchers attributed these rather outlook related reasons not to the function of a specific educational institution, but to an individual's internal disposition to act and communicate. Around a fifth cited a desire to gain knowledge in a specific field and unwillingness to be left behind. More than half of respondents (58%) said that learning gives them the opportunity to meet new people. Researchers particularly highlight this aspect of socialisation of older people as a motivation for choosing to learn. And it can be linked to older people's enjoyment of life and the pursuit of well-being. Participants in a 2013 qualitative focus group study of older people (Mockus et al., 2013) noted that interpersonal relationships, relationships with former co-workers, and relationships with members of a social organisation in which they are actively involved, are important for their life satisfaction. According to the researchers, "the study participants 'supported' the classical theory of activity, which states that higher levels of social activity and leisure activities promote well-being in older people". Third Age University is actively involved in supporting older people's engagement and leisure time through a range of learning activities.

A study conducted in 2014 (Kalvaitis et al., 2014) aimed to look at the development of Third Age Universities in Lithuania and to provide guidelines for their development. According to the researchers, Third Age Universities in the country have been driven mostly by private initiative and the willingness and desire of some municipal leaders to develop adult education. This phenomenon is certainly welcome, but it is regrettable that it hasn't turned out into a common characteristics, i.e. when all Third Age Universities are fully supported by local governments. Hopefully this will be encouraged by a currently drafted new law on non-formal adult education.

Researchers also focus on the assessment of older adults' improved health, in addition to socialisation as a learning impact aspect. Studies on the impact of learning on the older adults' quality of life conducted in 2015 and 2018 (Sučylaitė et al., 2015; Sėlenienė, 2021) have confirmed that older adults see learning as an opportunity to turn run their lives along a better line, to lead a more informed life, and, in this way, learn to manage performance impairments due to emotional limitations. Measuring overall health status of older adults in different cities, researchers found that older people in cities with active Third Age Universities rated their health better.

The study in 2018, "Third Age Universities in Lithuania. Situation in 2018" (Kalvaitis, 2018), revealed that in 2017-2018, 16.5 thousand students attended

65 third-age universities in Lithuania. The number of older people attending TAUs is increasing every year. The majority of TAUs in Lithuania invite all older adults who wish to improve their skills. The researchers highlighted that learners at all TAUs in the country actively participate in both classroom lectures and various practical activities (art studios, Nordic walks, etc.). The students of the Third Age University are also active in other leisure activities (travelling, participating in amateur ensembles).

Conclusions

Overall, it can be stated that in Lithuania Third Age Universities with their specificity of activities, target audience and peculiarities of organisation of activities are an effective channel for consistent and purposeful educational activities to ensure a healthy ageing. The involvement of older people in the activities of TAUs is steadily growing, creating favourable conditions for the implementation of educational activities.

Scientific literature, document analysis and secondary data analysis reveal that for construction of a learning society in Lithuania older people should be actively encouraged to join the learning process. The process is strongly influenced by previous their learning experiences and social environment. Research confirms that the learning of older people leads to personal growth, consolidation of their role in society, while at the same time the substructure for building a learning society in Lithuania materializes.

List of References

- Analysis of UTA system performance. (2012).
- Boud, D. (2000). Sustainable assessment: rethinking assessment for the learning society. *Studies in continuing Education*, 22, 2, 151-167.
- De Camillis, S. (2000). *Motivazioni all'educazione continua. Perché gli adulti frequentano i corsi di studio per tutto l'arco della vita*. Roma: EdUP.
- D'Orazio, E., Florenzano, F. (2000). *Studiare da grande. Conoscere e fare le università della terza età*. Roma: EdUP.
- COUNCIL RECOMMENDATION on a European approach to micro-credentials for lifelong learning and employability. (2021). Retrieved from: <https://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52021DC0770&from=EN>
- Giddens, A. (1992). *Modernity and Self-Identity*. Cembrigde: Polity Press, Palo Alto: Stanford University Press.
- Gustaitienė, L., & Benevičienė, V. (2014). Vyresnio amžiaus žmonių psichologinių bei socialinių veiksnių, psichosocialinio prisitaikymo ypatumai socialinių ir demografinių duomenų atžvilgiu. *Socialinis darbas*, 13, 248-262.
- Fullan, M. (1998). *Pokyčių jėgos*. Vilnius: Tyto Alba.
- Hakkinen, P., Jarvela, S., Mäkitalo-Siegl, K., Ahonen, A., Naykki, P., & Valtonen, T. (2017). Preparing teacher-students for twenty-first-century learning practices (PREP 21): a

- framework for enhancing collaborative problem-solving and strategic learning skills. *Teachers and Teaching: Theory and Practice*, 23(1), 25-41.
- Jarvis, P., & Griffin, C. (eds.) (2003). *Adult continuing education: major themes in education*, London: Routledge.
- Kalvaitis, A. (2018). Trečio amžiaus universitetai Lietuvoje. 2018 m. situacija. Kvalifikacinių ir profesinio mokymo plėtros centras. Vilnius.
- Kalvaitis, A., Barauskienė, J., & Mačėnaitė, A. (2014). Trečio amžiaus universitetai Lietuvoje. Situacijos analizė ir plėtros gairės. Ugdymo plėtotės centras, Vilnius.
- Lietuvos pažangos strategija „Lietuva 2030“. (2012). Retrieved from: <https://www.vyturelis-alytus.lt/wp-content/uploads/2014/02/LIETUVA-2030X.pdf>
- Mockus, A., Sondaitė, J., & Butėnaitė, J. (2013). Socialiai aktyvių vyresnio amžiaus žmonių pasitenkinimo gyvenimu psichosocialinių veiksnių kokybinė analizė. *Socialinis darbas*, Nr. 12(2), 340–352.
- Ranson, S. (1994). *Towards the learning Society*. Cassell.
- Sėlenienė, L. (2021). Trečiojo amžiaus universiteto veikla nacionalinės mokslo programos „Sveikas senėjimas“ kontekste: Klaipėdos rajono atvejis. *Studijos – verslas – visuomenė: dabartis ir ateities išvalgos*, VI, 148–156.
- Strategy and action plan for healthy ageing in Europe, 2012–2020. (2012). World Health Organization. Retrieved from: https://www.euro.who.int/__data/assets/pdf_file/0008/175544/RC62wd10Rev1-Eng.pdf
- Sučylaitė, J., Razbadauskas, A., Martinkėnas, A., & Žuravliova, T. (2015). Klaipėdos regiono senjorų, dalyvaujančių Trečiojo amžiaus universiteto veikloje, su sveikata susijusi gyvenimo kokybė. *Visuomenės sveikata*, I, 12-16.
- Trečio amžiaus universitetų sistemos veiklos analizė. (2012). *Socialinės informacijos ir analizės agentūra*, Vilnius.
- Zemaitaityte, I. (2016). Older adult education in Lithuanian ageing society. *Society. Health. Welfare*, Vol. 30, p. 1-9.

SOCIAL INTERACTION EXPERIENCES OF BEGINNING UNIVERSITY TEACHERS IN BUILDING OCCUPATION-RELEVANT COMPETENCIES

Birutė Anužienė

Klaipėda University, Klaipėda State University of Applied Sciences, Lithuania

Salomėja Šatienė

Klaipėda State University of Applied Sciences, Lithuania

Abstract. *The article presents findings of a qualitative study focused on analysis of social interaction experiences of beginning teachers in higher education, whereby social interaction is construed as a dialogue, conversation, socio-cognitive conflict, and intersubjective solutions thereof, which influence the process of formation of new competencies.*

The aim of research is to show the prevailing experiences of beginning university teachers in building competencies within the context of social interaction - socio-cognitive conflict - situations. The research is based on the interactional ethnography approach. The research participants were newly hired teachers of different universities in Lithuania. The research shows that the degree of asymmetry in social relations is subject to differences in the status, experience, competencies, or age of the agents. In the context of intensity of socio-cognitive interaction, where it involves a small number or single-direction exchanges of views and opinions, socio-cognitive conflict will not necessarily be progressive in building new competencies. As regards the features of social and affective interaction, the situation of convenience - confrontation is the most favorable for the acquisition and formation of cognitive structures - competencies. Social and cognitive abilities of participants in a socio-cognitive conflict, as prerequisites for cognition, are essential for the acquisition of new structures - competencies.

Keywords: *social interaction, socio-cognitive conflict, university teachers' competencies.*

Introduction

Social interaction is viewed as a form and a process of communication whereby individuals and groups exchange specific social symbols, systematically influence each other, and adapt to each other, and which is often followed by establishing mutual understanding and social solidarity, and formation of particular social behaviour (Matulionis, 2002). An academic community may be associated with a kind of federation uniting actors of various profiles scattered across a variety of disciplines, departments, and faculties, who possess and nurture very different professional and social representations, activity methods, symbols, culture, technologies, etc. Following Bourdieu

(1997), university may be defined as a field with its own competition, specific interests, aims, etc. In such a variegated field of academic activity, during social interaction, different ideas, views, approaches, and beliefs frequently “intersect”, and an individual’s concepts, knowledge, information, social representations or views are confronted with some new information perturbing and contradicting the information held, with different knowledge, views or beliefs, i.e., the individual encounters a socio-cognitive conflict (SCC) situation. Due to the complexity of the university environment, professional integration of beginning university teachers may not be going as smoothly as one would expect. Professional integration is hampered by the fact that the university teachers who have just started an academic career are encouraged to immediately get involved in research programs and projects, to understand and master the academic culture and different aspects of activity organization, and to perform their teaching activity applying an adequate didactic and andragogical approach to higher education, i.e. they are urged to carry out the activities for which some of them are not prepared due to lack of knowledge, competencies or experience. Therefore, aiming at speedy and successful professional integration, the beginning university teachers are faced with the necessity of immediate extensive learning at their workplace in social interaction situations, when communicating with heads of departments, colleagues, students, or university social partners for the construction and development of the competencies needed for their academic activity. This is not an easy task, which may explain why almost every beginning university teacher faces a certain crisis, which Nault (2005, p. 48) calls a period of “survival”. This fact demonstrates the relevance of focusing on analyzing social interaction experiences of newly hired university teachers, when social interaction is understood as dialogue, conversation, and socio-cognitive conflict and intersubjective solutions thereof, which impact the construction of new structures – competencies - in the cognitive process. There have been no studies of this kind reported. One of the authors of the present study - B. Anužienė (ex. Jatkauskienė) – has analyzed SCC as an epistemic factor in the students’ acquisition of new knowledge and representations. However, neither the students’ experiences nor those of the teachers were researched in the social interaction perspective. This led to the main *research problem question*: What kinds of social interaction experiences of beginning university teachers - specifically, socio-cognitive conflict experiences - prevail in building occupation-relevant competencies? The research question is clarified in detail by *the subject matter of research* – social interaction situations of building competencies relevant to academic work within the context of experiences of newly hired university teachers. *The aim of research* is to reveal the prevailing experiences of competence building of beginning university teachers in the perspective of social interaction – socio-cognitive conflict situations. *The research methods* include a scientific literature analysis, and

ethnographic interview (dialogue and conversation method) for data collection when the research participants open up and tell their experiences of one or another situation. The *thematic analysis* was chosen as a data processing and interpretation method due to its flexibility, and providing the possibility for the researchers to think independently and assess the situation analyzed.

Literature Review

The construction of the beginning university teachers' competencies in the social interaction situation is based on the socio-constructivist model of learning applied in an academic environment (Joita, 2005), Piaget's (2020) idea of the two stages in learning related to the state of disequilibrium and equilibrium, and the concept of perturbing information (Thievenaz, 2017). Beginning university teachers may be viewed as adult learners, whereas SCC may be viewed as disequilibrium of the learning process arising through interaction with other individuals in the learning process and caused by differences in social representations, views about a fact, phenomenon, object, information, knowledge, and other confrontations (Sacco & Buccarielli, 2008, p. 2). SCC is considered a cognitive development factor when it enables the learner to assess and accept the other persons' views and change their own social representations of the fact, phenomenon, object, thus acquiring new knowledge and competencies, and integrating them into the system of one's knowledge, competencies and representations, and finding a solution to a learning, cognitive problem (Darnon, Doll, & Butera, 2007, p. 231). Some authors (Davis et al., 2011; Buchs et al., 2004) point out that the new information or knowledge may correspond with the representations and ideas held by the individual and also expand the boundaries of knowledge. This is expressed as a process of equilibrium or balance, which does not cause any SCC. When the new knowledge does not correspond to the individual's representations and the existing knowledge, it may be declined. Thus, the individual may experience a state of shock - a socio-cognitive conflict – or disequilibrium as the individual is confronted by cognitive disagreement. The disequilibrium may be expressed as destabilization of thinking, which makes the individual feel threat to the self (Buchs et al., 2004). Therefore, the person looks into the new information, reconsiders it seeking to attain the state of equilibrium.

Starting with Piaget's (1964) research findings and moving towards Androwkha and Jezegou's (2019) research, it is unquestionable that the SCC concept has been transformed. However, the importance of SCC in learning and competence construction in social interaction situations has not diminished. In the 70s, SCC was analyzed by scholars in the field of social psychology, and later it became a subject matter of interdisciplinary research of a variety of areas of human activity. In the recent decades, research has focused on the impact of

SCC in learning contexts including SCC task design in collaborative learning with respect to students' motivation and affect (Asterhan et al., 2010); children's cognitive development in pre-school setting with robot integration in learning (Benvenuti & Mazzoni, 2020); learning of culturally homogeneous groups by socio-cognitive conflict in the online learning setting (Weinberger et al., 2013); socio-cognitive conflict as a pedagogical technique in teaching science (Foster, 2012); didactic management of SCC in a higher education setting (Zaharia, 2013); relationship between moral problems and socio-cognitive conflict in terms of emotions and complexity of thought (Myry & Helkama, 2007); socio-cognitive conflict in the context of students' dietary choices focusing on the way epistemic goals and socio-cognitive climate in argumentation affect achievement of epistemic outcomes (Brocos et al., 2022); socio-cognitive conflict in the perspective of metacognitive self-regulation (Schnaubert et al., 2021). Interdisciplinary analysis of SCC has revealed the concept and highlighted its positive impact on social interaction and the adult learning process in particular (Sacco & Buccarielli, 2008). For a long time, SCC was considered a negative phenomenon in learning and competence building. Only in the last decades, it has been viewed positively, stating that SCC can stimulate learning by becoming an epistemic source of new knowledge, competencies or representations of a heterogeneous group (Darnon et al., 2007).

Methodology

The research adopted the *interactional ethnographic approach* (Skukauskaite & Green, 2022), combining the research methods and theoretical perspectives which allow revealing and describing how the members of a social group in a particular social interaction situation construct new knowledge, competencies, meanings, views, actions and understanding being influenced by various factors of social interaction.

The thematic analysis of the research findings is based on the conceptual approach of *the socio-cognitive conflict theory* (Bourgeois & Nizet, 2005), according to which there are four factors identified, which influence the effects of the social interaction in the process of acquisition and construction of new structures - competencies: *the degree of the asymmetry of social relations; the intensity of socio-cognitive interaction; the social affective qualities of interaction; the individuals' cognitive and social abilities* (p. 161). This approach allowed the authors of the study to carry out a *thematic analysis* without getting lost in the participants' experiences, and helped to understand not only the contours of the situation but also gain a deep insight into its essence.

During the process of data collection and analysis of transcripts, the greatest attention was given to those episodes of the interviews/conversations

which were directly linked with the research question: What kinds of social interaction of beginning university teachers - specifically, socio-cognitive conflict experiences – prevail in building occupation-relevant competencies?

The data collection and transcription of the interviews was carried out in September to November, 2022, meeting the research participants in different towns. Eight university teachers from different Lithuanian universities were invited to take part in the interview sharing their experiences of the beginning of their careers, the situations of professional integration and social interaction. Six university teachers agreed to take part in the research, including one male and five female teachers from the towns of Klaipeda, Kaunas, Vilnius and Siauliai. The participants' age ranged from 38 to 64, and the duration of work experience was from 8 to 30 years. The convenience strategy of data collection was adopted inviting familiar teachers to participate thus seeking a smoother conversation and elimination of potential tenseness or embarrassment. Following the principles of interactional ethnography, there was a research plan designed including the estimated duration of the interview, the form, ethics criteria, and organizational aspects of interviews. There were 4 interviews of different length conducted with each participant, which were recorded, listened to and transcribed. During the first interview, there was a consent form signed by the participant. The participant was asked about the experiences of beginning their career at the university, their personal stories when they faced a SCC, and thus acquired the relevant competencies. During the following interviews they were asked to continue their story, revealing some particular details of the first interview that were of interest to the researchers looking into the participants' experiences, the factors of social interaction, and context. The participant's experience, described by the researchers, the story recounted, and the interpretation thereof was checked by the participants to make sure it corresponded to the participant's ideas, and it was approved, or it was corrected.

The thematic analysis was carried out following the principles of Braun & Clarke (2012) methodology in the following stages: (1) *The researchers familiarizing themselves with the data*, which included transcribing the recordings, writing comments and reading notes. The aim of this stage was not only to make notes, but also to become thoroughly familiar with the transcripts, and notice the things which were relevant to the research question; (2) *Generating Initial Codes*, which included systematic data analysis through coding. The coding was performed in a traditional way without using computer software. The stage was completed with a review of the codes and the data extracts collated; (3) *Searching for Themes*, which in the present study included comparing the themes with the *socio-cognitive conflict theory* (Bourgeois & Nizet, 2005). The researchers had to decide which themes were significant and provided answers to the research question, and which subthemes might be identified, which meant looking into the code clusters; (4) *Reviewing Potential*

Themes, which involved checking whether there were sufficient meaningful data to support the theme, and whether the theme was sufficiently coherent; (5) *Defining and Naming Themes*, when the researchers named and defined the themes relating them to the aforementioned essential factors identified in the *socio-cognitive conflict theory* (Bourgeois & Nizet, 2005) having influence on the effect of social interaction on the acquisition and construction of new structures - competencies, and describing the meaning of the themes; (6) *Drawing Conclusions*, which were produced drawing on the whole data analysis.

The study was carried out following the principles of research ethics associated with qualitative research – respect for persons, confidentiality and anonymity, beneficence and non-maleficence, and justice (Žydžiūnaitė & Sabaliauskas, 2017).

Research Findings and Discussion

The degree of the asymmetry of social relations. The research participants were asked to share their experiences, thoughts and views of starting their careers at the university. The most vivid episode of the participants’ experiences is provided in Table 1, and the experiences of other participants, which complement it, are provided in the text below the table. When analyzing the data, it was noticed that the theme of *the degree of the asymmetry of social relations* is characterized by unique expression, eloquently justifying the subject matter of its subthemes – the influence of the attitude of a competent head of department with significant academic experience; the beginning university teacher’s confidence in the colleagues and themselves; the impact of a positive attitude of the colleagues; realization of the socio-cognitive conflict.

Table 1 The expression of the theme of the Degree of the asymmetry of social relations (created by the authors)

Expression of the subject matter of the subtheme	Interview episodes illustrating the expression of the subject matter of the subtheme	Essential facts and analysis
The influence of the attitude of a competent head of department with significant academic experience	<i>I can remember the very first day at the department. In front of me there was a dignified grey-haired elderly woman, head of department. I felt so tiny, all shrunken up before her. Nobody asked me to sit down, so I kept standing. “You have a diploma, so you can start working. Tomorrow there are the first lectures, and you will find the timetable downstairs.</i>	There is an obvious high level of the asymmetry of relations, which is determined by the difference in competencies, experience, age and status. The dominant subject - head of department - responds to the state of a new employee with a low level. The needs of being informed and

	<p><i>Can you read? That's fine. Go to the library and find yourself a coursebook for the beginning". I wanted to ask: "What should I do? How should I work? What should I say to those students?" I felt like shouting: "I have a diploma of an interpreter, but these are foreign language classes for political science students. Would you recommend a coursebook?" I didn't ask, I didn't dare to, I was scared (R3)</i></p>	<p>constructive communication are not met. A considerable challenge at the beginning of one's career having no adequate means for activity, having no idea of the very essence of the activity, and being afraid to ask. There are evident dynamics of the representation of social relations from positive to negative.</p>
<p>The beginning university teacher's confidence in the colleagues and themselves</p>	<p><i>In the morning, I had an impression, that I would not survive if I fail, and that would be followed by bullying, stress, and fear. But one needs to get up and go to the university. I was saying to myself: "You have completed such difficult studies, you know the language, and you are young, and this will help you understand the students in the class. You have to somehow adapt your knowledge to the audience. But I don't know how to do that" (R3)</i></p>	<p>There is absence of confidence in one's competence or strength, there is no support, and lack of help from colleagues during the difficult period of adaptation. The role of the social task is important to the beginning teacher.</p>
<p>The impact of a positive attitude of the colleagues</p>	<p><i>I am heading towards the department office, and I see a woman at the end of the corridor smiling at me. She asks me: "Are you new here? Are you just starting?" I reply to her: "Yes, absolutely new and inexperienced". She laughs and says: "Come with me, I will show you a good coursebook. And there is a Teacher's book with the answer key. You will not fail. Everything will be fine. We have all been through that, and as you see, I am still safe and sound" (R3)</i></p>	<p>A positive attitude of a colleague helps to overcome the fear, and creates positive pre-conditions for acquisition of new competencies. A third party - a colleague - coming to the social interaction situation has a positive effect on acquisition of new cognitive structures. There are dynamics of the representations of social relations from negative to positive.</p>
<p>Realization of the socio-cognitive conflict</p>	<p><i>I had been hoping for and expecting a different beginning, and it seemed as if everything turned upside down in my mind. Unfortunately, there was nobody but colleague A. to help me overcome the frustration which I experienced the very first day (R3)</i></p>	<p>The situation encountered on the first work day reveals the socio-cognitive conflict faced, whereas a high degree of the asymmetry of social relations inhibits acquisition of new information, knowledge or competence, which demonstrates that in this situation SCC may not be considered a positive factor in competence development.</p>

The degree of the asymmetry of social relations may be determined by differences in the status, experience, competencies and age. According to Bourgeois and Nizet (2005), a high degree of asymmetry in the partners' status, experience, competencies, or age does not provide a favorable way to resolve the SCC which would facilitate acquisition and modification of cognitive structures. However, other participants shared their experiences of less drastic beginning of their careers, which may be illustrated by the following episode: "...on the very first day I was assigned a very competent mentor. I wished she had given me more of her time, but actually she was not able to help me much. She was very busy participating in a project, focused on preparing for a partners' visit, so I didn't feel like being a nuisance, and did not dare to bother her. I imagined the start of my dream job a little different... the first two months were really stressful, as I did not know who to ask for help when some problems arose, and there were quite a few" (R5). Darnon, Butera and Mugny (2008) point out that too large a gap between the partners' positions in terms of experience or competencies, is not useful for acquisition of new cognitive structures. This was evident in the episode recounted by a participant: "*the situation was such that I had to relocate and find a new job. Although I had considerable academic experience, having started work at a university in another city, I faced some problems of work organization – I had little understanding of the internal information systems of the university. I felt ill at ease about asking my colleagues how to use the systems, as considering my pedagogical name and academic degree, which was higher than that of most of the teachers at the department, I felt obliged to be proficient with the modern technologies. However, I did get over this fear of looking incompetent, and asked for help, as in that situation the academic degree was not helpful compared to the experience of my new colleagues, and the fact that the new job meant a lot to me*" (R1). When analyzing the research data, it became evident that the participants experienced not only SCC, but also a cognitive conflict. Following Piaget's (2020) theory, there are two stages in learning based on the state of disequilibrium and equilibrium. Disequilibrium comes from ignorance or inability to act (i.e., cognitive conflict), and may be expressed by "*I don't know what to do*" as in the episodes recounted by R3, and R1. In the case of SCC, disequilibrium is caused by disagreement with the other individual's ideas, views, etc., and may be expressed by "*I disagree/disapprove/oppose*". This disequilibrium may be associated with the problems of affective nature, like "*I'm useless, I am not able to do that*" (the episode recounted by R3). Equilibrium - the SCC resolution - is attained through the process of assimilation-accommodation, during which new experience and knowledge is acquired, and the individual broadens the field of understanding, knowledge and activity (the episode recounted by R1). In this situation, the process of social interaction reveals itself, in which the participant (the episode recounted by R1)

is able to handle the SCC, understands and re-examines his/her views and beliefs, and successfully resolves the SCC acquiring new abilities and knowledge. The differences in the learner’s concepts, testing hypotheses and observations, or the results of analyses may cause the so-called ‘cognitive shock’ – cognitive conflict or loss of balance (Jatkauskienė et al., 2019). If it occurs in interaction with other individuals, the cognitive conflict becomes a SCC. Therefore, the mechanism of a cognitive conflict is the same as in the case of a SCC. The difference is only in the fact that it is present during interaction with other individuals (Daele, 2009). Bourgeois and Nizet (2005) identify four factors determining the impact of asymmetry on the socio-cognitive conflict and acquisition of new cognitive structures: involvement of a dominant third party into the relationship (as it was expressed in the episode recounted by R3); the level of the dominant subject’s response (experiences of R3 and R5); representation of social relations (the episode recounted by R5); the social significance of the task (the episode recounted by R1).

The intensity of socio-cognitive interaction. It corresponds to the intensity of verbal interaction, frequency of disagreements, and the intensity of the partner disagreement. If the interaction of individuals involves a small number of exchanges of views or ideas, or if the exchange is mainly one-sided, SCC may not lead to progress or stimulate construction of new competencies (Darnon, Butera & Mugny, 2008). The intensity of social interaction may have a positive effect on learning and construction of competencies if positive verbal and non-verbal communication and the substantiation of the arguments provided is taken into account. The means of social interaction include the following types: verbal and non-verbal (gestures, facial expression, body posture), focused and non-focused (e.g., behavior in workplace and home environment); direct and indirect.

Table 2 The expression of the theme of Intensity of socio-cognitive interaction (created by the authors)

Expression of the subject matter of the subtheme	Interview episodes illustrating the expression of the subject matter of the subtheme	Essential facts and analysis
Intensity of verbal interaction	<i>At the beginning, there wasn't much communication with colleagues; there were only monthly department meetings; I would only say hello or goodbye when I had an encounter with a colleague; thus, I did not know anybody personally at the department. I just expected the communication to be more intensive (R2); At the beginning, that communication was not very</i>	At the beginning of academic activity there is lack of intensive verbal/non-verbal interaction, although the participants had such a need. This may be associated with emotional security, as beginning university teachers do not know their colleagues, are not very good at using the

	<i>smooth... I had to learn the colleagues' "jargon", and they also were very loud... (R1); A year or two later, I could start talking to the colleagues (of course, not everybody) without any introductory polite phrases or small talk like "hello, how are you" when encountering them in the corridor, and feel emotionally secure (R6)</i>	professional "jargon", have not familiarized themselves with the organizational culture of the university, the procedures and requirements of activity.
Frequency of disagreements	<i>I proposed to improve the teaching methods as the students complained about the lectures of some of the teachers being boring, and I also wanted to improve my own didactic skills. My proposal was declined as worthless. I remember the exact wording: "You are talking nonsense - you have just started working, and now you are about to destroy things". I might have lacked arguments. However, I did not hear any solid arguments to support the rejection of my approach (R3); There was a new Master's study programme being developed by the department. I had just started my career. Nearly every day, there were disagreements arising among the teachers of the department as to the issues of the vision of the ultimate goal, the needs for the potential study subjects, the approach to the university's mission in the development of student competencies, ensuring professional integration, etc. (R5)</i>	In the first case, the SCC was not positively resolved, as the other individual's idea and approach were not considered, and no solid argumentation was produced. The SCC having not been resolved, the participant's teaching competencies and those of the other teachers were not developed. In the second case, the disagreements between colleagues produced some preconditions for re-examination of the participant's associations, images or processes. Thus, the disagreements and solid arguments produced by the colleagues enabled development of the participant's new cognitive structures, and construction of new competencies. The SCC is positive when it is resolved at the epistemic level (ideas, arguments), rather than relational level.
Exchange of approaches and ideas	<i>There have always been the exchanges of views and ideas and they still go on, but I think, they do not cause any concern or stress until it poses a threat to the individual's competence or authority. I sometimes refrain from expressing my idea as my colleagues may see it as my desire to 'excel myself' with my knowledge (R4); In most cases I did not share my idea, especially with the head of department or the</i>	The exchange of approaches and ideas is positive provided it does not pose a threat to the competence of the individual in the SCC, and there is no considerable difference in the social status of the individuals in conflict. Otherwise, the difference in approaches or opposition becomes a relational conflict, which

	<p><i>professors as there was too large a gap between their status and mine (R3); At the beginning of my career, I somehow timidly took part in round-table discussions or exchange of ideas, as you have to have that experience so that you can share it. However, I should say that every afternoon I spent at that round table gave me an opportunity to learn and hear something new (R1)</i></p>	<p>emphasizes unhealthy interpersonal competition or influence.</p> <p>There is an inner dialogue going on, during which an individual adopts the new information or knowledge and integrates it into their system of knowledge and representations, or rejects it after consideration.</p> <p>SCC generally speeds up the process of learning, or even the changes of one's position.</p>
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The findings of this empirical study are in line with the insights of some other scientific research. The social exchange theory developed by both Homans and Blau (Mentus, 2014) explains social behaviour when analyzing exchanges of approaches and ideas, and emphasizing the individualistic pursuit of personal gain and the stages of social exchange including the individuals' personal relationships of exchange; differentiation of status and power; legitimization and institutionalization; opposition and change (Mentus, 2014). Therefore, social exchange may not be equal, and the inequality of exchange may result in power differentials.

The social affective qualities of interaction describe the atmosphere in which relationships develop. The atmosphere of the relationship between two partners is based on two aspects which consist of a few ways: irritation - convenience, or opposition - approval. According to Monteil (1988, as cited in Bourgeois & Nizet, 2005), the convenience – confrontation situation is the most favourable for acquisition of cognitive structures. It would be erroneous to believe that each social interaction, or each SCC facilitates construction of new competencies or enriches a person's knowledge. Social interaction depends on the importance of specific objects, events or people for individuals or groups.

Table 3 The expression of the theme of Social affective qualities of interaction (created by the authors)

Expression of the subject matter of the subtheme	Interview episodes illustrating the expression of the subject matter of the subtheme	Essential facts and analysis
Convenience situation	<i>When my status was lower than the opponent's, I pretended that I agreed with the opponent, whereas I did not actually change my approach (R4); It was very important to me to understand if</i>	The importance of a different social status in SCC resolution is emphasized. In the first case, focusing on

	<i>everybody thought the same way, or it was just the one who was talking. If it was an idea of the majority, I adopted it and re-examined my approach (R6)</i>	consideration and resolution is observed (R4). The other cases demonstrated decentering.
Confrontation situation	<i>When the opinions diverged considerably, I compared my idea with those of others, and this helped to find the right solution to the problem, find an alternative (R2); There was somebody at the department who would never agree with a different opinion, in no way; that person couldn't understand other people's points of view, and it was taken to the personal, relational level (R3)</i>	There is focusing on reasoning and resolution (R2). In the other case, there is decentering, as the confrontation moves from the cognitive to the social level, which does not create positive conditions for SCC resolution.

When analyzing the essence of SCC, two dimensions of a primary representation of an event, fact, phenomenon or object are identified: *cognitive* (the person's knowledge of or familiarity with the fact, event, phenomenon) and *affective* (the person's feelings and response to the fact, phenomenon, object) (Jatkauskienė et al., 2019). Every fact triggers an action or response, which is based on the primary representation of the fact or phenomenon. The learner's affective (emotional) security is a major condition for the SCC in this situation to become a source of learning and competence building, and a developmental factor (Jatkauskienė, Norkienė, & Nugaras, 2019). Conversely, the individual will not be able and/or willing to constantly experience emotional imbalances, i.e., will disengage from the cognitive process. This demonstrates that the cognitive problems arising in the course of learning or discussion, are not as threatening as the problems of an affective nature, and adequate SCC regulation can help to resolve the SCC so that it promotes learning and competence building, and facilitates cognitive development (Butera, Sommet & Darnon, 2019). In the SCC situation, there are two ways of reasoning and decision making: focusing and decentering (Jatkauskienė et al., 2019). In the case of focusing, the individual may give too much attention to the elements observed, and being focused on them, may have difficulty understanding other people's views. In the case of decentering, the individual is able to understand the other person's view. If during a discussion, the participants are only focused on their own patterns of thinking or reasoning, and ignore other points of view, other ways and possibilities for solving the problem, it can be stated that focusing occurs. Conversely, if the participants in the discussion give consideration to others' points of view, and thus construct alternative patterns of solving the problem, it can be stated that decentering occurs. Such decentering takes place with respect to the social representations held by the participants in the discussion, and their social status. The scholars who research SCC (Daele, 2010; Androwkha & Jezegou, 2019), argue that decentering in the SCC situation is a

very important source of adult learning, as the confrontation of ideas and views becomes a driving force of learning, competence building and knowledge construction.

The individuals' cognitive and social abilities is also an aspect of SCC. Cognitive skills as prerequisites of cognition, i.e., existence of the learner's cognitive structures, are necessary for acquisition of new structures, as following the *constructivist learning concept, the construction of a new structure of knowledge is determined by existence of the previous structure.*

Table 4 The expression of the theme of Individuals' cognitive and social abilities
(created by the authors)

Expression of the subject matter of the subtheme	Interview episodes illustrating the expression of the subject matter of the subtheme	Essential facts and analysis
The SCC partners' empathy and ability to listen and ask questions	<i>I believe we can reconcile all views, and solve the problems, and benefit from that. You only need to feel empathy for another person - "try and be in their shoes" (R1); It will be bad if you are afraid to ask when starting your activity, and even worse, of you try and ask, but nobody can even hear you, or they may not want to hear you. Or they have no time for you. What are you? Only a greenhorn newbie... (R3)</i>	Compassion, empathy, listening to another person in the everyday situations of social interaction ensure faster professional integration and competence building.
Argumentation skills	<i>The ability to present arguments largely depends on your knowledge, and abilities and that you are not afraid to say that in public. Of course, this may be quite difficult at the beginning of your career, as you don't know the people, doubt your competence, and don't want to be a nuisance. However, you need to "grow a spine" by yourself. Then it will be easier to find alternative solutions, and feel emotional security (R4)</i>	Argumentation skills are useful when confronted with perturbing conflicting information, ideas or views. It is an advantage in resolving SCC. The individual's social and cognitive skills as prerequisites of cognition are essential for acquisition of new structures - competencies.
Perceived self-efficacy	<i>Everyone should gain and nurture their social skills. This is a guarantee of your self-efficacy. Then we feel we can do something big and significant... when you appreciate and reflect on the usefulness of different views, we consider them and reflect on how to improve ourselves (R1)</i>	Being with and within a group of colleagues is a perfect environment for SCC expression, and development of self-efficacy.

Irrespective of the individual cognitive skills, the learner needs the social skills which enable effective communication in conflict situations. Darnon, Butera and Mugny (2008) argue that the individual may not possess a solid basis of previously developed social and cognitive skills pursuing a positive effect of the conflict on acquisition of new structures. The colleagues in the SCC situation have to master communication and argumentation skills in order to gain advantage from collaborative learning.

The research participants' experiences revealed that SCC in many cases may develop into a cognitive conflict which arises in both an explicit (mentoring, collaboration, activity observation, etc.), and implicit situation of social interaction, when there are different social representations of the problem of the beginning university teacher. Therefore, the results of the present research may be applied in practice in a higher education institution when introducing or developing a more effective model of formal mentorship, which would stimulate professional integration of beginning university teachers, and facilitate acquisition of occupation-relevant competencies by creating the necessary SCC conditions, utilizing the available resources, etc. (see Figure 1).

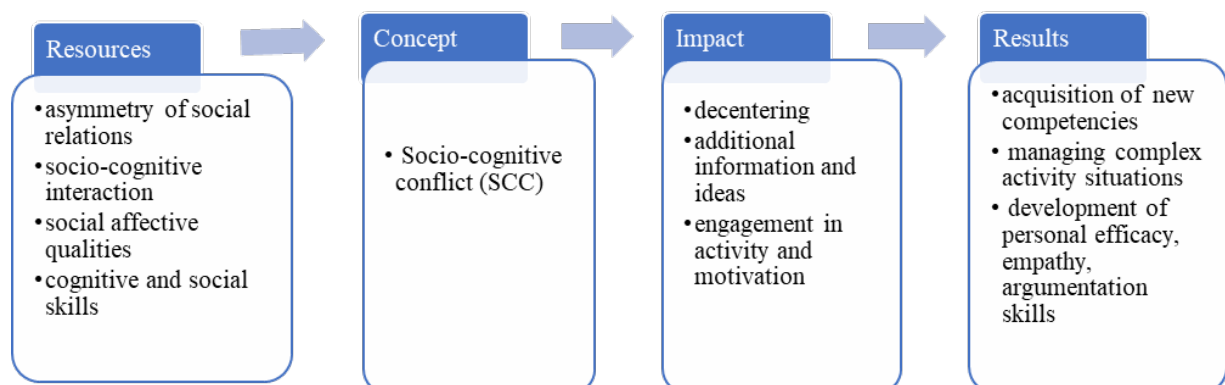


Figure 1 SCC resources, impact and results in practice (created by the authors)

The figure shows that understanding of the epistemic prerequisites for SCC, the knowledge of SCC resources, and utilization of its advantages in practice when organizing mentoring for the beginning teachers has considerable impact on decentering and acquisition of additional information. Therefore, taking advantage of the possibilities of SCC in practice may reduce the degree of asymmetry in social relations by transition from asymmetry to managing relationships, thus avoiding the loss of the beginning teacher's competencies. Understanding of the intensity of socio-cognitive interaction and practice may provide emotional security to the newly hired person, accelerate building the relevant competencies, strengthen motivation and the sense of personal efficacy.

Conclusions

1. In scientific literature, SCC is a theoretically-grounded concept which has considerable influence on the construction on occupation-relevant competencies in the social interaction situation. Following Bourgeois and Nizet's (2005) conceptual approach, it can be stated that in the construction of occupation-relevant competencies of beginning university teachers in the SCC situation, the level of asymmetry of social relationships is determined by the differences in the teachers' status, experience, competencies, and age. The level of the dominant subject's response to the state of a new staff member may be low. The unfulfilled needs for being informed and constructive communication may become a considerable challenge at the start of an academic career.
2. In the perspective of the intensity of socio-cognitive interaction, when the interaction involves a small number or one-sided exchanges of views or ideas, the SCC may not lead to progress in the construction of new competencies. At the beginning of an academic career there may be a lack of intensive verbal/non-verbal interaction, even though beginning teachers express their need for communication. The lack of more intensive socio-cognitive interaction may be linked to the need for emotional security.
3. In the perspective of the qualities of socio-cognitive interaction, the convenience – confrontation situation is the most favorable for acquisition and construction of cognitive structures - competencies. There is focusing and decentering of reasoning and resolution observed, as confrontation is transferred from the cognitive to social level, which may not create the conditions required for positive resolution of the SCC.
4. The SCC participant's social and cognitive skills as prerequisites of cognition are essential for acquisition of new structures - competencies. The social and cognitive skills possessed ensure faster professional integration and competence building in everyday social interaction situations.

List of References

- Androwkha, S., & Jézégou, A. (2019). Présence socio-cognitive lors d'une activité collective et à distance synchrone: une étude empirique réalisée auprès de trois groupes d'enseignants en situation de formation». In *Revue Internationale des Technologies en Pédagogie Universitaire/International Journal of Technologies in Higher Education (RITPU/IJTHE)*, 16(3), 22-38.
- Asterhan, C. S. C., Butera, F., Nokes, T., Darnon, C., Schwarz, B. B., Butler, R., Levin, J., et al. (2010). Motivation and affect in peer argumentation and socio-cognitive conflict. In K. Gomez, L. Lyons, & J. Radinsky (Ed.), *Learning in the Disciplines: Proceedings of the 9th International Conference of the Learning Sciences (ICLS 2010)*, 211-218. Retrieved from: <https://repository.isls.org/bitstream/1/2801/1/211-218.pdf>

- Aumont, B., & Mesnier, R.-M. (1992). Les mécanismes du conflit socio-cognitif. In *L'acte d'apprendre*, 191-195. Paris: PUF.
- Bandura, A. (1985). *L'apprentissage social*. Mardaga.
- Benvenuti, M., & Mazzoni, E. (2020). Enhancing wayfinding in pre-school children through robot and socio-cognitive conflict. *British Journal of Educational Technology*, 51(2), 436–458. DOI: <https://doi.org/10.1111/bjet.12848>
- Bourdieu, P. (1997). *Les usages sociaux de la science. Pour une sociologie clinique du champ scientifique*. Paris: INRA.
- Bourgeois, E., & Nizet, J. (2005). *Apprentissage et formation des adultes*. Paris: Presses universitaires de France.
- Braun, V., & Clarke, V. (2012). Thematic Analysis. In H. Cooper, P. M. Camic, D. L. Long, A. T. Panter, D. Rindskopf, & K. J. Sher (Eds.). *APA Handbook of Research Methods in Psychology, Vol. 2: Research Designs: Quantitative, Qualitative, Neuropsychological, and Biological*, 57-71. Washington DC: American Psychological Association. DOI:10.1037/13620-004
- Brocos, P., Jiménez-Aleixandre, M. P., & Baker, M. J. (2022). "Be rational!" Epistemic aims and socio-cognitive tension in argumentation about dietary choices. *Frontiers in Psychology*, 13:933062. DOI: 10.3389/fpsyg.2022.933062
- Buchs, C., Butera, F., Mugny, G., & Darnon, C. (2004). Conflict Elaboration and Cognitive Outcomes. *Theory into Practice*, 43(1), 23–30.
- Butera, F., Sommet, N., & Darnon, C. (2019). Sociocognitive conflict regulation: How to make sense of diverging ideas. *Current Directions in Psychological Science*, 28(2), 145-151. DOI: <https://doi.org/10.1177/0963721418813986>
- Daele, A. (2009). *Débattre pour apprendre. Pédagogie Universitaire-Enseigner et Apprendre en Enseignement Supérieur*. Retrieved from: <http://pedagogieuniversitaire.wordpress.com/2009/06/05/debattre-pour-apprendre>
- Daele, A. (2010). Le conflit sociocognitif à l'université: une revue de littérature et quelques propositions. In *Revue AIPU*, tome 3.
- Darnon, C., Butera, F., & Mugny, G. (2008). *Des conflits pour apprendre*. Grenoble: Presses Universitaires de Grenoble.
- Darnon, C., Doll, S., & Butera, F. (2007). Dealing with a disagreeing partner: Relational and epistemic conflict elaboration. *European Journal of Psychology of Education*, 22(3), 227–242. DOI: <https://doi.org/10.1007/BF03173423>
- Davis, A., & Winstone, N. (2011). Educational Implications. In A. Slater & G. Bremner (Eds.), *An Introduction to Developmental Psychology*, 587-612. Chichester, UK: BPS Blackwell.
- Foster, C. (2012). Creationism as a Misconception: Socio-cognitive conflict in the teaching of evolution, *International Journal of Science Education*, 34(14), 2171-2180. DOI:10.1080/09500693.2012.692102
- Jatkauskienė, B., Andriekienė, R.M., & Nugaras, M. (2017). Professional Integration of University Faculty in Terms of Organizational Culture and Transition of Professional Identity. *Social welfare interdisciplinary approach*, 7(1), 88-103.
- Jatkauskienė, B., Norkienė S., & Nugaras M. (2019). Socio-cognitive conflict as an epistemological source of new knowledge and social representations. *SOCIETY. INTEGRATION. EDUCATION*, 5, 131-147.
- Joita, E. (2005). Constructivism and constructionism in the formation of the design of the training. In E. Joitta (coord.), *Constructivist strategies in the initial formation of the students*. Craiova: Publishing House Universitaria, 239-274.
- Matulionis, A. V. (2002). *Sociologija*. 2-oji laida. Vilnius: Homo liber.

- Mentus, V. (2014). Social power in exchange theories: Homans's and Blau's considerations of the relationship between the power and the exchange. *Socioloski pregled*, 48, 165-182. DOI: <https://doi.org/10.5937/socpreg1402165M>
- Myyry, L., & Helkama, K. (2007). Socio-cognitive conflict, emotions and complexity of thought in real-life morality. *Scandinavian Journal of Psychology*, 48(3), 247–259. DOI: <https://doi.org/10.1111/j.1467-9450.2007.00579.x>
- Nault, G. (2005). *Étude du fonctionnement et du potentiel d'une communauté de pratique en ligne pour le développement professionnel d'enseignants novices*. Doctoral thesis, Montréal, Université du Québec à Montréal.
- Piaget, J. (1964). *Six études de Psychologie*. Paris: Éditions Denoël (Médiations).
- Piaget, J. (2020). *L'Équilibration des Structures Cognitives*. Paris: PUF.
- Sacco, K., & Bucciarelli, M. (2008). The role of cognitive and socio-cognitive conflict in learning to reason. *Mind & Society*, 7(1), 1–9.
- Schnaubert, L., Krukowski, S., & Bodemer, D. (2021). Assumptions and confidence of others: the impact of socio-cognitive information on metacognitive self-regulation. *Metacognition Learning* 16, 855–887. Skukauskaite, A., & Green, J. L. (2022). *Interactional Ethnography. Designing and Conducting Discourse-Based Ethnographic Research*. Routledge.
- Thievenaz, J. (2017). *De l'étonnement à l'apprentissage. Enquêter pour mieux comprendre*. Duvain – la - Neuve: De Boeck Supérieur. DOI: <https://doi.org/10.4000/edso.2654>
- Weinberger, Marttunen, M., Laurinen, L., & Stegmann, K. (2013). Inducing socio-cognitive conflict in Finnish and German groups of online learners by CSCL script. *International Journal of Computer-Supported Collaborative Learning*, 8(3), 333–349. DOI: <https://doi.org/10.1007/s11412-013-9173-4>
- Zaharia, I. (2013). On didactic management of sociocognitive conflict. *Scientific Papers Series Management, Economic Engineering in Agriculture and Rural Development*, 13(1), 457-464. Retrieved from: <http://managementjournal.usamv.ro/pdf/vol.XIII/Art74.pdf>
- Žydzūnaitė, V., & Sabaliauskas, S. (2017). *Qualitative Research: Principles and Methods*. Vilnius: Vaga.

ĢIMENE KĀ VĒRTĪBA UN ĢIMENISKĀS VĒRTĪBAS MŪSDIENU LATVIJAS SABIEDRĪBĀ: IESKATS EIROPAS VĒRTĪBU PĒTĪJUMA REZULTĀTOS

*The family within the value system and family values in the context
of Latvia today: insights from the European Values Survey*

Ilze Koroļeva

Rīgas Stradiņa Universitāte, Statistikas laboratorija, Latvija

Maruta Pranka

Rīgas Stradiņa Universitāte, Labklājības un sociālā darba katedra, Latvija

Ginta Elksne

Latvijas Universitāte, Filozofijas un socioloģijas institūts, Latvija

Abstract. *The formation of a person's values and mindset shift is a process that takes place throughout a person's life, but views on basic values are instilled in the family from early childhood and their formation continues during the socialisation process at school and in society. The family plays a primary role in the transmission of values as important elements of an individual's character, the teaching of which largely determines the individual's life path. Just as family structures have changed over time and vary from culture to culture, so too have attitudes towards the family, its relationship to society and its relative value in the social order. This paper analyses the place of the family as a value in the overall value system of the individual and identifies the value beliefs that currently prevail within the family itself. The main research questions to be answered are: (1) are there differences in views – and what are these differences – on the value of the family among different groups in Latvian society; (2) what values are transferred in the family and passed down to children? The analysis of the problem is based on Latvian data from the fifth phase of the European Values Survey (EVS) in 2021 (n=1335).*

Keywords: *attitudes towards family values, European Values Survey, the value of family.*

Ievads

Introduction

Lielākā daļa Rietumu industrializētās sabiedrības un, iespējams, arī visas pasaules iedzīvotāju uzskata, ka ģimenes dzīve ir vissvarīgākais viņu dzīves aspekts. Ģimene tiek uztverta kā pamats, kur veidojas un tiek uzturētas sabiedrības vērtības, veidojas uzvedības modeļi. Tādēļ pētnieki aicina sabiedrību

sniegt atbalstu ģimenēm, jo tieši tās ir vieta, kur tiek attīstītas cilvēciskās pamatvērtības – savstarpēja cieņa, iecietība, citādības pieņemšana, atbildība par citiem, patiesības izjūta, godprātība, taisnīgums un spēja sadarboties (Bernardes, 2002). Latvijas Nacionālajā attīstības plānā 2021.–2027. gadam definētās prioritātes *Stipras ģimenes, veseli un aktīvi cilvēki* kā viens no rīcības virziena *Stipras ģimenes paaudzēs* mērķiem noteikts ģimenes kā vērtības stiprināšana sabiedrībā, tajā skaitā – pilnveidojot atbalsta sistēmu ģimenēm, kā arī panākot pamatvajadzību kvalitatīvu nodrošinājumu (NAP2027).

Ģimenei ir primāra loma vērtību kā svarīgu indivīda rakstura elementu veidošanās procesā un pārnēsē, un to apgūšana lielā mērā nosaka indivīda dzīves ceļu. Tāpat kā ģimenes struktūras laika gaitā ir mainījušās un atšķiras dažādās kultūrās, tāpat ir mainījusies arī attieksme pret ģimeni, tās attiecības ar sabiedrību un relatīvā vērtība sociālajā kārtībā. Tādēļ no sabiedrības viedokļa analīzes ir svarīgi zināt, kāda ir ģimenes kā vērtības vieta indivīda kopējā vērtību sistēmā, kādi vērtībuzskati dominē ģimenēs šobrīd un kāds ir sabiedrības atbalsts tradicionālām un netradicionālām ģimenēm.

Šajā rakstā tiek analizēta ģimenes kā vērtības vieta indivīda kopējā vērtību sistēmā un noskaidroti, kādi vērtībuzskati šobrīd dominē pašā ģimenē. Galvenie pētnieciskie jautājumi, uz kuriem tiek meklētas atbildes, ir: (1) vai pastāv un kādas ir atšķirības dažādu Latvijas sabiedrības grupu vērtībuzskatos par ģimeni; (2) kādas vērtības ģimenē tiek nodotas un ieaudzinātas bērnos? Problēmas analīze balstīta uz Eiropas Vērtību pētījuma piektā posma Latvijas datiem (EVS), kuri iegūti 2021. gadā.

Teorētiskais pamatojums

Theoretical Basis

Vērtības ir dziļi iesakņojušies uzskati, kuru uzdevums ir virzīt indivīdus uz pasauli, kurā viņi dzīvo. Sabiedrībā valdošās vērtības ir pamats kopīgu vērtību un uzvedības standartu iedibināšanai. Vērtības regulē sabiedrību un attiecības starp indivīdiem, tās nosaka morālo uzvedību, veido izpratni par atšķirību starp labo un ļauno. Šajā nozīmē vērtības “ir sociāli kopīgi jēdzieni, kas pilda kopienas funkciju” (Smith, 2013, p. 1011).

Tiek uzskatīts, ka vērtības ir galvenais faktors, kas nosaka arī indivīda turpmāko apmierinātību ar dzīvi. Vērtību jēdzienu, kas tiek lietots kopš 19. gadsimta, var analizēt divējādi: piemēram, aplūkojot, ko kāds priekšmets vai noteikta rīcība nozīmē sabiedrībai jeb – kāda ir to praktiskā vērtība. Savukārt, no socioloģiskā un psiholoģiskā viedokļa vērtība ir kāds abstrakts un vēlamais stāvoklis, ko cilvēki tiecas iegūt (Motoi, 2017). Citi definē vērtības kā vajadzību pārstāvību, kas nosaka uzvedības normas, virza cilvēkus uz vēlamajiem mērķiem un veido pamatu mērķu noteikšanai un vērtību piešķiršanai situācijām un objektiem (Brown & Grace, 1996).

Vērtības ietver sevī ne tikai kognitīvus elementus, bet arī spēcīgu emocionālo komponenti. Jo spēcīgāk kāda vērtība ir iesakņojusies un ir nozīmīgāka vērtību sistēmā, jo tā tiek izdzīvota intensīvāk, uztverta nopietnāk, izraisa daudz emociju un mobilizē spēcīgāku enerģiju. Vērtības veido grupas saikni abstraktā līmenī, piešķir kopienai identitāti, kas saista indivīdus savā starpā, īpaši kritiskos brīžos, vienlaikus tās atklāj atšķirības no citām sociālajām grupām, ar savādāku vērtību sistēmu (Motoi, 2017).

Vai varam runāt par vērtībām kā par kaut ko iedzimtu vai iemācītu, apgūtu? Katra nākamā paaudze no iepriekšējām pārmanto dažādas kultūras vērtības un pieņem to radītās normas šo vērtību praktizēšanai. Kultūru šajā kontekstā var definēt kā “sabiedrības vai sociālās grupas atšķirīgo garīgo, materiālo, intelektuālo un emocionālo iezīmju kopumu”, kas “papildus mākslai un literatūrai ietver arī dzīvesveidu, sadzīves veidus, vērtību sistēmas, tradīcijas un ticējumus” (UNESCO Vispārējā deklarācija par kultūras daudzveidību, 2001, preambula).

Cilvēka vērtībuzskatu veidošanās un uzskatu maiņa ir process, kas risinās visā cilvēka dzīves garumā, sākot ar bērnību. Nozīmīga ietekme vērtību uzturēšanā ir skolām un citām izglītības institūcijām. Sociologs E. Dirks uzsver izglītības latento lomu cilvēku socializācijā sabiedrības veidošanās procesā. Šī “morālā izglītība”, kā viņš to nosauca, palīdz veidot saliedētāku sociālo struktūru, apvienojot dažādas izcelsmes cilvēkus, uzsverot arī citas slēptās izglītošanās lomas, piemēram, pamatvērtību nodošanu un sociālo kontroli (Ballantine & Spade, 2008).

Tomēr primāra un īpaši nozīmīga loma vērtību kā svarīgu indivīda rakstura elementu pārnēsē ir ģimenei, kur tās tiek mācītas un apgūtas jau no bērnības, un to mācīšana lielā mērā nosaka indivīda dzīves ceļu. Vecāku misija ir nodrošināt saviem bērniem morālo izglītību pēc iespējas agrāk, kas palīdz indivīdam vairāk vai mazāk veiksmīgi integrēties sabiedrībā, ņemot vērā arī to, ka dažādās kultūrās vērtības ir atšķirīgas. Piemēram, dažās tradicionālajās sabiedrībās kolektīvisms (grupas vajadzību vērtēšana pār indivīda vajadzībām) var būt svarīgāks par individuālismu (Boudon, 2017).

Ģimenes vērtības ir normas, kas izriet no mūsu pieredzes ģimenes struktūrā un kas veido mūsu izpratni par sociālo konstrukciju, kuru mēs saucam par ģimeni. Laika gaitā ģimenes struktūras ir mainījušās un atšķiras dažādās kultūrās, ir mainījusies arī attieksme pret ģimeni, tās attiecības ar sabiedrību un tās relatīvā vērtība sociālajā kārtībā. Pēdējās desmitgadēs ir mainījusies vērtību – jo īpaši ģimenes, izglītības, profesionālo vai politisko vērtību – loma un nozīme indivīda dzīvē (Mieriņa et al, 2021). Tomēr ģimenes ieguldījumi vērtību un kultūras kapitāla veidošanā joprojām ir nozīmīgi, jo tie uzlabo labklājību, radot iespējas personām izpaust, attīstīt, pārveidot un nodot nākamajām paaudzēm savu kultūras mantojumu.

Pēc U. Beka domām, sadursme starp mīlestību, ģimeni un individuālo brīvību ir kļuvusi par ģimenes pamatiezīmi un vienlaikus arī pamatproblēmu. Mūsdienu sabiedrība ir indivīdu, nevis ģimeņu sabiedrība, tāpēc apgalvojums, ka ģimene ir sabiedrības pamatvienība, zaudē savu pamatotību (Beck, 1992). Savukārt J. Šnēvinds jēdzienu ģimene saprot kā “intīmu attiecību sistēmu variantu, kas var sastāvēt gan no dažādām paaudzēm, gan vairāku paaudžu konstelācijām (grupām)” (Schneewind, 1998, p. 26). Šī definīcija ietver arī neprecētus pārus.

Lai gan pēdējās desmitgadēs ir notikušas būtiskas izmaiņas gan ģimenes struktūrā, gan tās uzvedībā, Eiropiešu skatījumā ģimenes nozīme cilvēka dzīvē tiek vērtēta visaugstāk un šie vērtībuzskati tiek nodoti nākamajām paaudzēm (Panagiotopoulou et al., 2022).

Vērtību nodošana no paaudzes paaudzei nozīmē, ka jaunieši brīvprātīgi pieņem viņiem svarīgas vērtības. Brīvprātīgi pieņemtās un internalizētās vērtības ļauj jauniešiem pašregulēt savu darbību. Ģimenes vērtību pārmantošana ir uzskatāma par divvirzienu procesu: no vienas puses – bērna izpratne par vecāku vērtībām un no otras – vērtību pieņemšana vai noraidīšana (Knafo & Schwartz, 2009). Jauniešu vērtīborientācijas nevajadzētu uzskatīt par statiskām, bet gan par dinamiskām un mainīgām, kuras ietekmē daudzi faktori (Syrkin & Lesthaeghe, 2004).

Metodoloģija *Methodology*

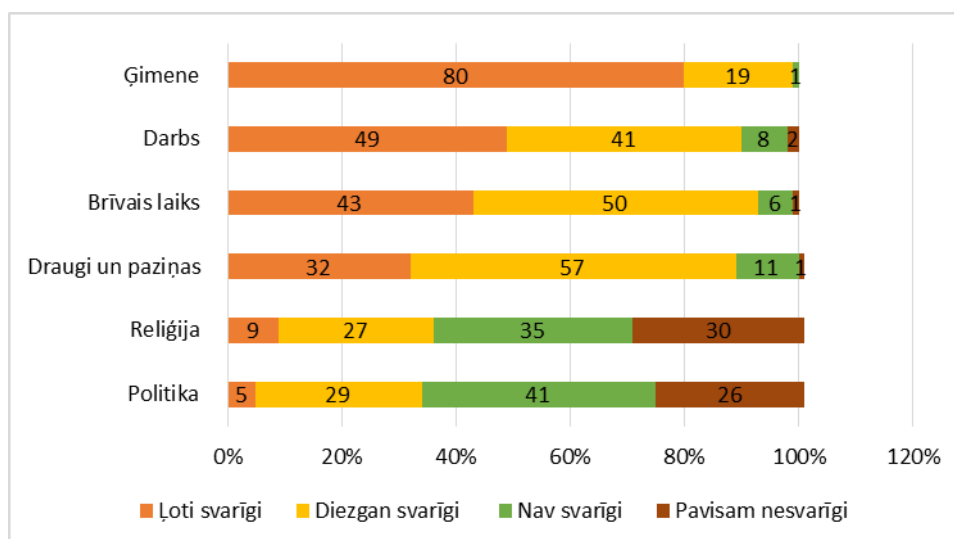
Latvijas iedzīvotāju vērtībuzskatu un attieksmju analīze balstīta uz Eiropas Vērtību pētījuma (*European Values Study, EVS*) datiem. EVS ir viens no nozīmīgākajiem starptautiskajiem salīdzinošajiem pētījumiem Eiropā, kas ietver atkārtotas šķērsriezuma aptaujas par cilvēka pamatvērtībām, un visā Eiropā tas tiek īstenots ik pēc 8 līdz 10 gadiem, iekļaujot iedzīvotāju attieksmes un viedokļu noskaidrošanu par galvenajām dzīves jomām: ģimeni, darbu, reliģiju, politiku, labklājību, vidi, politiku un sabiedrību, reliģiju un morāli, nacionālo identitāti (EVS. About EVS, 2023). Salīdzinošā kontekstā vērtību spriedumi parāda arī to, cik lielā mērā Latvijas iedzīvotāju uzskati ir tuvi citu Eiropas Savienības valstu iedzīvotāju vērtībuzskatiem. Eiropas Vērtību pētījumā Latvija ir piedalījusies jau kopš 1990. gada. Šajā rakstā veikta analīze balstās uz Eiropas Vērtību pētījuma 5. posma aptauju (2018–2021), kas Latvijā īstenota LU SZF Sociālo un politisko pētījumu institūta vadībā (projekta vadītāja Inta Mieriņa). Lauka darbu Latvijā 2021. gadā no maija līdz septembrim īstenoja Socioloģisko pētījumu institūts. Kopējais izlases apjoms, kas iekļauj analīzei derīgās anketas, $n = 1335$.

Kvantitatīvo datu analīzē izmantotas aprakstošās statistikas metodes. Lai izvērtētu vērtībuzskatu atšķirību nozīmīgumu dažādās sociāli demogrāfiskās

grupās, izmantots Hī kvadrāta tests. Bērnos attīstāmo vērtību un īpašību faktoranalīzē izmantota galveno komponentu metode, faktoru skaitu nosakot atbilstoši kritērijam, lai faktoriem īpašvērtības $>1,0$. Lai atvieglotu kopējo faktoru saturisko interpretāciju, izmantota dispersijas maksimizējošā (*varimax*) rotācijas metode, faktoru vērtības rēķinātas pēc lineārās regresijas metodes, faktoru interpretācija veikta pēc tām pazīmēm, kuru faktorslodzes attiecīgajā faktorā $> 0,45$. Tālākā analīzē atbilstoši faktoru vērtību sadalījumam kvartilēs aprēķinātas rangu pazīmes no 1 – vismazāk izteiktā faktora vērtība līdz 4 – visvairāk izteiktā faktora vērtība. Lai noskaidrotu, kādas vērtības bērnu audzināšanā dominē dažādās sabiedrības grupās, turpmākajā analīzē tika pārbaudīta saikne starp šīm pazīmēm un dažādiem sociāli demogrāfiskiem rādītājiem, t.i., respondentu dzimumu, vecumu, izglītības līmeni, etnisko piederību, ģimenes statusu.

Ģimene kā vērtība kopējo vērtību sistēmā *The family within the value system*

Jaunākie EVS dati parāda, ka, lai arī ģimenes struktūrā un attieksmēs (pret to) notiek izmaiņas, indivīda kopējo vērtību skalā joprojām dominē tradicionālās vērtības (skat. Inglehart, 2018) – starp kurām pirmo vietu stabili ieņem ģimene. Gandrīz visiem respondentiem (99%) ģimene ir svarīga, turklāt, salīdzinot ar citām vērtībām, ģimenei nozīmīgi biežāk tiek piešķirta visaugstākā vērtība, proti, absolūtā vairākumā gadījumu (80%) tā ir ‘ļoti svarīga’ (1. attēls). No citām vērtībām, kas Latvijas iedzīvotājiem kopumā ir svarīgas, minamas brīvais laiks (93%) un darbs (90%).



1. attēls. Dažādu vērtību svarīgums cilvēka dzīvē (%)
Figure 1 Importance of different values in a person's life (%)

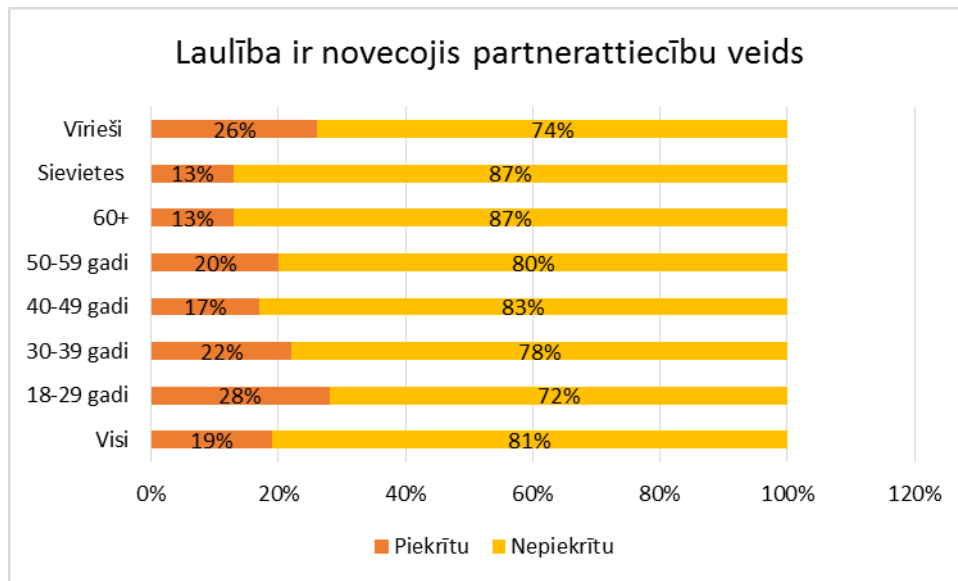
Aplūkojot attieksmi pret vērtībās dažādās iedzīvotāju grupās, salīdzināsim tikai augstākā novērtējuma atšķirības (proti atšķirības atbildē ‘ļoti svarīgi’.) Hī kvadrāta kritērijs parāda, ka vērtību svarīguma novērtējumā starp dažādām sociāldemogrāfiskām grupām pastāv būtiskas atšķirības. Pēc dzimuma nozīmīgākās atšķirības (Sig <0,000) vērojamas tieši attieksmē pret ģimeni un politiku kā vērtībām: sievietes ģimeni vērtē nozīmīgi augstāk nekā vīrieši (ļoti svarīga ģimene ir 88% sieviešu un 68% vīriešu). Savukārt vīriešiem divreiz biežāk nekā sievietēm ļoti svarīga šķiet politika. Cits vērtībuzskatus diferencējošais faktors ir vecums. Tā jaunākajai paaudzei vecumā līdz 29 gadiem darbs, ģimene, kā arī reliģija un politika ļoti svarīga šķiet nozīmīgi retāk nekā citu vecuma grupu pārstāvjiem. Savukārt šajā vecuma grupā, salīdzinot ar citām, ir daudz lielāks jauniešu īpatsvars, kuri visaugstāk novērtē brīvo laiku (53%) un draugus (42%). Vecākās grupas (60+) pārstāvji nozīmīgi augstāk nekā citas paaudzes vērtē ģimeni (86%), reliģiju (16%) un politiku (11%). Pieaugot izglītības līmenim, visbūtiskāk pieaug tādu vērtību kā darbs un ģimene nozīmīgums, savukārt samazinās reliģijas nozīme. Pēc tautības pazīmes galvenās atšķirības vērojamas attieksmē pret darbu – darbam, salīdzinot ar krievu un citas tautības iedzīvotāju vērtējumu, ir būtiski augstāka vērtība latviešu acīs. Savukārt reliģijai daudz augstāku vērtību piešķir citu tautību (izņemot latviešus un krievus) iedzīvotāji.

Attieksme pret laulību un veiksmīgas laulības priekšnosacījumi *Attitudes towards marriage and preconditions for a successful marriage*

Pēdējās desmitgadēs daudzās Eiropas valstīs un arī pasaulē kopumā ir mainījusies attieksme pret tradicionālo, uz laulību balstīto ģimenes modeli – pret laulību kā ģimenes pamatu. Daudz biežāk sastopams neregistrētu vai reģistrētu partnerattiecību ģimenes modelis un kopdzīves-partnerattiecību forma jau kļuvusi par normu (Luijkx et al., 2022). Laulību skaits ES-28 valstīs laikā no 1964. līdz 2014. gadam bija samazinājies uz pusi, savukārt šķirto laulību skaits šajā laika posmā bija dubultojies, pieaugot no 0,8 līdz 1,9 uz 1000 iedzīvotājiem (European Commission. Eurostat, 2018). Laikā no 2009. līdz 2021. gadam ES valstīs atbilstoši par 28,5% ir pieaudzis vienpersonas mājsaimniecību bez bērniem skaits (European Commission. Eurostat, 2022). Šie rādītāji gan dažādās valstīs var būt ļoti atšķirīgi, un tie saistīti ar sabiedrības vērtībām, tai skaitā ar tradicionālajām ģimenes vērtībām un attieksmi pret netradicionālajām ģimenes formām.

Mūsdienu Eiropā vairs tikai neliela daļa ģimeņu atbilst tradicionālajam ģimenes modelim, kurā vīrietis ir ģimenes apgādnieks, sievietes loma ir rūpēties par ģimeni un ģimenē ir vairāki bērni, tomēr, kā atzīmējis L. Halmans (*Halman*) runājot par ģimenes vērtībām, eiropieši ir pārsteidzoši konservatīvi (Halman et al., 2005). Savukārt jaunāko, uz EVS datiem balstīto, publikāciju autori uzsver,

ka katrs piektais eiropietis (vidēji aptuveni 20%) piekrīt apgalvojumam, ka laulība ir novecojis partnerattiecību veids. 2020./21. gada aptauja parāda, ka Latvijas iedzīvotāju uzskati ir līdzīgi – tam, ka ‘laulība ir novecojis partnerattiecību veids’ piekrīt aptuveni piektā daļa (19%) respondentu (2. attēls). Salīdzinot ar vīriešiem, nozīmīgi retāk šādu viedokli atbalsta sievietes (atbilstīgi 13% pret 26%), bet krietni biežāk – gados jaunāki cilvēki (atbilstīgi 28% vecumā līdz 29 gadiem un 13% no 60+ vecuma grupas).



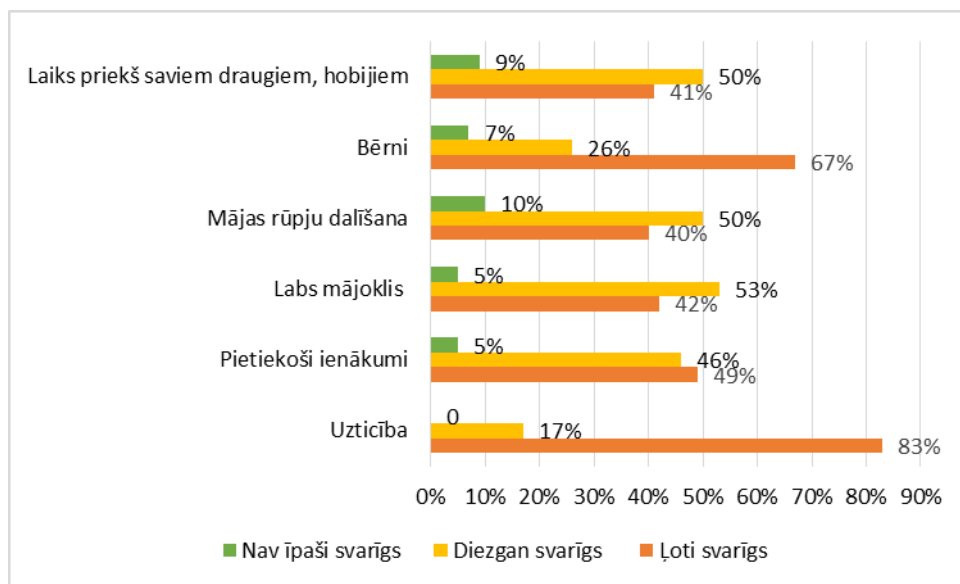
2. attēls. Attieksme pret laulību kā partnerattiecību veidu dažādās iedzīvotāju grupās (%)
 Figure 2 Attitudes towards marriage as a form of partnership in different population groups (%)

Priekšstati par veiksmīgu laulību balstās indivīda vērtībuzskatos par ģimeni. Eiropas Vērtību pētījumā respondentiem tiek piedāvāts izvērtēt piecus veiksmīgas laulības kritērijus: ‘uzticību’, ‘bērnu nozīmību’, ekonomisko situāciju, kas iekļauj ‘pietiekamus ienākumus’ un ‘labu mājokli’, ‘mājas rūpju sadali’ starp partneriem (vīrieša un sievietes lomu mājas pienākumu veikšanā), kā arī privāto ‘laiku katram priekš saviem draugiem, personīgiem hobijiem un aktivitātēm’.

Līdzīgi kā daudzās Eiropas valstīs (Panagiotopoulou et al., 2022) arī Latvijā laulībā visaugstāk tiek vērtēta savstarpējā uzticība – 83% respondentu to uzskata par ļoti svarīgu un vēl 17% – par diezgan svarīgu kritēriju (3. attēls). Vairāk nekā divas trešdaļas (67%) kā ļoti svarīgu ģimenes vērtību un veiksmīgas laulības kritēriju nosauc bērnu esamību, 26% uzskata, ka tas ir diezgan svarīgi. Kopumā kā ļoti svarīgs kritērijs veiksmīgai ģimenes funkcionēšanai ir ekonomiskā nodrošinātība. Pietiekami ienākumi ļoti svarīgi šķiet gandrīz pusei (49%), bet diezgan svarīgi – vēl 46% respondentu, savukārt labs mājoklis 42%

gadījumu tiek vērtēts kā svarīgs, bet vairāk nekā pusei (53%) tas ir ļoti svarīgs nosacījums veiksmīgai laulībai.

Lai gan mūsdienu Eiropā dominē egalitārs ģimenes modelis, kas balstās uz abu partneru vienlīdzību visos ģimenes dzīves jautājumos, mājas pienākumu sadale un personīgais laiks draugiem, hobijiem, lai arī kopumā ir pietiekami nozīmīgi kritēriji, tomēr uz pārējo nosacījumu fona 'ļoti svarīgi' tie ir salīdzinoši mazākai daļai (~40%) respondentu.



3. attēls. *Veiksmīgas laulības vai partnerattiecību priekšnosacījumu vērtējums (%)*
Figure 3 *Evaluation of the preconditions for a successful marriage or partnership (%)*

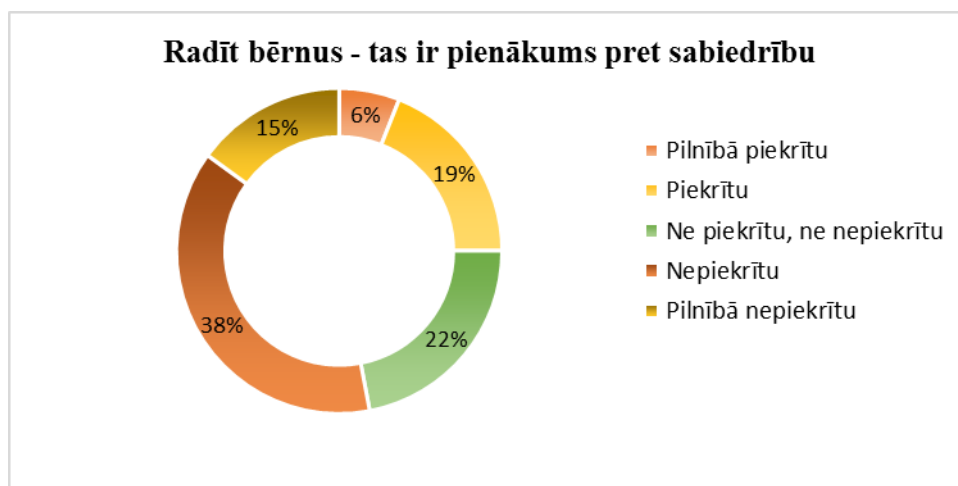
Aplūkojot vērtējumu dažādās respondentu grupās, nozīmīgākās atšķirības kritēriju vērtējumā nosaka dzimums un vērtībattieksme pret laulību, mazāk – vecums. Sievietes nozīmīgi augstāk nekā vīrieši par veiksmīgas laulības priekšnosacījumiem uzskata uzticību, mājas rūpju dalīšanu un bērnus. Jaunieši nedaudz lielāku nozīmi piešķir mājas rūpju dalīšanai, savukārt bērnu nozīme veiksmīgai laulībai pieaug proporcionāli, palielinoties vecumam. Tradicionālo vērtību pārstāvji attieksmē pret laulību (proti, tie kas nepiekrīt uzskatam, ka laulība ir novecojusi partnerattiecību forma) nozīmīgi augstāk vērtē uzticību, mājas rūpju dalīšanu un bērnu nozīmi ģimenē. Bērnu nozīmi ievērojami augstāk vērtē tie, kas ir precējušies vai kuriem ir laulību dzīves pieredze. Citu kritēriju izvērtējumā atšķirības nav būtiskas.

Viedoklis par bērnu radīšanu un audzināšanu *Attitudes towards having and raising children*

Viena no būtiskākajām ģimenes funkcijām ir bērnu radīšana un audzināšana, neatkarīgi no attieksmes pret to. Iepriekšējo EVS posmu dati

liecina, ka šādam apgalvojumam piekrīt aptuveni tikai trešdaļa (35%) Eiropas iedzīvotāju. Mūsdienās bērnu radīšana un faktiskais bērnu skaits ir personiskas un brīvas izvēles jautājums. Tā vairs nav neizbēgamība, ekonomiska nepieciešamība, vecumdienu nodrošinājums vai pienākums pret Dievu, tomēr, neskatoties uz emancipāciju un individualizāciju, lielākā daļa eiropiešu dod priekšroku dzīvesveidu “Precējies-ar-bērniem” dzīves stilam (Halman et al, 2005).

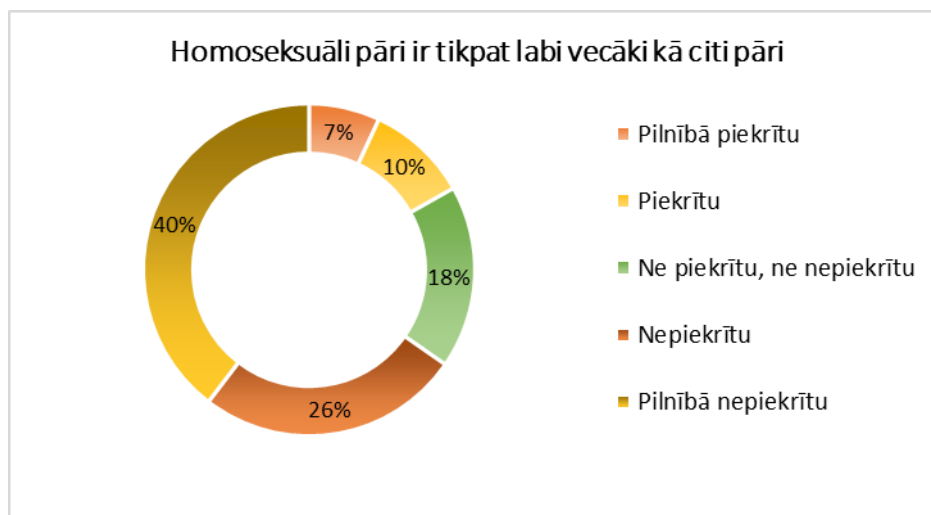
EVS pētījumā respondentiem tiek uzdots jautājums “vai bērnu radīšana ir pienākums pret sabiedrību?”. Kā liecina 2021. gada aptaujas dati, Latvijas sabiedrībā šādam viedoklim piekrīt ceturtdaļa (25%) respondentu, no tiem pilnībā to atbalsta vien 6% respondentu, bet vairāk nekā puse (53%) neuzskata, ka bērnu radīšana būtu pienākums pret sabiedrību (4. attēls). Salīdzinot attieksmi dažādās sociāli demogrāfiskās grupās, visbūtiskāk indivīdu attieksmi ietekmē vecums. Pieaugot vecumam, pieaug to respondentu īpatsvars, kuri piekrīt minētajam viedoklim – ja vecumā līdz 29 gadiem to atbalsta vien 14% respondentu, tad vecumā 60+ pienākumu radīt bērnus kopumā atbalsta 40% respondentu. Pēc dzimuma viedokļi būtiski neatšķiras. Pēc ģimenes statusa pazīmes precētie vai tie, kuriem ir laulību pieredze (piem., atraitņi), biežāk atbalsta šo viedokli, bet pēc izglītības līmeņa – cilvēki ar zemāku izglītības līmeni (nav vidējās izglītības).



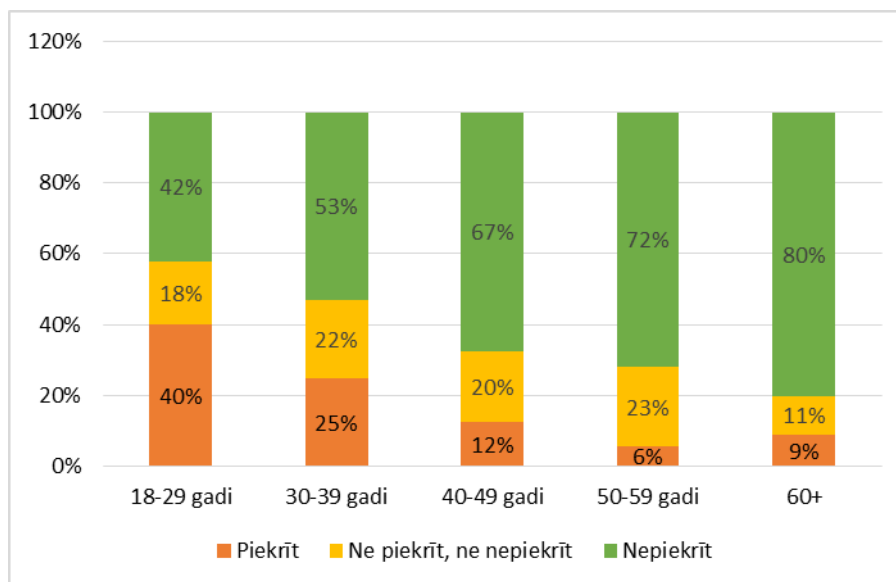
4. attēls. Attieksme pret bērnu radīšanu kā ģimenes pienākumu (%)
 Figure 4 Attitudes towards having children as a family responsibility (%)

Sabiedriskā un politiskā līmenī šobrīd aktuālas ir diskusijas par viendzimuma pāru ģimenēm un bērnu audzināšanu šādās ģimenēs. Par to, ka Latvijā dominē tradicionālās vērtībās balstīta attieksme, liecina arī fakts, ka 66% nepiekrīt viedoklim, ka ‘viendzimuma pāri var būt tikpat labi vecāki kā citi pāri’ (5. attēls). Viedoklim, ka homoseksuāli pāri var pilnvērtīgi audzināt bērnus, piekrīt kopumā 17%, bet gandrīz tikpat lielai daļai nav sava viedokļa. Kā tas bija

sagaidāms, būtiskākā sabiedrības viedokli diferencējošā pazīme ir vecums jeb paaudžu atšķirības. Vistolerantākie šajā jautājumā ir jaunieši vecumā līdz 29 gadiem, no kuriem 40% ir pārliecināti, ka homoseksuāli pāri var būt tikpat labi vecāki kā jebkuri citi pāri. Pieaugot vecumam, proporcionāli pieaug to respondentu daļa, kam ir pretējs viedoklis, un 60+ vecumā jau absolūtais vairākums (80%) nepiekrīt šim viedoklim.



5. attēls. Viedoklis par bērnu audzināšanu netradicionālā ģimenē (%)
Figure 5 Attitudes towards raising children in a non-traditional family (%)

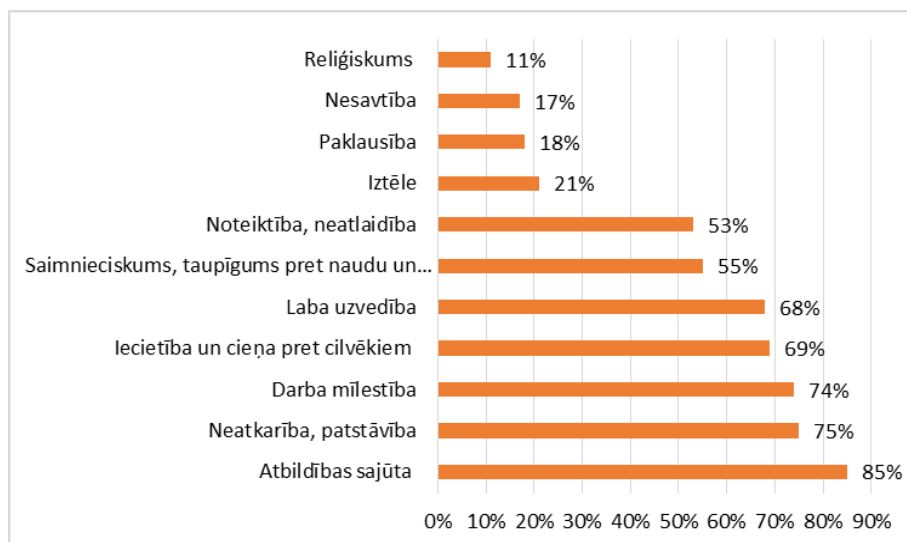


6. attēls. Vecuma ietekme uz viedokli par bērnu audzināšanu netradicionālā ģimenē (%)
Figure 6 The influence of age on attitudes towards raising children in a non-traditional family (%)

Vērtības un īpašības, kuras ģimenē svarīgi attīstīt bērniem *Character traits that are most important for a child to develop within the family*

Lai arī cilvēka vērtībuzskatu veidošanās, uzskatu maiņa ir process, kas risinās visā cilvēka dzīves garumā, tomēr pirmos priekšstatus par pamatvērtībām bērnam sniedz ģimene audzināšanas procesā, tālāk vērtību veidošanās un maiņas process turpinās jau skolā, sabiedrībā. Vērtības, kuras ģimenē tiek nodotas bērniem, un īpašības, kuras vecāki uzskata par nepieciešamām attīstīt, ir tieši atkarīgas no pašu vecāku vērtībuzskatiem. EVS pētījumā tika piedāvāts no 10 vērtībās balstītām īpašībām izvēlēties ne vairāk kā piecas, kuras, pēc respondentu domām, būtu jāattīsta bērniem audzināšanas procesā ģimenē. Atbilžu atspoguļojums liecina, ka Latvijas sabiedrībā vienlīdz augstu tiek vērtētas kā tradicionālās tā arī pašizpaušmes vērtībās balstītās īpašības. Absolūtais vairākums respondentu, kā vienu no svarīgākajām īpašībām, kuras ģimenei būtu jānodod un jāattīsta bērnos, nosauc 'atbildības sajūtu' (85%), 'neatkarību un patstāvību' (75%) un 'darba mīlestību' (74%) (7. attēls). Nākamo īpašību grupu veido 'iecietība un cieņa pret cilvēkiem' un ' laba uzvedība'. Tikai tad seko tādas izdzīvošanas un pašizpaušmes vērtības kā 'saimnieciskums, taupīgums' un 'noteiktība, neatlaidība'.

Ievērojami retāk minētas iztēle un tādas tradicionālās vērtības kā 'paklausība' un 'nesavtība'. Vismazākā nozīme mūsu sabiedrībā tiek piešķirta 'religiskumam'.



7. attēls. *Rakstura iezīmes, kuras vissvarīgāk attīstīt bērnam ģimenē (%)*
Figure 7 *Character traits that are most important for a child to develop within the family (%)*

Lai reducētu sākotnējo mērījumu telpu, kuru veido bērniem attīstāmās rakstura īpašības, tika izmantota faktoranalīzes metode. No 10 pazīmēm jaunajā mainīgajā tika iegūti 4 faktori vai vērtību grupas. Izmantojot kvartiļu rangu pazīmes, kas aprēķinātas, balstoties uz iegūto faktoru vērtībām, aplūkosim, kādas vērtības dominē dažādās iedzīvotāju grupās.

Pirmā faktoru grupa, kuru nosacīti varam dēvēt par tradicionālo vērtību dimensiju, ietver tādas īpašības kā reliģiskums, nesavtība, paklausība un pašizpaušmes īpašība – iztēle. Šo īpašību kopums statistiski biežāk izplatīts respondentu grupā ar salīdzinoši zemu izglītības līmeni nekā to respondentu vidē, kas sevi raksturojuši kā ticīgos. Šīs vērtīborientācijas izplatībā nav būtisku atšķirību pēc citām sociāli demogrāfiskajām pazīmēm.

Otra faktoru kopa iekļauj tradicionālo un izdzīvošanas vērtības dominanci – darba mīlestību un noteiktību, neatlaidību. Šo īpašību grupu par svarīgāku krietni biežāk uzskata sievietes, indivīdi ar vidējo un vidējo profesionālo izglītību, citu tautību pārstāvji (ne latvieši un krievi), vidējās paaudzes (40 – 49 gadi), kā arī vecākās paaudzes (60+) pārstāvji. Īpaši neraksturīgs šis uzskatu kopums ir jaunākās paaudzes pārstāvjiem. Biežāk raksturīgs ticīgiem cilvēkiem.

Trešais faktors – pašizpaušmes īpašības – neatkarība, patstāvība un atbildības sajūta, savukārt tradicionālās vērtības, piem., kā reliģiskums, šajā faktorā iekļautas ar pretēju zīmi. Statistiski nozīmīgā līmenī šī vērtību dimensija dominē tikai cilvēku grupā ar augstāko izglītības līmeni. Nedaudz biežāk izplatīts precēto respondentu un to vidē, kuri uzskata sevi par neticīgajiem.

Ceturtajā īpašību dimensijā dominē tradicionālās un pašizpaušmes vērtības – laba uzvedība, kā arī pašizpaušmes vērtības – iecietība un cieņa pret citiem cilvēkiem, bet ar pretēju zīmi iekļaujas tādas rakstura iezīmes kā saimnieciskums un taupīgums. Šajā grupā ievērojami biežāk pārstāvētas sievietes, indivīdi ar vidējo speciālo un augstāko izglītības līmeni, atbilstoši tautības pazīmei – latvieši, nedaudz biežāk pārstāvēti jaunieši vecumā līdz 29 gadiem un pretēji – 60+ vecuma grupa.

Secinājumi **Conclusions**

Dati liecina, ka, lai arī Eiropā ir ģimenes modeļu daudzveidība un ģimenes jēdziena izpratne paplašinās, Latvijas iedzīvotājos dominē tradicionālā ģimenes uztvere – 80% respondentu uzskata, ka laulību institūcija ir gana mūsdienīga, un atbilstoši tikai 20% uztver laulību kā novecojušu partnerattiecību veidu. Vērtību hierarhijā ģimene joprojām ir svarīgākā vērtība pamatvērtību skalā (tā nozīmīgi biežāk tiek vērtēta kā ļoti svarīga (80%). Kopumā ģimene ir svarīga 99% iedzīvotāju). Tas vedina secināt, ka kultūras vērtību nodošana ģimenē no paaudzes paaudzē joprojām saglabā savu aktualitāti. Sniedzot atbildi uz pirmo pētniecisko jautājumu – “vai pastāv un kādas ir atšķirības dažādu Latvijas

sabiedrības grupu vērtībuzskatos par ģimeni”, datu analīzes rezultāti parāda, ka vērtībuzskatu un attieksmju dažādību visvairāk nosaka indivīda vecums. Jaunieši vecumā līdz 29 gadiem nozīmīgi biežāk nekā pārējie uzskata laulību par novecojušu attiecību formu, bet ir daudz tolerantāki attiecībā pret homoseksuālu pāru potenciem kļūt par labiem vecākiem. Pieaugot vecumam, proporcionāli pieaug tradicionālo uzskatu piekritēju īpatsvars gan attieksmē pret ģimeni, gan ģimenisko vērtību izpratnē, ievērojami biežāk viņi atbalsta laulību institūciju kopumā, bērnu nozīmi laulībā, viedokli, ka bērnu radīšana ir pienākums pret sabiedrību u. tml.

Otrs nozīmīgākais faktors, kas diferencē attieksmes un ģimenisko vērtību izpratni, ir respondentu dzimums – sievietes, ievērojami biežāk nekā vīrieši, uzskati par ģimeni ir balstīti tradicionālās vērtībās. Dažos jautājumos atšķirības vērtībuzskatos ir atkarīgas no respondenta izglītības līmeņa, ģimenes statusa un ģimenes dzīves pieredzes, tautības un ticības.

Ģimenes lomu vērtību pārnesē visspilgtāk raksturo īpašību kopums, kuru vecāki uzskata par svarīgu iemācīt bērnam. Atbildot uz raksta sākumā izvirzīto otro pētniecisko jautājumu “kādas vērtības ģimenē tiek nodotas un audzinātas bērnos”, secināms, ka kopumā dominē pašizpaušme un tradicionālās vērtības – atbildības sajūta, neatkarība, patstāvība un darba mīlestība.

Summary

This paper analyses the place of the family as a value in the overall value system of the individual and identifies the value beliefs that currently prevail within the family itself. Based on Latvian data from the fifth phase of the European Values Survey (EVS) in 2021 (n=1335) the authors seek answers to the questions on differences in views on the value of family among different groups in Latvian society and which values are transferred in the family and passed down to children.

The data show that despite the diversity of family models and the broadening in Europe of an understanding of the family, the traditional perception of the family prevails among the Latvian population – 80% of respondents believe that the institution of marriage is still modern and, correspondingly, only 20% perceive marriage as an outdated form of partnership. In the hierarchy of values, the family is still the most important value in the overall scale of values in the population (99% of cases). The results of the analysis show that the diversity of values and attitudes is mostly determined by the age of the individual, differences in opinion of different generations, gender and family life experience.

Young people under the age of 29 are significantly more likely than others to see marriage as an outdated form of relationship, but are much more tolerant of the potential of homosexual couples to become good parents. As age

increases, the proportion of those who hold traditional views increases proportionally, both in their attitudes to the family and in their understanding of family values; they are significantly more likely to support the institution of marriage in general, the role of children in marriage, the view that having children is a duty to society, etc.

Women's views of family values are significantly more likely to be based on traditional values than those of men. Other characteristics that significantly influence differences in value judgements are the respondent's level of education, marital status and experience of family life, their nationality and religion.

The role of the family in the transmission of values is most clearly characterised by the set of qualities that parents consider important to instil in their children, which is dominated by self-expression and traditional values – a sense of responsibility, independence, autonomy and a love of work. This suggests that the transmission of cultural values in the family from one generation to the next is still relevant.

Literatūra References

- Ballantine, J. H., & Spade, J. Z. (2008). *Schools and Society: A Sociological Approach to Education*. Los Angeles: Pine Forge Press.
- Beck, U. (1992). *Risk Society. Towards a New Modernity*. London, Newbury Park, Calif.: SAGE Publications.
- Bernardes, J. (2002). *Family Studies: An Introduction*. Taylor & Francis.
- Brown, D., & Crace, R. K. (1996). Values in life role choices and outcomes: A conceptual model. *Career Development Quarterly*, 44(3), 211–223.
- Boudon, R. (2017). *The origin of values: Sociology and philosophy of beliefs*. Routledge.
- European Commission. Eurostat. (2018). *Archive: People in the EU - statistics on household and family structures—Statistics Explained*. Retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=%20People_in_the_EU_%E2%80%93_statistics_on_household_and_family_structures&oldid=375234
- European Commission. Eurostat. (2022). Household composition statistics — *Statistics Explained*. Retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Household_composition_statistics
- EVS (2023). About EVS. Retrieved from: <https://europeanvaluesstudy.eu/>
- EVS (2022). European Values Study 2017: Integrated Dataset (EVS 2017). GESIS, Cologne. ZA7500 Data file Version 5.0.0. Retrieved from: <https://doi.org/10.4232/1.13897>
- Halman, L., Luijkx, R., & van Zundert, M. (2005). Family. In *Atlas of European Values*. Brill, Leiden, 24–41.
- Inglehart, R. (2018). *Cultural Evolution. People's Motivations are Changing and Reshaping the World*. Cambridge University Press.
- Mieriņa, I. et al. (2021). *Latvijas sabiedrības vērtības salīdzinošā skatījumā*. Rīga, LU Sociālo zinātņu fakultātes Sociālo un politisko pētījumu institūts, Pieejams:

http://petijumi.mk.gov.lv/sites/default/files/title_file/Eiropas%20vert%20LV_PETIJUMS.pdf

- Knafo, A., & Schwartz, S. H. (2009). Accounting for parent-child value congruence: Theoretical considerations and empirical evidence. In U. Schonpflug (Ed.). *Cultural transmission. Psychological, developmental, social and methodological aspects*. New York: Cambridge University Press, 240-268.
- Latvijas Nacionālais attīstības plāns 2021.–2027. gadam*. Pieejams: <https://likumi.lv/ta/id/315879-par-latvijas-nacionalo-attistibas-planu-20212027-gadam-nap2027>; https://www.pkc.gov.lv/sites/default/files/inline-files/20200204_NAP_2021_2027_gala_redakcija_projekts_.pdf
- Luijkx, R., Reeskens, T., & Sieben, I. (Eds). (2022). *Reflections on European Values*. Open Press TiU.
- Motoi, G. (2017). Values as an object of study for the American and the French sociology. A review of F. Znaniecki's and R. Boudon's perspectives. *Social Sciences and Education Research Review*. Department of Communication, Journalism and Education Sciences, University of Craiova, vol. 4(2), December, 222-231.
- Panagiotopoulou, P., Gari, A., & Emvalotis, A. (2022). Traditional and Post-Materialist Values About Family and Marriage in Greece. In R. Luijkx, T., Reeskens, & I.Sieben (Eds.), *Reflections on European Values*, 448-462. Open Press TiU.
- Parsons, T. (1971). *The System of Modern Societies*. Englewood Cliffs, NJ: Prentice-Hall.
- Smith, V. (2013). *Sociology of work: An Encyclopedia*, Los Angeles: Sage Reference.
- Syrkin, J. & Lesthaeghe, R. (2004). *Value orientations and the Second Demographic Transition (SDT) in Northern, Western, Southern Europe: Un update*. Demographic Research.
- Schneewind, J. B. (1998). *The Invention of Autonomy: A History of Modern Moral Philosophy*, 1st Edition, Cambridge University Press.
- UNESCO Vispārējā deklarācija par kultūras daudzveidību*. Pieejams: https://www.unesco.lv/lv/deklaracijas?utm_source=https%3A%2F%2Fwww.google.com%2F

INCLUSION OF SENIOR CITIZENS IN LIFELONG LEARNING TO REDUCE THE NEGATIVE IMPACT OF POPULATION AGING IN LATVIA SOCIETY

Tatjana Azamatova

Rīga Stradiņš University, Latvia

Abstract. *Today, the age structure of the population of Latvia is close to the average for the European Union, but the share of senior citizens is rapidly increasing. Population aging is one of the most significant trends in demographic processes, which brings changes to all areas of society. This article analyses some risks both for seniors themselves and for society resulting from these trends, and the reasons why Latvia is falling behind in addressing these risks. The primary goal of this article is to summarise and interpret a variety of scientific publications and legal documents from a global perspective, also using methods such as monograph analysis, content analysis, descriptive statistics, and compilations of experiences and best practices. The author of the article put forward arguments in favour of the inclusion of seniors in lifelong education in Latvia, as one of the elements of social policy to reduce the negative effects of population aging. According to the author, it is necessary to promote and develop a fully lifelong learning system for seniors in Latvia.*

Keywords: *lifelong learning, population aging, senior citizens, University of the Third Age.*

Introduction

The age structure of the population of Latvia is close to the average for the European Union, but the share of senior citizens is rapidly increasing. Population aging is one of the most significant trends in demographic processes, which brings changes to all areas of society. This article analyses some risks both for seniors themselves and for society resulting from these trends, and the reasons why Latvia is falling behind in addressing these risks.

The objectives of the study are: to synthesize a wide variety of academic sources, including scientific publications and legal documents; to provide an analysis of the possible risks, both for seniors themselves and for broader society, resulting from population aging; to propose arguments evaluating the inclusion of seniors in lifelong education in Latvia, as one of the elements of social policy for the reduction of the negative effects of population aging.

In data selection procedure was a wide variety of academic sources assembled, with emphasis on those sources that provide critical insight into the topic of population aging, and the inclusion of seniors in lifelong education.

The following methods were used: interpretation and academic synthesis of a variety of expert opinions, monograph analysis, legal document analysis, content analysis, descriptive statistics, compilations of experiences and best practices.

Analysis of current demographics trends

As life expectancy increases and the proportion of senior citizens in the population is growing wider, the aging of Latvian society becomes one of its biggest challenges. According to the data of the Central Statistical Office, at the end of the last century, the share of people aged 65 and over in Latvia did not exceed 15%, but in 2021, approximately 21% of the population of Latvia was over 65 years old. In this respect, Latvia is not an exception, as in the European Union the average proportion of people 65+ in 2021 was around 21% of the total population (EUROSTAT, 2023). In the territory of Latvia, population aging proceeds unevenly, especially affecting certain regions: Latgale and Vidzeme, as well as larger cities (Kučinskis, 2019). In Eastern European and post-Soviet countries, the process of population aging is accelerated by labor migration and other factors (Poutvaara, 2021). Demographic forecasts show that population aging will accelerate in the coming decades, with a rapid increase in the proportion of older people (Krumiņš & Bērziņš, 2019). Today, about a fifth of the population of Latvia is at an age that is usually associated with diseases, economic dependence and social passivity. The aging of society is a long-term and irreversible process that cannot be stopped, but one can try to reduce its negative consequences. This opinion forces us to re-evaluate our understanding of age and may become the basis for changing the paradigm of old age (The World Bank, 2015). In the past years, the stereotype of old age as "empty spending of the last years of life" is outdated in today's view, and a new vision of our retirement years must be created, as an active, diverse, and meaningful stage of life.

The changing paradigm of ageing

As the discussion about population aging develops, different terms for older people are employed. Along with the combination of words "older people", "elderly people" and "senior citizens", "seniors" is often commonly used to correctly and neutrally denote this age stage of life. This article will use these terms interchangeably. Belonging to the senior category is usually determined by the time when, according to the applicable laws, a person can retire. However, this does not mean that from this moment on, a person stops developing and turns into a kind of static personality. What the individual's "third stage of life" will be filled with depends on them (Zaļkalns, 2013). On the

other hand, society's task is to create conditions in which the rights of senior citizens will not be restricted, but their status and the guarantees offered by the state will give them confidence about the future, as well as allow them to participate in the development of the well-being of the entire society.

Population aging as a social process is inextricably linked to our understanding of individual aging. Together with healthy lifestyle recommendations, concepts such as "active aging" and "successful aging" enter the daily circulation. According to the definition of the World Health Organization (WHO), "active aging" is the optimization of the processes of human health, social protection and inclusion in society for its older members (World Health Organization [WHO], 2020; Tomšone, Pranka, & Briška, 2020). The application of this principle gives seniors the opportunity to use their potential in physical, social and spiritual aspects throughout their life, as well as to participate in public life, considering their needs, wishes and opportunities. In practical terms, it is an approach that supports older people's participation in the labour market and community life; balancing it with household care, caring for loved ones, volunteering, hobbies, etc. On the other hand, the concept of "successful aging" is founded in principles of psychology. The basic elements of the concept are the individual's psychological mood and motivation, which promotes inclusion in society by assuming his social role in a different quality (Mendes, 2013). Society and the prevailing attitude in it can create a favourable environment in which everyone is able not only to feel safe, but also to see opportunities for self-realization for their own growth. Riga Stradins University assoc. prof. Dr. med. Signe Tomšone introduces the term "active and healthy old age", which is more in line with the peculiarities of the Latvian language and social environment (Tomšone, Pranka, & Briška, 2020). Understanding and researching the aging of society will also help to develop scientific language in the relevant field.

Specifics of Latvian society

In Latvia, the average pension is about 40 percent of the average salary, so a significant part of the elderly population is at risk of poverty. But even if the size of the pension was decent and corresponded to the real market prices, material well-being is not the only issue that worries seniors. Stories about the low income and unsecured needs of the "poor pensioner" are endlessly repeated in the mass media; they condition the seniors to be constantly dissatisfied with themselves, with those around them, and with their life in general. At the same time, in the eyes of economically active people, the image of the elderly is depicted as constantly begging for something. This leads to the deformation of moral values, because it creates the illusion that their sadness, loneliness, the loss of the meaning of life do not cause suffering. In the authors' opinion, the

social problems that arise with the aging of the population need to be solved not only by redistributing funding and ensuring the availability of medical and social assistance in the long term. It is also important for seniors to be shown the benefits of an active lifestyle: the opportunity to devote time to hobbies, meet interesting people, travel, learn new technologies, etc. It is no less important for people in old age to get new impressions: tastes, smells, movements, emotions. One of the main conditions for the well-being of elderly people is regular social contact. Scientific research results show that seniors are more exposed to risks such as social isolation, loneliness, depression and diseases related to disorders of the nervous system (Centrālā statistikas pārvalde [CSP], 2020). Those who are involved in social activities and maintain a high level of interaction feel better and are more satisfied with their quality of life. Conversely, seniors who lack social contacts are more likely to feel lonely and suffer from social isolation. On average, in the EU-28, about 7% of people over the age of 75 have not had contact with family members or relatives in the last 12 months (in Latvia there were 2%), while about 9% of respondents had no one in the neighborhood with whom they could discuss personal issues or ask for help (In Latvia there were 13%) (CSP, 2020). In fact, today, elderly people are at a higher risk of social isolation, instead of being naturally connected to one common network of social, neighbourly, familial and other relationships.

In Latvian society, negative stereotypes about seniors have been formed in the previous century: they are perceived as boring, useless, socially insignificant; they are in poor health; they are unable to quickly adapt to the new socio-economic situation, unable to learn new technologies, etc. It is often believed that people are unable to work when they reach retirement age, and this belief is the basis for discrimination in employment relations. However, about one fifth of Latvian pensioners continue to work, finding paid positions despite limited availability. For objective reasons, older people have outdated knowledge, conservative habits and ideas, but most of all they lack the skills to independently organize their free time. Many seniors do not have hobbies, they are not used to caring about the diversity of cultural life, so a lot of time is devoted to television, which satisfies their need for information. Some of the older people do not know where to go for help or advice, they are not well versed in legal issues, laws and regulations. In addition, having lived through an era of authoritarianism, when the most sought-after human qualities were diligence and obedience, seniors feel uneasy in front of officials, afraid to defend their interests. Most people over 65 are single or widowed. They are mostly women, whose average life expectancy is much higher than that of men (in Latvia, this difference is 10 years). Losing a spouse and friends, they feel lonely and unneeded. Many face age discrimination - ageism - which manifests itself in negative stereotypes about older people spread in society.

Ageism is discrimination – an unfavorable, different, restrictive, unequal treatment based on a person's age. In 1968, gerontologist Robert N. Butler described the phenomenon of ageism as irrational hostility. Within ageism, older people, unlike the young, are perceived as old-fashioned, weak-minded, rigid, less valuable (Butler, 1969). The laws of the Republic of Latvia declare the principle of equality for all citizens, but in practice, a less favorable attitude towards the elderly is often tolerated. Ageism is sustained by the influence of the mass media of the Western world, which propagates an obsession with youth. As a result, youth is associated with beauty, and many people, especially women, fear aging.

The effects of population aging in a global context

The effects of population aging are evident in many areas of life. As a result of the decrease in the number of people of working age, tax revenues also decrease, and difficulties arise in creating the part of the social budget that is spent on ensuring societal guarantees. This is a serious threat to the quality of life of all age groups. Economic growth is slowing down, the structure of the labour market is changing - there is a shortage of qualified labour (EUROSTAT, 2019). Inevitably, the level of general consumption will be lowered, the amount of personal savings will decrease, which is spent to maintain a full standard of living and the health of family seniors. The increase in the proportion of elderly people in the country leads to more and more expenses related to the provision of medical care, especially in the long term. More social care centres and nursing homes will soon be needed to accommodate lonely, elderly people who are unable to care for themselves. An expansion of inpatient gerontology centres, day centres and home care services are likely to occur soon. The political consequences of the aging process are also significant if we consider the experience of already "aged" countries - for example, Japan, which can currently be called a democratic gerontocracy. Japanese politicians are directly dependent on the most powerful social group – seniors (Coulmas, 2007). Seniors are extremely influential, as the older generations traditionally participate more actively in elections than the young. Many political and economic decisions are made with their interests in mind.

At first, demographic aging, social isolation and similar social processes were primarily perceived in relation to the economic costs of solving these problems. But in recent years, the peculiarities of social processes in Europe are increasingly viewed as opportunities for innovation, as new and prospective market niches (European Commission, 2013). A new market segment dubbed the "silver economy" is emerging, in which goods (special mobile phone models, technical aids) and services (tourist trips, training courses) are developed, tested and manufactured according to the needs of the elderly. The

main task of these innovations is to technically provide people with limited opportunities a full life at home, reducing the burden on the social care and health protection system, as well as enhancing the quality of life of senior citizens. However, technological innovation is not effective if it is not embedded in a wider context of social change.

Population aging issues have been recognized by many international organisations. Questions related to the aging of society were brought up in the following international conferences: in Bucharest in 1974, Mexico City in 1984 and Cairo in 1994. The United Nations has increasingly focused on aging issues since 2002, when the Madrid International Plan of Action on Aging was adopted. This assembly approved a strategy for addressing the problem of population aging and related social, cultural, economic and demographic issues in the 21st century (Madrid International Plan of Action on Ageing, 2002). In the European Union, the year 2012 was named the "European Year for Active Aging and Solidarity between Generations" (Wittich, 2011). And lastly in 2016, the World Health Organization approved the document "Global Strategy and Action Plan on Aging and Health (2016-2020)", which is mandatory for related policies in all UN countries. Each country should create a "healthy ageing" strategy, formulate an evidence-based social policy and action plan. The WHO strategy defines the main priorities in the development of the social policy of the member states (WHO, 2016). The strategy includes lifelong learning - provision of non-formal education opportunities for the elderly (Rudnicka et al., 2020). One of the goals announced in the strategy is to create a "friendly" environment for the seniors and favourable conditions that would help realize their potential, maintaining a longer independent and healthier life.

Lifelong learning as an element of social policy

One of the common practices to reduce the negative effects of population aging is lifelong learning for senior citizens. Today, education is not only associated with one specific early stage of life, but rather has become a dynamic process throughout life. Due to demographic changes, the number of students is decreasing, which is causing changes in the structure of education. Concurrently, demand for education services is increasing in older people. The myth that a person is unable to learn new knowledge and skills as they age has been completely refuted, and there has long been talk of implementing a truly lifelong educational model. More than 6% of EU-28 residents aged 55 to 64 and 3% aged 65 to 74 participated in formal and informal training in 2018 (EUROSTAT, 2019). The highest level of participation of elderly people in lifelong learning is in the Nordic countries - Finland, Sweden and Denmark. There are significant differences between adult education and education for older people, primarily in goals and motivation. In adult education, there is a

need for more professional training programs aimed at improving the skills of students. Seniors are offered more playful and simpler methods that are appropriate for their ability to perceive new information (Lacob, Lisa, & Pocinho, 2019). Education for seniors is both a kind of mental gymnastics that prevents the weakening of cognitive abilities, and secondarily a tool for acquiring new knowledge or verifying old ones. In some rare cases, participation in lifelong learning programs is combined with the desire to continue a working career.

University of the Third Age

For most seniors, special educational institutions have appeared under the common name of the University of the Third Age or U3A, which emerged with somewhat different goals. As a result of development for almost 50 years, two completely different models have appeared: "French" and "English".

In France, at the University of Toulouse in 1973, Pierre Vellas created the first training course for people of retirement age (The First University of the Third Age). It included not only lectures, but also the development of special curricula for seniors, which were then used in other countries as well. Pierre Vellas defined three main tasks of the University of the Third Age: 1) intellectual (professors and lecturers) and administrative (rooms, libraries, staff) resources of the university should be used in senior education; 2) the university should conduct gerontology research in the interests of science, the state and the seniors themselves; 3) the university should promote communication and cultural exchanges between generations (Escuder-Mollon, 2014). A characteristic feature of the "French" model is the combination of high-level didactic and research activities, using various organizational forms. Most U3As in France are formally (as a university course) or informally (as a centre for lifelong learning) connected to one of the universities. Their activities are financed by a combination of state subsidies, sponsor funds and the participants' own fees. Considering the wishes of the participants, U3A students are offered a wide selection of courses. Usually, the curriculum for seniors includes courses such as computer training, legal and financial skills, the basics of healthy eating, English or another foreign language at a conversational level, dancing, choir singing, handicrafts and others (Lassnigg, 2020). According to the "French" model, life learning courses for senior citizens were established in Belgium, Switzerland, Germany, Italy, the Netherlands, etc. (Selecky, 2017). Later, similar universities for seniors were organized in some Central and Eastern European countries: Poland, Czech Republic, Slovenia.

The "English" U3A model is based on other idea. As early as 1983, community-type associations based on self-organization and mutual assistance were established in Great Britain (Beckett, 2009). Seniors organize learning

activities themselves, using their own and their colleagues' knowledge and experience, giving lectures voluntarily. This model has characteristics such as equality of participants and cooperation. Learning centres provide funding independently by collecting tuition from members. The program is created considering the interests of the participants, and information is often provided via the Internet. The "English" U3A model is distributed in Ireland, Australia, New Zealand, Cyprus, South Africa, Malta and elsewhere. Other models are also known in international practice, for example the so-called "People's schools" have long existed in Denmark, which are based on the ideas of N.F.S. Grundvig, and are characterized by mutual learning of participants without formal knowledge tests, while in Finland a "hybrid" model is being developed - U3A tends to draw on university resources, but seniors' groups are essentially voluntary community-based associations.

One of the most positive examples in the Eastern European region is Poland, where the first training course for older people was created at the post-graduate education centre of the Medical University of Warsaw in 1975, then mainly in large cities (Poznan, Krakow), but now they also operate in cultural centres and libraries of small municipalities. Currently, there are about 600 such universities in Poland, whose classes are attended by more than 200 thousand people. Based on the vast amount of information about the activity of U3A in Poland, there is a proposal among scientists to categorize it as a unique model (Kobylarek, 2019).

In the Baltic region, the most active development of U3A can be observed in Lithuania. In 2018, there were 67 such institutions in various cities of Lithuania, some of them worked in cooperation with existing universities, that is, they worked according to the "French" model: Kaunas College, University of Kaunas, University of Klaipeda, Lithuanian University of Sports, Panevezys College and Rokiški branch of Panevezys College (Kalvaitis, 2018). Other U3As often use the material base of schools, public libraries, museums or municipalities - premises, equipment, etc. Most of the U3As in Lithuania collect tuition from their members and seek funds from other sources to ensure their activities, municipalities also financially support about one third of them.

University of the Third Age is a widely developed international movement that uses diverse forms of organization of their work. In general, the goals and programs of U3A are similar: involvement of seniors in social life, strengthening of health, prevention of social isolation and loneliness. Despite the differences in U3A models, seniors actively use the opportunity to learn, acquire useful skills and competences, and do not stop in their development. In many cases, the most important result can be simply a systematic load on the brain with the aim of preventing or at least delaying neurodegenerative diseases (Alzheimer's, Parkinson's, etc.). Several scientific studies have shown that going to university at an older age improves the quality of life: improves physical and mental

health, reduces the risk of isolation, reduces drug use and increases social integration (Jacob et al., 2019). As the education level of the elderly increases, their opportunities to use electronic forms of state and banking services increase, active participation in voluntary work is observed, and other positive changes are taking place, which have wide social consequences.

The first steps towards lifelong learning for seniors in Latvia

In Latvia, seniors are not yet included in the lifelong education system, although the first training courses exist in various cities. As an analogue of U3A, the "School for Seniors" was established in Krāslava in 2015, and by 2022, a similar institution opened its doors in a few more places - Kuldīga, Aglona, Sigulda and Ikšķile. There, seniors receive modern knowledge in various fields, and find out what their lifestyle should be like in order to stay energetic longer and keep a clear mind (Azamatova, 2021). Most older people attend these courses and educational programs mainly for the pleasure of learning and to interact with other students, not to obtain a certificate or diploma. At the same time, there is also the passivity of senior citizens and the prejudiced attitude of the population of Latvia towards the acquisition of education for the elderly.

The good experience and good successful solutions accumulated in foreign countries can serve as an example for the development of lifelong learning methods for seniors in Latvia. The experience of such training centres shows that an active lifestyle in old age allows them to feel like they belong to a group of like-minded people, which helps to distract them from bad feelings, sad thoughts, and anxiety. By engaging in regular and interesting activities, people are less exposed to the risk of depression, get sick less often and seek medical help less often, better navigate social processes, and feel more satisfied with life. By researching and gathering foreign experience and good practice examples, it is possible to consider the peculiarities of each U3A model.

Conclusions

To address the challenges of population aging, modern societies are trying to change the paradigm of peoples' 'third age', transforming it into an active lifestyle not only in public image, but also in content. The concept of "healthy aging", embodied in the social policy programs of nation states, implemented in the light of policy documents of international organizations, will become a model of behaviour for many older people.

Although the aging process of the society is accelerating, Latvian society is still starting to get used to the new demographic situation and develop adaptation measures. It is necessary to develop a positive attitude of all age groups towards the inevitable changes.

The inclusion of seniors in lifelong education in Latvia is one of the necessary elements of state social policy to reduce the negative effects of population aging. Modern Latvian society must make serious changes - overcome prejudices and use the experience of other European countries in organizing education for seniors (University of the Third Age or its analogue), in order to reduce the impact of population aging.

List of References

- Azamatova, T. (2021). Nenoveco, Latvija! Kā samazināt sabiedrības novecošanās negatīvo ietekmi. *Ir. Pieejams: <https://ir.lv/2021/03/11/nenoveco-latvija-ka-samazinat-sabiedribas-novecosanas-negativo-ietekmi/>*
- Beckett, F. (2009). *The U3A story*. Bromley: Third Age Trust
- Butler, R. N. (1969). Age-ism: Another form of bigotry. *The Gerontologist*, 9(4). Retrieved from: <http://agisme.eu/wp-content/uploads/2018/02/Butler-Ageism.pdf>
- Centrālā statistikas pārvalde (CSP). (2020). *Nabadzības risks un sociālā atstumtība Latvijā. 2019.gada*. Pieejams: <https://stat.gov.lv/lv/statistikas-temas/iedzivotaji/monetara-nabadziba-nevienlidziba-un-sociala-atstumtiba-14>
- Coulmas, F. (2007). *Population Decline and Ageing in Japan – The Social Consequences*. London: Routledge-Taylor and Francis Group. DOI: <https://doi.org/10.4324/9780203962022>
- Escuder-Mollon, P., & Cabedo, S. (Ed.) (2014). *Education and quality of life of senior citizens*. Helsinki: University of Helsinki DOI: <http://dx.doi.org/10.6035/EducationQuality.2014>
- European Commission. (2013). *Guide to social innovation*. Publications Office. Retrieved from: <https://data.europa.eu/doi/10.2776/72046>
- EUROSTAT. (2019). *Ageing Europe. Looking at the Lives of Older People in the EU*. Retrieved from: <https://ec.europa.eu/eurostat/web/products-statistical-books/-/KS-02-19-681>
- EUROSTAT. (2023). *Ageing Europe - statistics on population developments*. Retrieved from: https://ec.europa.eu/eurostat/statistics-explained/index.php?title=Ageing_Europe_-_statistics_on_population_developments
- Jacob, L., Lisa, V., & Pocinho, R. (2019). The senior universities students in Portugal and Brazil. *Geopolitical, Social Security and Freedom Journal*, 2(1), 11-20. DOI: <https://doi.org/10.2478/gssfj-2019-0002>
- Kalvaitis, A. (2018) *Universities of the third age in Lithuania. Situation of 2018*. Retrieved from: https://epale.ec.europa.eu/sites/default/files/00033_treciojo-amziaus-universitetai-lietuvoje_-2018-m_-situacija.pdf
- Kobylarek, A., & Błaszczński, K. (2020). East European U3As facing the problem of seniors' needs. *Revista Lusófona de Educação*, 49(4), 27-40. DOI: 10.24140/issn.1645-7250.rle49.02
- Kobylarek, A. (2019). The University of the Third Age in Poland. A democratic and holistic approach to the education of the elderly. *E-mentor*, 5(77), 60-66. DOI: <https://doi.org/10.15219/em77.1390>
- Krumiņš, J., & Bērziņš, A. (2019). Demogrāfiskās attīstības vērtējumi un prognozes. *Tautas ataudze Latvija un sabiedrības atjaunošanas izaicinājumi*. LU Akadēmiskais apgāds, 273-285. DOI: <https://doi.org/10.22364/talsai>

- Kučinskis, M. (2019). *Informatīvais ziņojums par priekšlikumu par Nacionālā attīstības plāna 2021.-2027. gadam mērķiem, prioritātēm un rīcības virzieniem, kā arī tā turpmāko izstrādes un sabiedriskās apspriešanas procesu*. Pieejams: https://www.pkc.gov.lv/modules/nap/modules/nap_aside_navigation/assets/NAP2027_kodols_piedavajums.pdf
- Lassnigg, L. (2020). *The Austrian Lifelong Learning Strategy – a case of contradictory national responses to European policy proposals*. DOI: 10.13140/RG.2.2.17765.63209
- Madrid International Plan of Action on Ageing. Report of the Second World Assembly on Ageing. (2002). Retrieved from: <https://www.un.org/development/desa/ageing/madrid-plan-of-action-and-its-implementation/second-world-assembly-on-ageing-2002.html>
- Mendes, F. (2013). *Active ageing: A right or a duty?* DOI: 10.5172/hesr.2013.22.2.174
- Poutvaara, P. (2021). Population Aging and Migration. *IZA Discussion Papers*, 14389, Institute of Labor Economics. Retrieved from: <https://docs.iza.org/dp14389.pdf>
- Rudnicka, E., Napierała, P., Podfigurna, A., Męczekalski, B., Smolarczyk, R., & Grymowicz, M. (2020). The World Health Organization (WHO) approach to healthy ageing. *Maturitas*, 139, 6-11. DOI: <https://doi.org/10.1016/j.maturitas.2020.05.018>
- Selecky, E. (2017). *Universities of the Third Age in Europe - best practice*. Retrieved from: https://www.academia.edu/35297291/UNIVERSITIES_OF_THE_THIRD_AGE_IN_EUROPE_BEST_PRACTICE
- The First University of the Third Age. Pierre Vellas. (n.y.). Retrieved from: <https://www.worldu3a.org/worldpapers/vellas-uk.htm>
- The World Bank. (2015). *Aging with growth in Central Europe and the Baltics: what's next for old Europe?* Retrieved from: <http://documents.worldbank.org/curated/en/559001468000582442/Aging-with-growth-in-Central-Europe-and-the-Baltics-what-s-next-for-old-Europe>
- Tomson, S., Pranka, M., & Briška, I. (2020). *Latvijas iedzīvotāju virs darbības vecuma veselību ietekmējošo paradumu un funkcionālo spēju pētījums*. Veselības ministrija. Pieejams: <https://www.esparveselibu.lv/petijums/latvijas-iedzivotaju-virs-darbspejas-vecuma-veselibu-ietekmesiosie-paradumi>
- World Health Organization (WHO). (2016). *The global strategy and action plan on ageing and health 2016–2020*.
- World Health Organization (WHO). (2020). *Healthy ageing and functional ability*.
- Wittich, V. G. (2022). *Madrid International Plan of Action on Ageing (MIPAA) +10 years*. Retrieved from: https://afics.unog.ch/UNECE_Day%20of%20OP_2011-09-30%20_final.pdf
- Zaļkalns, J. (2012). Neļaut prātam novecot. *Ilustrētā Zinātne*. Piel. "Ilgs Mūžs", (rudens), 9-14.

**MĀKSLA UN DIZAINS, DIZAINA
IZGLĪTĪBA**

Art and Design, Design Education

AGRĀRĀ REFORMA UN IZMAIŅAS LATGALES LAUKU KULTŪRAINĀVĀ 20. GADSIMTA 20. UN 30. GADOS

Agrarian Reform and Changes in the Cultural Heritage Landscape of Rural Latgale in 1920s and 1930s

Vladislavs Malahovskis

Rezekne Academy of Technologies, Latvia
Latgale Culture and History Museum, Latvia

***Abstract.** In the 20th century, Latvia underwent several rapid rearrangements of social and economic system. One of them were the Latvian Agrarian Reform (1920–1937) due to the implementation of which also the Latgalian rural cultural heritage landscape changed. In Latgale, there were established farmsteads instead of compactly inhabited locations (villages, in Latvian – sādžas). The rural landscape of Latgale became similar to rural landscape in other regions of Latvia. The aim of the article is, studying the economic and social aspects of life in Latgalian villages, to find out the outcomes of dividing villages into farmsteads during the Latvian Agrarian Reform, their influence on changes in the Latgalian rural cultural heritage landscape.*

***Keywords:** agrarian reform, farmstead, landscape, Latgale, village.*

Ievads

Introduction

Kultūrainava veidojas ilgākā laika posmā, tās veidošanos ietekmē gan dabas apstākļi, gan dažādi sabiedrībā notiekošie procesi. Attiecības starp cilvēku un ainavu, kurā viņš dzīvo, ir savstarpējā mijiedarbībā. Šo mijiedarbību raksturo divi līmeņi: 1) uztveres sfēra (ainava kā garīgā (mentālā) konstruētā vienība); 2) darbības sfēra, kas apraksta kā ainava un cilvēki (sabiedrība) mijiedarbojas caur dažādām aktivitātēm / darbībām, ko izraisa zemes apsaimniekošana, plānošana u. c. Tas sekmē saikni starp cilvēku un apkārtējo ainavu (Dosshe, Rogge, & Eetvelde, 2016). Līdz ar to ainava bieži tiek saistīta ar tās dzīvotspēju (Adams, 2018).

Cilvēka darbības atstātās pēdas dažādos laikos ir attiecīgā laika sabiedrības radītie produkti un *nospiedumi* kultūrainavā. Šie *nospiedumi* konkrētā laikā un vietā ir radušies noteiktu sociālekonomisku apstākļu ietekmē, tie atspoguļo konkrētā laika domas un idejas, kā arī iespējas (Stūre, 2004). Politiskās un sociālekonomiskās pārmaiņas rada arī pārkārtojumus ainavā – mainās ainavas

uzbūve, vizuālais modelis un telpiskais apveids (Melluma, 1994). Latvijā 20. gadsimtā ir notikuši vairāki strauji sociālekonomiskās sistēmas pārkārtojumi. Viens no tiem bija Latvijas agrārā reforma (1920–1937). Reforma paredzēja zemes īpašumu sistēmas pārveidošanu – muižu zemju, ēku, inventāra, lopu konfiskāciju un zemes, ko ieskaitīja Valsts zemes fondā sadalīšanu bezzemniekiem un sīkzemniekiem jaunsaimniecību ierīkošanai. Īstenojot agrāro reformu Latgalē, vienlaikus jaunsaimniecību ierīkošanai uz bijušajām muižu zemēm, reformas galvenais uzdevums te bija likvidēt sādžu šņoru (biržu) saimniekošanas veidu, sadalot sādžas viensētu saimniecībās. Latgalē bija maz bezzemnieku, jo absolūto vairākumu no zemes pieprasītājiem veidoja sādžu sīkzemnieki ar 2–10 hektāriem zemes (Latvijas agrārā reforma, 1930).

Pētījuma aktualitāti noteica divi faktori: 1) sādža kā Latgales lauku dzīves pamatelements ir izzudis, tāpēc ir svarīgi saglabāt sociālajā atmiņā sādžu dzīves reālijas un pieredzi. Turklāt atsevišķi sādžu dzīves *nospiedumi* ir pamanāmi arī mūsdienās. Latgalē ir saglabājušies skrajciemi (izklaidus esošu vairāku viensētu kopa). Latgalē nav iesakņojušies arī oficiāli piešķirtie māju (viensētu) nosaukumi. Nereti, sevišķi vecāka gadagājuma cilvēki, sevi joprojām mēdz identificēt kā bijušās sādžas (ciema) iedzīvotāju; 2) Latvijā 20. gadsimtā ir īstenotas arī citas agrārās reformas, kuras arī būtiski izmainīja lauku kultūrainavu. Piemēram, padomju okupācijas režīma īstenotā kolektivizācija u. c.

Raksta mērķis ir, izpētot Latgales sādžu dzīves saimnieciskos un sociālos aspektus, noskaidrot Latvijas agrārās reformas ietvaros veikto sādžu dalīšanas viensētās rezultātus, to ietekmi uz izmaiņām Latgales lauku kultūrainavā.

Pētījumā tika izmantota vēsturiski ģenētiskā metode, lai raksturotu sādžu izcelsmes, attīstības un norieta faktorus. Lai noteiktu atšķirīgās iezīmes Latgales lauku kultūrainavā pēc sādžu sadalīšanas viensētās, izmantota salīdzinošā metode. Kā vēstures avoti rakstā ir izmantoti Latvijas Nacionālā arhīva dokumenti un latgaliešu autoru darbi. Latgaliešu dokumentālajā prozā sādžu dzīve un sādžu sadalīšana viensētās ir atspoguļota daudzveidīgi un spilgti, jo vairākumam no autoriem tās bija piedzīvotās bērnības atmiņas, kā arī dzirdētais dažādos stāstījumos vēl no tiešajiem sādžu dzīves lieciniekiem.

Sādžu izcelšanās *Origination of villages*

Latgale bija vienīgais novads Latvijā, kur kopš 17. gadsimta līdz 20. gadsimta 30. gadu beigām dominēja atšķirīgs no pārējās Latvijas zemnieku apmetnes veids – sādža. Pārējā Latvijas teritorijā dominēja viensētas. Sādžas vairākas zemnieku ģimenes dzīvoja vienkopus. Sādžu lielums bija dažāds – no dažām saimēm līdz vairākiem desmitiem. Vārds *sādža* ir aizguvums no lietuviešu *sōdžius* ‘ciems, sādža’ (Karulis, 1992). Latgalē *sādžai* bija arī citi

apzīmējumi – ciems un sala (sola).

Sādžu izcelšanās pamatā galvenokārt dominēja saimnieciskie faktori (nodevu ievākšana, kļaušu atstrādāšana, zemnieku kopatbildība), kas palīdzēja muižniekiem un valstij pārvaldīt zemniekus. Sādžas nereti veidojās no vienas dzimtas pārstāvjiem. Laika gaitā palielinājās sādžu iedzīvotāju skaits, bet precību rezultātā arī sastāvs. Latgalē sādžas veidojās gan Polijas-Lietuvas valsts un cariskās Krievijas lauku saimnieciskās politikas rezultātā, gan arī (nomaļās vietās) kāda cilvēka vai vairāku cilvēku darbības rezultātā. Literāts Dekters (*Donats Mūrnieks*; 1901–1963) par dzimto bijušā Ludzas apriņķa Ciblas pagasta Dorvas (Dekteru) sādžas izcelsmi raksta: “Agrākos laikos šeit auguši lieli meži. Ieradās kāds pārdrošnieks, uzcēlis pirtiņu un no priežu celmiem tecinājis darvu. Viņam izauguši pieci dēli [...] No šiem pieciem vīriem izveidojās tagadējais Dorvas ciems ar 118 dvēselēm” (Dekters, 1970, p. 8). Šādu sādžu izcelsmi pēc Latgales apceļojuma 19. gadsimta 80. gados apstiprina arī latviešu etnogrāfijas pētnieks Augusts Bīlenšteins (*Bielenstein*; 1826–1907): “Latviešu ciemi senatnē bijuši mazāki un viens otrs no tagadējiem ciemiem sākumā tiešām bijis viensēta” (Bīlenšteins 2001, p. 406). Atsevišķi arhīva dokumenti liecina par ko līdzīgu. Piemēram, Ludzas apkaimes Buzdu sādžā dzīvojošās četras saimes bija brāļu Franča, Jāņa un Staņislava Rancānu pēcnācēji (LNA LVVA, 43.f., 1.apr., 203.1.).

Sādžu plānojums *Village planning*

Sādžu plānojums bija atkarīgs no reljefa un pastāvošajiem satiksmes ceļiem. Parasti sādžām bija raksturīgs triju veidu plānojums: 1) ar sētām, kurās ēkas atradās ceļa (ielas) vienā pusē, bet otrā pusē bija izvietoti dārzi un atsevišķas saimniecībā mazāk nozīmīgas ēkas (senākais sādžu plānojuma variants); 2) ar sētām, kas atradās citai pret citu abās ielas pusēs (jaunākais sādžu plānojuma veids, kas bija radies sādžu iedzīvotāju pieauguma rezultātā); 3) ar sētām, kas attiecībā cita pret citu bija izvietotas pēc šaha galdiņa principa. Savukārt paugurainās vietās atsevišķas sētas bija izvietotas bez jebkāda ģeometriskā plānojuma, atbilstoši apvidus reljefam – izklaidu sādžas. Latgaliešu literāts Meikuls Apeļs (1901–1942) šādi apraksta Sondoru izklaidus tipa sādžu Rēzeknes apriņķī: „Puskilometru attālumā no ezera, uz diviem paprāviem pakalniņiem un spraugā starp tiem, izkaisītas Sondoru sādžas mājiņas un citi saimniecības šķūņi. No pakalniem uz leju, ezerā iedurdamās, stiepās garas un šauras sondoriešu tīruma šņoru strēmeles. Dažas šņores bija drusku platākas, bet dažas smieklīgi šauriņas [...] Sādžā ir vairāki desmiti māju. Kāds pāris māju ir jaunas, nesen būvētas, ar diezgan palieliem logiem, ar koka rotājumiem virs tiem. Vienai no mājām pat sienas apšūtas ar dēļiem un izkrāsotas zaļā krāsā [...] Pārējās mājas ir vecas, ar apsūnojušiem, novecojušiem jumtiem.[...] Daudzas

mājas atradās zem viena jumta ar kūti” (Apeļs, 1932, p. 65).

Visas saimniecības ēkas sādžā atradās atsevišķi no lauku zemes. Vienam saimniekam parasti piederēja pastāvīga mājas vieta, uz kuras tika celtas ēkas, iekopts augļu un sakņu dārzs pastāvīgai lietošanai, aramzeme – izkaisīta pa visiem sādžas tūrumiem šņoru veidā, pļavas – lietojamas šņoru veidā, ganības – visiem saimniekiem kopīgas.



1. attēls. *Rindu sādžas plānojums* (Bērziņš, 1958)
Figure 1 Planning of terraced house village (Bērziņš, 1958)

Saimnieciskā un sociālā dzīve *Economic and social life*

Sādžām bija raksturīgas tā sauktās šņoru zemes. Šņoru zemes izveidojās, jo Latgalē pastāvēja tradīcija sadalīt saimniecības zemi visu pieaugušo saimnieka dēlu starpā. Zemi parasti dalīja gareniski. Mainoties paaudzēm un pieaugot iedzīvotāju skaitam (Latgalē ģimenē vidēji bija 8–12 cilvēki), zemes daudzums sādžās nepārtraukti samazinājās. Tādā veidā izveidojās 2–3 hektārus lielas saimniecības ar 2–3 metriem platām, 100 un vairāk metriem garām šņoru zemēm. Piemēram, Rēzeknes apriņķa Ozolmuižas pagasta Bekšu sādžā 1863. gadā bija 16 saimniecības, bet 1921. gadā – jau 49, kuru zeme bija sadalīta 4876 šņorēs (Terentjeva, 1973). Vienas saimniecības šņorēs sadalītā zeme parasti bija izkaisīta pa visu sādžu. Nereti tā sastāvēja no 50 līdz 80 šņorēm, bet atsevišķos gadījumos šņoru skaits pārsniedza pat 160. Šņorēs atradās apmēram $\frac{3}{4}$ Latgales sādžu zemes (Mednis, 1924).

Šaurās šņores varēja apart tikai gareniski. Turklāt bija jāuzmanās, lai neaizskartu ežu vai cita saimnieka šņori. Mēslojumu taupības nolūkos lika šņores vidū. Tādējādi šņores vidū labība pārauga un sakrita veldrē, bet šņores malās tā tikko uzdīga (Grišāns, 1968). Šņores bija ne tikai sarežģīti apstrādāt, bet pat iegaumēt, to atrašanās vietu, jo tās atradās dažādās sādžas malās, dažkārt pat vairāku kilometru attālumā. Šāda saimniekošanas sistēma bija galvenais trūkuma cēlonis.

Teorētiski jebkurš sādžas saimnieks varēja savā lietošanā esošo zemi

izmantojot pēc saviem ieskatiem – izmantot kā aramzemi, ganības, ierīkot augļu dārzu u.tml. Ierobežojumi tikai bija uz būvniecību ārpus noteiktā sādžas ēku vietu gabala, jo tam bija vajadzīga sādžas sabiedrības piekrišana. Tomēr praksē šī saimniekošanas brīvība nepastāvēja un arī nevarēja pastāvēt, jo šņoru zemju sistēma noteica gan kopīgus visai sādžai zemes apstrādāšanas laikus, gan apsaimniekošanas veidus un metodes. Tādējādi viens no galvenajiem sādžu saimniekošanas sistēmas principiem bija atsevišķu tās locekļu saimnieciskās darbības saskaņošana, mazākuma pakļaušanās vairākumam. No vienas puses, sādžā valdīja kolektīvisma un savstarpējās izpalīdzības principi, bet no otras puses visa saimnieciskā dzīve bija pakļauta sādžas diktātam, ko noteica šņoru zemju sistēma. Sējas, ražas novākšanas un pļaujas darbiem visā sādžā bija jānotiek vienlaicīgi, lai nekaitētu kaimiņa laukam. Nereti labību tīrumos stiprākās ģimenes no savām šņorēm rudenos novāca pirmās un vājākajām ģimenēm vajadzēja strādāt pat naktīs, jo nenoplautās šņores bieži vien tika nobradātas (Briška, 1969). Jo sādža bija lielāka, jo saimnieciskā atkarība no kaimiņiem arī bija lielāka.

Sādžā bija daudz kopēju lietu. Novadpētnieks Bonifācijs Briška (1902–1994) ir aprakstījis dzīvi dzimtajā Kozu solas sādžā Varakļānu pagastā tikai ar četrām sētām un 26 iedzīvotājiem. Sādžiniekiem esot bijusi kopējā pirts, aka, sile lopu dzirdināšanai, kā arī kopējs bullis, kuru katram saimniekam noteiktā secībā vajadzēja uzturēt divus gadus pēc kārtas (Briška, 1969). Sādžai parasti bija arī sava kopēja kalte, dzirnavas, ganības, dažkārt arī kūtis. Ceļi, kas gāja caur sādžu, arī bija kopējais sādžas īpašums. Kopējās lietas tika uzturētas kārtībā kopējiem spēkiem, savstarpēji vienojoties. Kopīgās sādžas pļavas un ganības ik gadus pārdalīja. Tas bija sarežģīts un laikietilpīgs process. Nereti siena pļāvēji vairāk laika patērēja pie pļavu uzmērīšanas un strīdiem, nekā pie pašas pļaušanas. Tāpēc pļavu uzmērīšanas darbs tika veikts ļoti skrupulozi (Dekters, 1970).

Sādžu konservatīvā vide nospieda atsevišķu uzņēmīgāko saimnieku privāto iniciatīvu. Jebkura saimniekošanas jauninājuma pastāvēšana bija lielā mērā atkarīga no pārējo sādžinieku attieksmes, kas parasti bija noraidoša. Minētie apstākļi ne tikai apgrūtināja zemes racionālu izmantošanu sādžās, bet to darīja pat neiespējamu. Arī uzņēmīgāko un turīgāko sādžas saimnieku vēlmi izdalīties no sādžas viensētā parasti nepieļāva pārējie sādžinieki. Latgales vēsturnieks Tadeušs Puisāns (1922–2006) sādžu raksturo kā etnisku un kulturālu kopu, kas rūpējās par sevi un sargāja sevi no jaunām idejām un katru svešo iespaidu saņēma ar aizdomām un noraidi (Puisāns, 1988).

Kopīgi noturētas, kāzas, bēres, dažādi saviesīgi pasākumi vienoja sādžu daudzveidīgo sabiedrību un palīdzēja aizmirsties par trūkumu. Svarīgas bija kopējās tikšanās kaimiņu starpā, kur tika apspriesti dažādi jaunumi (Dekters, 1970). No sādžinieku vidus izvirzīja sādžas vecāko – izglītotāko, pieredzes bagātāko sādžinieku – tādu, kam sādžā bija autoritāte. Sādžas vecākais sasauca

sādžinieku sapulces par sādžai aktuāliem jautājumiem – kopējo sādžas objektu uzturēšanas kārtība, kopējo ganību un pļavu sadalīšanas kārtība, muižas nodevu normas sadale starp atsevišķam saimēm, palīdzības organizēšana atraitnēm un bāreņiem, dažkārt arī strīdi sādžinieku starpā, sīko zādžību gadījumi u.tml. Sapulcēs piedalījās un pieņēma lēmumus tikai pieaugušie vīriešu kārtas sādžinieki. Sievietes un bērni sapulcēs nepiedalījās. Lielo sādžu sabiedrība bija daudzveidīga, bet tajā pašā laikā cilvēki centās būt izpalīdzīgi. Svarīgs sādžu sabiedriskās dzīves aspekts bija arī konfliktsituāciju risināšana. Biežs strīdu cēlonis bija kaimiņa šņoru nobradāšana. B. Briška atzīmē, ka šie konflikti vienmēr tika atrisināti izlīgšanas ceļā un nekad netika risināti kautiņa vai tiesas ceļā (Briška, 1969).

Objekts ar nozīmīgu sociāli reliģisku funkciju sādžā, bija krucifikss, kur tika noturētas kopējās lūgšanas un reliģiskie dziedājumi.

No sādžām uz viensētām *From villages to farmsteads*

Latgales zemnieku iziešana viensētās bija sākusies jau 19. gs. 70. gados, kad Vidzemes zemnieki sāka iepirkt zemi Latgalē, jo Latgalē tā bija daudz lētāka. Sekojot viņu saimniekošanas paraugam, arī daži vietējie zemnieki sāka atteikties dzīvot sādžās un apmetās uz atsevišķiem zemes gabaliem. 1904. gadā Rēzeknes un Ludzas apriņķos jau bija ap 2900 viensētām (Brežgo, 1954). Dažkārt par iemeslu iziešanai viensētās bija arī ugunsgrēka izcelšanās kādā mājā, kad parasti nodega visa sādža. Latgaliešu izdevējs Vladislavs Locis (*Lōcs*; 1912–1984) apraksta Kolna solas sādžas iemītnieku pārdomas pēc šāda ugunsgrēka: “Vajag iet viensētās. Būs katram savs zemes gabals, sava sēta, nebūs caur vienu sētu jācieš visai sādžai [..] Arī šņores ir apnikušas, bet par visu vairāk ir apriebusies tā lamāšanās” (Lōcs-Vaideāns, 1997, p. 11). Masveidīgāka sādžu sadalīšanu viensētās sākās ar tā dēvēto Stolipina likumu (1906, 1910, 1911) izdošanu, kad Latgalē tika sadalīta 901 sādža (18% no sādžu kopskaita), iedalot 13 450 viensētas. 1920. gada sākumā Latgales apriņķos bija fiksētas 5264 nesadalītas sādžas ar 78 383 saimniecībām (Latvijas agrārā reforma, 1938).

Likvidējot sādžu šņoru saimniekošanas sistēmu un izveidojot viensētu saimniecības, tika cerēts pārvarēt Latgales agrāro atpalcību. Sādžu saimniecību mazā platība noteica jaunu efektīvāku saimniekošanas metožu ieviešanu, lai to veiktu, vispirms bija jālikvidē šņoru zemju sistēma. Tā kā Latgalē bija tradīcija sadalīt zemi visu saimnieka pieaugušo dēlu starpā, tad uz 1920. gadu lielā daļā sādžu saimniecību šņores bija kļuvušas tik šauras, ka tās vairs nebija iespējams dalīt, zemes bija tik maz, ka no tās nevarēja pārtikt.

Visus sadalīšanas darbus uz vietām pildīja mērnieki, kuru darbu vadīja apriņķa mērnieks. Mērnieki izstrādāja sadalīšanas projektu, bet pašas viensētas projektēja uz vienošanās, vērtēšanas vai mazāksolīšanas (*torgu*) pamata

(Latvijas agrārā reforma, 1930). Tā dēvētais *torgu* princips noteica: ja bija vairāki pretendenti uz vienu zemes gabalu, tad viensētu tajā vietā dabūja tas, kurš prasīja no viņam katra piederošā hektāra vismazāko normu. Piemēram, saimniekam bija tiesības uz 12 hektāriem no kopējās zemes. Mazāksolīšanā viņš pieprasīja katra hektāra vietā 0,80 hektārus. Ja mazāk neviens nebija prasījis, tad šis pieprasītājs norādītajā vietā saņēma viensētu ar zemes platību $12 \times 0,80 = 9,60$ hektāri. Nereti *torgi* izvērtās par azartisku pasākumu – atsevišķi zemes gabali tika izsolīti no dažām līdz pat vairākiem desmitiem reižu. Piemēram, Ludzas apriņķa Ciblas pagasta Zeltiņu sādžā daži gabali solīti pat 37, 38 un 48 reizes (LNA LVVA, 1679.f. 169.apr., 2103.–2105.l.).

Torgu princips simpatizēja tiem zemniekiem, kuri dažādu iemeslu dēļ (pārsvārā, lai nebūtu jāpārceļ ēkas) gribēja palikt sādžas vecajā vietā. Dažiem saimniekiem vēlme palikt vecajā vietā maksāja pārāk dārgi. Bija pat tādi daži zemnieki, kuriem sādžā piederēja 12–15 desetīnas, bet pēc sadalīšanas viensētās viņi dabūja tikai 2–5 desetīnas zemes (Trasuns, 1921). Tās pamatā bija ģimenes, kurām bija mazs un vājš darbaspēks. Lielākās saimes ar lielu darbaspēku uz *torgu* pamata varēja iegūt vairāk zemes, protams, neizdevīgākā vietā un arī nekultivētās zemēs.

Kad mērnieki sagatavoja sadalīšanas plānu un noteica sadalīšanas gaitu un termiņu, tad visi sādžinieki tika aicināti uz kopējo sapulci un iepazīstināti ar projektu. Tālāk līgumu slēgšanai, aktu par zemes vērtību parakstīšanai u. c. sadarbībai ar mērnieku, no sādžinieku vidus tika ievēlēts pilnvarots pārstāvis.

Vecās ierastās vietas atstāšana un ēku pārceļšana bija šķērslis, kas baidīja pašus sādžiniekus no izdalīšanās viensētās. Ēkas pilnīgi no jauna bija jāceļ apmēram 40 000 sādžu saimniecībām (apmēram 30% no sādžu ēku kopskaita). Daudzas, it īpaši vecās ēkas, bija sliktā stāvoklī. Saimnieki ēku remontam neieguldīja nekādus līdzekļus tāpēc, ka, izejot viensētās, būtu tāpat jābūvē jauna māja. Piemēram, Ludzas apriņķa Ciblas pagasta Mazo Trukšānu sādžā no 9 saimniekiem tikai divi palika vecajā ar visām ēkām (vienam bija jāpārceļ tikai pirts būve), bet sešiem saimniekiem uz jauno vietu bija jāpārceļ visas ēkas (LNA LVVA, 1679.f., 169.apr., 997.l.).

Mērnieki maz pūļu veltīja, lai pēc iespējas vairāk saimniekus atstātu vecajās sādžas mājās, pievienojot pie tām papildus zemes. Katoļu garīdznieks un sabiedriskais darbinieks Jānis Velkme (1876–1962) ēku pārceļšanas sakarā raksta: “Līksnas pagasta Vaikuļānu sādžā dzīvoja 95 saimnieki. Sādža atradās Daugavas krastā. Pats par sevi saprotams, ko nozīmē upes tuvums – peldēšanās, veļas mazgāšana, zvejošana, lopu dzirdīšana, skaistums [...] No 95 saimniekiem mērnieks atstāja tikai 5 saimniekus sādžā, bet visiem pārējiem bija jāpārceļas prom no ūdens dažādos virzienos un attālumos” (Zalāns, 1995, pp. 179–180).

Labā stāvoklī esošo sādžas ēku pārceļšanu atvieglāja tas, ka Latgalē pamatā bija baļķu guļbūves, kas bija salīdzinoši viegli nojaucamas un pārvedamas. Starp no jauna uzbūvētajām ēkām Latgalē bija salīdzinoši mazs būvju no

ugunsdrošiem materiāliem, te joprojām dominēja koka būvniecība. 1929. gada lauksaimniecības skaitīšana Latgalē jaunsaimniecībās uzrādīja tikai 567 mūra ēkas, kamēr pārējos Latvijas novados to skaits bija vairāk kā 10 reizes lielāks (Maldups & Salnais, 1932).

Jāmin, ka viensētās jaunuzceltās saimniecību ēkas pārsvarā bija tādas pašas, kādas tās bija sādžās. Vēl itin bieži jaunajās saimniecībās bija sastopamas pēc krievu celtniecības tradīcijas celtas ēkas, kad dzīvojamā māja ar kūti būvēja tik cieši blakus, ka jumti sagāja kopā, un starp kūti un istabu bija ar jumtu nosegts laidars, kur dienā uzturējās govis (Latvijas agrārā reforma, 1930).

Katrā sādžu sadalīšanas lietā svarīgi bija tas, vai katra atsevišķa viensēta bija nodrošināta ar ceļu. Ceļu ierīkošana varēja būt par strīdus objektu jau izgājušo viensētu saimnieku starpā. Gadījumos, ja kāds no saimniekiem izmantoja bijušo sādžas ceļu, kas pēc jaunā plāna gāja gar cita saimnieka ganībām, īpašumiem, bet plānā vairs nebija paredzēts, bija divi varianti – ceļu likvidēt vai sašaurināt to pēc pastāvošajiem noteikumiem līdz 4,5 metriem (LNA LVVA, 1679.f., 170.apr., 4., 23.l).

Neskatoties uz dažādiem sarežģījumiem, agrārās reformas pamatuzdevumi Latgalē tika izpildīti – absolūtais sādžu vairākums bija sadalīts viensētās. Uz 1937. gadu Latgalē bija sadalītas 4526 sādžas, ierīkojot 67 673 viensētu saimniecības (Latvijas agrārā reforma, 1938).



2. attēls. Lauks ar šņoru zemēm
(LgKM 21513)

Figure 2 *Field of strip farming* (LgKM 21513)



3. attēls. Latgales lauku ainava 20. gs. 30. gados (LgKm 23844)

Figure 3 *Rural landscape of Latgale (1930s)* (LgKm 23844)

Secinājumi *Conclusions*

- Sādžu dzīvotspēja Latgalē, laicam ritot, kļuva arvien vājāka. To noteica gan saimnieciskie un demogrāfiskie faktori (lielā dzimstība), gan pastāvošās tradīcijas zemes mantošanā.
- Latvijas radikālā agrārā reforma būtiski mainīja Latgales lauku vides uzbūvi un telpisko apveidu. Reformas īstenošanas rezultātā Latgale joprojām palika

tipiska sīksaimniecību zeme. Tomēr, veicot sādžu sadalīšanu atsevišķās viensētās, būtiski mainījās Latgales lauku kultūrainava. Kompakti apdzīvoto vietu vietā izveidojās viensētas. Latgales lauku ainava sāka līdzināties ainavai pārējos Latvijas novados. Zemnieka – bijušā sādžinieka – lauki vairs neatradās tālu projām un nebija izkaisīta šņoru veidā, bet atradās pārredzamā attālumā no saimnieka mājas.

- Likvidējot sādžu šņoru zemju sistēmu, tika radīti apstākļi, kas ļāva Latgales sīkzemniekiem rīcības brīvību savos, nu jau viengabalainajos īpašumos. Mainījās bijušo sādžinieku dzīvesveids un saimniekošanas metodes. Tika veicināta zemniecības diferenciaciju Latgales laukos, jo spējīgākie saimnieki varēja izvirzīties, viņu iniciatīva vairs nebija pakļauta konservatīvajai sādžas sabiedrībai.
- Izmaiņas kultūrainavā noteica arī agrārās reformas ietvaros noteiktā muižu zemju konfiskācija. Tā kā jaunsaimniecību ierīkošanai tika piešķirti zemes gabali no bijušajām muižu zemēm, tad bijušajos napārredzamajos muižas tīrumos parādījās jaunsaimnieku būves.
- Agrārās reformas izraisītie *nospiedumi* Latgales kultūrainavā nepastāvēja ilgi. 20. gadsimtā Latvijā tika veiktas vēl citas agrārās reformas. Padomju okupācijas režīms Latvijā ar represīvām metodēm veica kolektivizāciju – individuālo zemnieku saimniecību likvidēšanu un padomju saimniecību – sovhozu un kolhozu – izveidi. Savukārt pēc Latvijas valstiskās neatkarības atjaunošanas tika izsludināta reforma, kas paredzēja zemnieku individuālo saimniecību atjaunošanu.

Summary

The aim of the article is to find out the outcomes of dividing villages into farmsteads during the Latvian Agrarian Reform, their influence on changes in the Latgalian rural cultural heritage landscape studying the economic and social aspects of life in Latgalian villages.

Cultural heritage landscape forms within a longer period of time; its formation experiences the influence of both natural circumstances and various processes taking place in the society. Moreover, drastic political and socioeconomic changes cause landscape rearrangements – changes in the structure of landscape, its visual model and spatial outline. In the 20th century, Latvia underwent several rapid rearrangements of social and economic system. One of them were the Latvian Agrarian Reform (1920–1937) due to the implementation of which also the Latgalian rural cultural heritage landscape changed. In Latgale, not only new farms were emerging, but also simultaneously villages were being divided into farmstead households. Latgale was the only region of Latvia in which from the 17th century until the late 1930s, in comparison to the rest Latvia, a different type of settlement of farmers

dominated – a village (*‘sādža’*). In villages, there were several farmer families who lived in one location.

Dividing villages into separate farmsteads, compactly inhabited locations were replaced by farmsteads. The rural landscape of Latgale became similar to rural landscape in other regions of Latvia. Fields of a farmer – former villager – were not located far away anymore and were not dispersed in so called strips; now they were located at a visible distance from the farmer’s house.

Changes in the cultural heritage landscape were determined also by the confiscation of the manor lands provided for in the framework of the agrarian reform. As plots of lands from the former lands of manors were allocated for the establishment of new farms, buildings of new farmers appeared in the former immense fields of manors.

The *footprints* of the Latvian Agrarian Reform in the cultural heritage landscape of Latgale did not remain for long. The regime of Soviet occupation in Latvia carried out collectivisation – elimination of the individual farms and establishment of collective farms – applying repressive methods. After restoration of the independence of Latvian State, there was announced a reform that provided for renewal of individual households of farmers.

Pateicība

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Literatūra References

- Adams, R. E. (2018). Landscapes of post-history. No (Wall, E. & Waterman, T.) *Landscape and Agency*, 7–17. London and New York: Routledge.
- Apeļš, M. (1932). *Latgolās sātōs. Stōsti*. Rēzekne: Latgalīšu Školot. Central. B-bas izdavums.
- Bērziņš, O. (1958). *Latviešu zemnieku māju architektura*. Rīga: Latvijas Valsts izdevniecība.
- Bīlenšteins, A. (2001). Augšzemes ceļojuma piezīmes. Poļu Vidzeme (Krāslava, Volkenburga, Rozitene, Ludzene, Varklāni. No (Zeile, P.) *Ai, māte Latgale: Atskati Latgales vēsturē un kultūrvēsturē*, 383–413. Rīga: Annele.
- Brežgo, B. (1954). *Latgales zemnieki pēc dzimtbūšanas atceļšanas (1861–1914)*. Rīga: Latvijas Valsts izdevniecība.

- Briška, B. (1969). Latgaļu zemnīks un tō zeme symts godūs (1861–1961). *Dzeive*, 97, 3–18.
- Dekters. (1970). *Dorvas cīma ļaudis*. Minhene: P/s Latgaļu izdevnīceiba.
- Dosse, R., Rogge, E., & Eetvelde, V. (2016). Detecting people's and landscape's identity in a changing mountain landscape. An example from the northern Apennines. *Landscape Research*, 41(8), 935–948. DOI: 10.1080/01426397.2016.1187266
- Grišāns, J. (1968). *Pa atmiņu stygom*. Minhene: P/s Latgaļu izdevnīceiba.
- Karulis, K. (1992). *Latviešu etimoloģijas vārdnīca (II)*. Rīga: Avots.
- Latgales Kultūrvēstures muzejs (LKM), LgKM 21513. LKM, LgKM 23844.
- Latvijas agrarā reforma*. (1930). Rīga: Zemkopības ministrijas izdevums.
- Latvijas agrarā reforma*. (1938). Rīga: Zemkopības ministrijas izdevums.
- Latvijas Nacionālā arhīva Latvijas Valsts vēstures arhīvs (LNA LVVA). Daugavpils apriņķa Līksnas pagasta Aužguļanu sādžas sadalīšana viensētās, 1679. f., 170. apr., 4., 23. l.
- LNA LVVA. Zeltiņu sādžas zemes ierīcības lietas, 1679. f. 169. apr., 2103.–2105. l.
- LNA LVVA. Ludzas apriņķa Ciblas pagasta Mazo Trukšanu sādžas zemes sadalīšana viensētās, 1679. f., 169. apr., 997. l.
- LNA LVVA. Ludzas apriņķa Nautrēnu pagasta Buzdu sādžas sadalīšanas projekts, 43.f., 1.apr., 203. l.
- Lōcs-Vaideāns, V. (1997). *Myuža dīnas (I)*. Rēzekne: Latgolas kulturas centra izdevnīceiba.
- Maldups, A. & Salnais, V. (sast., 1932). *Lauksaimniecības skaitīšana Latvijā 1929. gadā. Lauksaimniecību ēkas*. Rīga: Valsts Statistikas pārvalde.
- Mednis, A. (1924). *Agrarais jautajums un zemes reformas Latvijā*. Rīga: Latvju kultura.
- Melluma, A. (1994). Metamorphoses of Latvian Landscapes during Fifty Years of Soviet Rule. *Geo Journal*, 33, 55–62.
- Puisāns, T. (1988). *Latgale. Vēsturiskas skices*. Toronto.
- Stūre, I. (2004). *Kultūras un dabas mantojuma aizsardzība un attīstības plānošana*. Rīga: LU Akadēmiskais apgāds.
- Terentjeva, L. (1973). No Latgales lauku apmetņu vēstures. *Arheoloģija un etnogrāfija X*, 223–230. Rīga: Zinātne.
- Trasuns, F. (1921). Padums zemnikim pi izišonas uz winsatom. *Latgolas Wōrds*, 18.
- Zalāns, A. (sak., 1995). *Prelāts Jānis Velkme (1876–1962)*. USA: North Aurora.

UNIVERSAL EDUCATIONAL MATERIAL. EXHIBITION BY PER ISAK JUUSO FOR YOUTH AND CHILDREN

Marija Griniuk

Sámi Center for Contemporary Art, Norway

Abstract. *This article explores the strategies employed by educators at the Sámi Center for Contemporary Art in Karasjok, Norway, in the production of educational materials related to an exhibition by Sámi duodji artist Per Isak Juuso. The study examines the process of creating materials that are suitable for various age groups of children and youth, and applicable to both local Sámi and international visitors. The research question is: How can the content of educational material within an art exhibition be designed to appeal to diverse audiences of children and youth? The aim of the study is to identify what kind of educational material about Sámi art can be used by different age groups and backgrounds, including local Sámi and international visitors. This aim is achieved through the following objectives: the design of educational material, presentation of the material to various groups of youth and children and their educators, evaluation of feedback on the content of the developed material, and a comparison, through observation, of the quantity of material used during the exhibition. The results of the research provide recommendations for art institutions and museums on how to develop universal educational materials that are suitable for various groups of learners and can be adapted by teachers to different levels of understanding during conversations.*

Keywords: *children, duodji, mediation, Sámi art, universal educational material, youth.*

Introduction

The article examines the strategies employed in the development, introduction, and usage of educational material used for mediating artworks within an art exhibition at an art center. The core task in working with exhibitions is the educational purpose, as art can serve as a platform for interpretation-based learning and empower participants to be active, creative, and expressive, as stated by Petrey (2012). According to this study, a dynamic and interactive process is at the heart of learning. However, exhibition spaces often provide a passive experience of spectatorship. Exhibition spaces, in general, are often designed with the goal of showcasing artworks in a visually pleasing way, but this can sometimes lead to a passive experience for viewers. Traditional exhibition spaces are typically set up for viewing only, which can make it difficult for visitors, particularly children and youth, to actively engage with the artworks. Petrey (2012) states that art can serve as a platform for interpretation-based learning,

which can empower participants to be active, creative, and expressive. However, the traditional setup of exhibition spaces often does not facilitate this kind of engagement. Furthermore, when the main goal is showing artworks, the educational potential of art exhibitions is often overlooked and not prioritized. The lack of interactive, dynamic and engaging features in exhibition spaces can make it difficult for visitors to fully engage and learn from the artworks on display.

Factors that are essential in welcoming youth and children into an exhibition space include an interactive process, a positive environment, and opportunities for active participation (Petrey, 2012). Therefore, for youth and children, it is necessary to add another layer to the experience of visiting an exhibition at an art center. Passive spectatorship is not sufficient. A means of activating young viewers in an exhibition space is needed. However, smaller art institutions often do not have the capacity to develop extensive materials for various age groups of children, both local and international. Therefore, this study aimed to explore how educators and mediators at an art center can develop universal educational material that allows for activating the space of experience and, at the same time, is useful for teachers of different age groups of students. Another challenge was that it is not always possible for groups of children and teachers to pre-order a guided tour or workshop. Therefore, the developed educational material is intended to be stand-alone, without the involvement of a mediator or educator at the art center being necessary in the process of mediation.

The method of the research was an arts-based approach, as the content of all the materials developed was based on artistic work and had an aesthetic output - the designed educational material for children and youth. According to Greenwood (2019), arts-based research is developed upon an aesthetic understanding of the researched area. Arts-based research always has an aim and objectives, whether within artistic, curatorial, or educational projects (Greenwood, 2019). The materials included artistic materials, observations, and conversations with the teachers who accompanied the groups of children. The analysis of the materials was conducted by the Principle Investigator (PI).

The PI developed the educational material for the exhibition by Per Isak Juuso, which was held from October 23rd to December 30th, 2022 at the Sámi Center for Contemporary Art in Karasjok, Norway. The idea and content were developed by a working group of three contributors: the PI, a designer, and a translator into Northern Sámi. As a result, the material was released in English for international groups and in Northern Sámi for local groups in Karasjok. The content of the material was identical in both language versions. The material was released during the Sámi Language Week in Karasjok and in conjunction with the exhibition by duodji artist Per Isak Juuso. Per Isak Juuso has over 25 years of experience with duodji/Sámi handicrafts and is a leader in innovation within this artistic field. The exhibition consisted of art objects made with duodji using

materials such as metal, wood, horn, and leather. Per Isak Juuso works with the composition of different materials and visual storytelling about tradition, materiality, and technique. All the artworks within the exhibition were from the private collection of Bertil Eriksson, a Sweden-based collector.

During the Sámi Language Week, an interview with Per Isak Juuso was conducted, as well as a public conversation with collector Bertil Eriksson. Additionally, a video about the exhibition was developed, featuring images of the artworks and storytelling by Per Isak Juuso. The video was presented in an open event format at the Sámi Center for Contemporary Art in Karasjok. The exhibition lasted for two months after the Sámi Language Week. The video was made available on the Sámi Center for Contemporary Art's YouTube channel and social media, while the designed and printed educational material was used throughout the entire period of the exhibition.

Case: Into the exhibition by Per Isak Juuso

The terminology used in the context of Sámi art is very specific and requires explanation. Firstly, *duodji*, as explained by scholar Gunvor Guttorm (2012, 2015), is the expression of creativity for the Sámi people, and traditionally natural materials are used in *duodji*. *Duodji* represents traditional Sámi culture, and in my opinion, it strongly promotes an ecological and nature-friendly creative process of artistic production. Within the context of *duodji*, discussions about materiality are of great importance (Guttorm, 2012, 2015). However, Juuso's innovative approach has allowed for the introduction of non-natural materials in the creation of *duodji*, and this has set *duodji* into a new discussion about the values of nature and the impact of technology on it. In Juuso's artworks, the dominant materials are wood, moose horns, and reindeer horns, but one can also find materials such as plastic.

It is important to mediate and explain art in a way that is tailored to various groups individually. Layering of the narrative and multileveledness of perception (Cupchik & Gignac, 2007; Griniuk, 2022) can be achieved in two different ways: by tailoring the narrative to each audience separately or by designing the content of education and mediation of an art exhibition in a universal approach. Layering of narrative is understood as providing multiple directions the story can take, such as only discussing the shape of an object or exploring questions about nature and the environment. Similarly, multileveledness of perception refers to the amount of information the viewer wants or is able to know and discuss about the artwork. When working with children, it is self-evident that perception would differ when working with first-graders who are 6-7 years old compared to gymnasium students who are 16-18 years old.

Specifically, the Sámi Center for Contemporary Art, being a smaller art center in the context of Norwegian art centers, has the goal of developing an

educational arena and attracting young people to experience art, both locally and internationally. However, there is no specific educational department and employees have the task of developing educational material alongside a variety of other tasks. This is a common scenario in institutions like this. Therefore, the importance is to understand the strategies on how the same educational material can become universal - suitable for a wide variety of target groups, applicable by the teachers who are teaching different subjects at school, and capable of evoking discussions that are interesting at all levels of knowledge and understanding.



*Figure 1, 2 Per Isak Juuso. Sámi Center for Contemporary Art, Karasjok
(Photo: Tor Egil Rasmussen)*

The specific aspect of the exhibition by Per Isak Juuso was that the artist works with duodji, and presents an innovative and experimental take on this traditional Sámi medium (see Figure 1 and 2). The objects in the exhibition varied in size and were placed in the display cases in the foyer of the Sámi Center for Contemporary Art. Some of the objects were very small, measuring only 7 square centimeters, while others were 50 x 70 cm or larger. The challenge was to shape the entry point into the exhibition in an explorative approach, by encouraging visitors to look for details and the traces of the artist's innovative play with traditional media. For example, on a duodji knife, Juuso incorporated a smiley (see Figure 3) or in another piece he used plastic to create blue fringes (see Figure 4). Such details were very important. It was crucial to develop materials that would encourage children and young people to look closely, whether at a larger or a tiny artwork.



Figure 3 Per Isak Juuso. Sámi Center for Contemporary Art, Karasjok. The knife in the front of the photo has a smiley on it (Photo: Tor Egil Rasmussen)

The designed educational material (see Figure 5) encouraged visitors to find the object presented in the material, suggest what kind of object it was and answer one of the given questions, which could be answered in a simple way or lead to deeper discussions about ecology or the relationship between human, tradition, and technology. For example, in the artwork titled "The kayak with the el-motor," the children were asked to locate the el-motor in the duodji object. This encouraged the children to look closely, explore the details in each object and consider the object within the context of contemporary socio-materiality. Additionally, the educational material questioned the relationship between the

artistic object and the titles given to them by the artist. For example, in the sculpture titled "self-portrait," made from wood, iron, and the face made from moose horns, the children were asked to interpret why the sculpture is a self-portrait.



Figure 4 Per Isak Juuso. Sámi Center for Contemporary Art, Karasjok. The object contains plastic fringes (Photo: Tor Egil Rasmussen)

Feedback from one of the visiting groups of gymnasium students and their teacher was that the educational material made them find details in the artworks that they would not have noticed otherwise. The most challenging task seemed to be the part where the students were invited to find the object with the smiley, as it was located on the edge of the knife and required to be viewed from a different angle, or to see it the visitor had to move around and look into the object from the level of one meter above the floor. Overall, the materials invited not only to inspect the objects but also to move around in non-usual ways and see the objects from different angles.

Language played a very important role in the development of the educational material. Since the release was connected to Sámi language week, it was essential to have material in Sámi and also in English in case of having international or Norwegian groups who do not understand Sámi. Interestingly, material in the Sámi language was used much more actively than in English, and some weeks it was necessary to re-print new materials in Sámi a few times to have them available for use and interaction. This suggests that most of the groups of

Find the artwork. Discuss the questions.



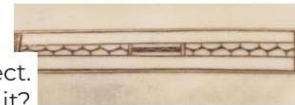
1. Find the object.
What kind of object is it?

2. Find the object with a smiley.
Why does this object have a smiley?

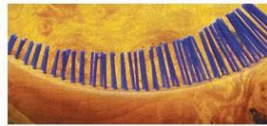


3. Find the object.
What kind of object is it?

4. Find the object.
What kind of object is it?



5. Find the object with blue fringes.
Why does this object have fringes?



6. Find the object.
What kind of object is it?

7. Find the object with claws.
Why does this object have claws?



9. Find the object.
Where is the engine on this object?

8. Find the object.
What kind of object is it?



10. Find the object.
What kind of object is it?

11. Find the object with this face.
Look at the title — Why do you think this object has this title?



Figure 5 Per Isak Juuso. Part of the educational material (Developed by Author, in collaboration with Tue Brisson Mosich and Monika Anti at Sámi Center for Contemporary Art in Karasjok)

learners were from Sapmi and could understand Northern Sámi, in which the materials were produced. Since Karasjok, where the art center is located, has two schools, one primary and secondary school and one school at the gymnasium level, the initial thought was that the material would be useful for the local teachers. However, groups of students were also arriving from other towns such as Kauntokeino. Nevertheless, it is not known exactly where each group was from, since at the Sámi Center for Contemporary Art, groups can just walk in without pre-booking, although some groups do book in advance.

Research results: towards universal educational material

As previously mentioned, universal educational material is material that can layer the possible directions where discussions between teachers and learners can go and is adjustable to many levels of perception. In this way, the same educational material, by being universal, can serve educational purposes for children from a very young age to young people up to 18 years old. Teachers shape the discussion, but the materials developed by educators and mediators at the Sámi Center for Contemporary Art can serve as a starting point by inviting children and youth to explore the exhibition, notice the fragments of the artworks and to contextualize their observations in the format of the discussion.

The findings of this study are:

- The educational material contains images and questions that can be interpreted from many different perspectives and deepened into a wide range of discussions, targeted at various groups of learners. This approach was taken in order to cater to the wide range of age groups and educational backgrounds of the children and youth visiting the exhibition. For example, when posed with the question of why a semi-abstract sculpture is titled 'Self-portrait', students of different ages would analyze and answer the question in very different ways. A 6-year-old child might focus on the physical appearance of the sculpture and its relation to the human form, while a 16-year-old student might delve deeper into the symbolism and conceptual meaning behind the title.
- The educational material encourages seeing the details, and in the process of looking for the details the learners are encouraged to look at the objects from different positions and to move around it and see it from different angles.
- The educational material can be used as a stand-alone material and does not require the presence of a mediator or educator. This is particularly useful in the context of art education where school groups do not

necessarily book visits in advance but rather walk in at their own time of convenience and subject relevance.

- The development of the material does not require an extensive team of an educational department at an art center, as in smaller art centers, many employees work on the development of educational material in parallel with a variety of other tasks.
- However, it is important to note that the development of educational material is a complex and time-consuming process that requires a certain level of expertise and resources. While it is true that the development of educational material does not necessarily require an extensive team of an educational department, it still requires skilled educators and mediators who understand the nuances of creating materials that can be adapted to various audiences. It also requires resources such as time, funding, and equipment to research, design, produce, and evaluate the effectiveness of the materials. Additionally, producing multilingual materials like in this case, requires language skills and/or translator/ editor to ensure the quality of the materials is maintained in both languages. It is also important to note that the design of universal educational materials is a challenging task, and it is not necessarily an easy task to create material that can be suitable for a wide variety of target groups, applicable by the teachers who are teaching different subjects at school, and capable of evoking discussions interesting on all the levels of knowledge and understanding.
- The learners are encouraged to analyze how the titles of the artwork are given, and how the materials in the artworks are used. They are also encouraged to understand art and innovation in parallel and to discuss art and societal contexts in a holistic perspective.
- The material developed for the Per Isak Juuso exhibition is framed as "universal material" referring to universal design strategies where the items are designed for a wide range of users in this case connected to educational institutions, yet different age groups and different subjects.

Conclusion

The study aimed to explore how to design the content of educational material within an art exhibition to various audiences of children and youth and that are applicable to both the local Sámi and international visitors. The culture of exhibition spectatorship present in youth and children require active involvement and participation in the exhibition experience, as well as a safe space for exploring the art venue and artworks within the exhibition. The research team developed educational material for the Per Isak Juuso exhibition at the Sámi Center for Contemporary Art, using a universal approach for the educational materials.

Through this study, it was found that the development of universal educational material, which encourages active exploration of each artwork, can serve as an effective tool for engaging children and youth in art exhibitions. The images and text encouraged active exploration of each artwork, and the questions developed could be adapted by the teacher to various complexities and themes of discussions. The material could be adapted to different subjects and was designed to be a stand-alone material, so that the educator and mediator did not necessarily need to be involved. This was convenient as it is often the case that visits to art centers are not booked in advance by the teachers. However, it's worth noting that the development of such materials requires skill, time and resources and not as simple as it may seem. One of the key findings from the research is that the universal approach to designing the content of the educational material involved constructing tasks and questions that were open-ended and able to be interpreted on various levels. This multilevel approach to the educational material was effective in engaging the visitors of different ages and abilities, encouraging them to explore the exhibition in their own way and gain insights on different levels. The findings of this study can be useful for art educators and mediators in art centers, galleries, and museums globally, who are looking to create engaging and effective educational experiences for children and youth. Overall, the study highlights the importance of active participation and exploration in exhibition spaces, as well as the importance of designing educational materials that can be adapted to different audiences and contexts.

References

- Cupchik, G. C., & Gignac, A. (2007). Layering in Art and in Aesthetic Experience. *Visual Arts Research*, 33(1), 56–71. Retrieved from: <http://www.jstor.org/stable/20715434>
- Greenwood, J. (2019). Arts-Based Research. Oxford Research Encyclopedia of Education. DOI: <https://doi.org/10.1093/acrefore/9780190264093.013.29>
- Griniuk, M. (2022). Techno-voyeurism into a performing body. The DA dissertation. The University of Lapland.
- Guttorm, G. (2012). Duodji: A new step for art education. *International Journal of Art & Design Education*, 31(2), 180-190.
- Guttorm, G. (2015). Contemporary Duodji—A personal experience in understanding traditions. *Relate North: Art, heritage and identity*, 60-77.
- Petrey, G. (2012). Assessing the impact of students facilitating workshops within the context of a collaborative cross institution project. *Enhancing the Learner Experience in Higher Education*, 4(1), 17-31. University for the Creative Arts. ISSN 2041-3122. Retrieved from: <http://journals.northampton.ac.uk/index.php/elehe/index>

THE INFLUENCE OF CHURCHES OF THE CITIZENSHIP CATHOLIC PARISHES ON THE LAYOUT AND URBAN SPACE OF MEDIEVAL TOWNS IN THE 13TH AND 14TH CENTURIES

Silvija Ozola

Riga Technical University, Latvia

Abstract. One of the most important types of cult buildings in medieval cities were churches for the citizenship Catholic parishes, which began to be built in Italy. In the 12th and 13th centuries on lands of the Baltic Seacoast, the construction of cult buildings expanded with the spread of the Catholic Faith, influencing the spatial organization of the urban environment, and developing church types. Churches for the citizenship Catholic parishes became architectural dominants in cities of the Hanseatic League. **Research problem:** the development of the planning and structure of churches for the citizenship Catholic parishes changed urban aesthetics; it is necessary to study churches for the citizenship Catholic parishes and layouts of medieval towns organized around the market to preserve historical identity during the development of the contemporary urban environment. **Research goal:** analysis of the impact of churches for the citizenship Catholic parishes on the layout, visual image and architecturally spatial development of the Hanseatic League cities. **Research novelty:** analysis of common and local features of churches for the citizenship Catholic parishes and their layout, as well as structural evolution in the Hanseatic League cities during the 13th–14th centuries. **Research methods:** analysis of archive documents, projects, cartographic materials and studies of published literature, an inspection of churches in nature, and photo fixation.

Keywords: church for the citizenship Catholic Parish, identity, medieval town, the Hanseatic League, urban environment.

Introduction

The Teutonic Order founded the State of the Teutonic Order (1230–1525), where small settlements dominated urban landscapes. Several towns stood out in terms of not only their size but also their functions. The Teutonic Order's Master (German: *Deutschmeister des Deutschen Ordens*, 1219–1230, *Landmeister von Preußen des Deutschen Ordens* 1229–1239) Hermann Balk, Bishop of Breslau Thomas I and High Duke of Poland (1232–1238) Henry the Bearded signed an agreement for the establishment of new towns (Jasiński, 1993, p. 102–101) in the State of the Teutonic Order. Historians believe that a medieval town was a relatively small, densely populated place, whose inhabitants were merchants, craftsmen, and representatives of free professions, who made a living mainly by

occupations not related to farming. A village was a densely populated place whose inhabitants were mainly engaged in farming, and the fishery was considered a subsidiary industry. In the medieval town, craftsmen and merchants were also involved in farming: lots of householders made a garden at the house and kept livestock, poultry and a horse. Outside the town, the rural area contained arable land and meadows. In towns located by rivers and lakes, people were occupied with fishery (Šterns, 2002, p. 112–113).

Wooden fortresses and residential towers built by conquerors on the highest places of the relief strengthened the obtained properties. Following traditions of the Roman Empire, the Knights built monumental buildings – castles. Later, financially independent castles for Commandry and Vogtei centres started to build in the State of the Teutonic Order. The tower became the architectonic dominant of the castle. Near the fortress, a church was built for the congregation. The planning of the Commandry and Vogtei centres obtained the first outlines (Ozola, 2020a). In every subjugated Prussian-inhabited region, the main building in the administrative centre was a stone castle with a tower included in its structure. Larger or smaller settlements were formed in the protection of fortresses. In the Teutonic power centre, the ruler's residence with a high tower of stone for defence and manifestation of the ruler's power dominated over buildings placed at the foothill of the hillfort's surroundings. A large and medium-sized settlement was called a town, which gained not only town rights, defensive walls and a Town Hall, but also its own area and citizens, government and structure. The Town Hall with a tall tower manifested the power of the trading town. The Municipal Law was the most characteristic element of a medieval town. This was because the settlement could not otherwise be called a town; in this regard, medieval cities differ from huge prehistoric settlements. Written historical sources show that the settlement that gained town rights was sometimes called after a short time in the same way as a nearby village that did not have town rights; as a result, these settlement names were sometimes contradictory and the terminology becomes problematic. It is possible that names attributed to settlements should be perceived differently. Historical sources written in Latin or Middle German created a set of names of different status attributed to settlements as *dorp*, *wille*, *oppido*, *civitas*, *oppidum*, *oppidulum*, *vicus*, *viculus*, *villa*, and *locus*. In German, these were *Stadt*, *Städlein*, *Hakelwerk*, *Weichbild*, *Palte*, and *Fleck*.

The layout of the marketplace and the placement of the Town Hall were different. The function of the market was obtained both by an extended street that led from the settlement to the fortress and by a triangular or trapezoidal square at the junction of the roads that led to the settlement. Later, the Town Hall was built on a side of this square, and town halls were usually made from former marketplaces. Sometimes, several town halls were located in cities, which emerged from several independent settlements. In orthogonal planned towns, it was possible to meet two types of Town Hall placement: one on the side or corner

of the square, and the other one – in the centre of the square. In Riga, the Town Hall was situated on the corner of an irregular square, in Mitau (Latvian: *Jelgava*) and Windau (Latvian: *Ventspils*) – on one side of the rectangular square, in Wenden – on one of the streets.

After a heavy defeat in the Battle of Saule, the Livonian Branch of the Teutonic Order was established on 12 May 1237. A new autonomous structural unit for the subjugation of the lands was the Brotherhood of the German House of Saint Mary in Jerusalem in Livonia (Latin: *Fratres de Domo Sanctae Mariae Theutonicorum Jerusalemitana per Livoniam*) (Šterns, 2002, p. 420). The State of Livonia (1237–1561) was founded by taking over tenures of the Livonian Brothers of the Sword, and it included the Selonian and Semigallian lands, most of the Estonian lands, the southwest part of Latgalia and two-thirds of Courland. In Livonia, the first towns for economic and religious function were established in geographically advantageous and well-protected areas along major waterways and roadways, using well-known linear urban planning solutions at traffic routes and centric plans at intersections. Settlements did not become towns due to their economic potential or spatial size but as a result of the political or other intentions of landlords (German: *Landesherrn*). The same names could be used for settlements of different topographical sizes and economic potential. Conversely, a name corresponding to a larger settlement could be used for settlements with seemingly insignificant economic potential. This means that the content of assigned names must be reviewed and the use of the Latvian words *ciems*, *miests*, *pilsmiests*, *pilsapmetne*, *mazpilsēta*, and *pilsēta* must also be evaluated. In Livonia, a hierarchy of populated sites existed, and the town was renamed differently to adapt to the local political and economic conditions. The content of the title was fulfilled only politically and legally but in other cases only economically. Criteria such as population, topographic space size, legal factors, economic potential, and link to international regional structures could define the boundary between large and small settlements. However, several settlements with significant economic potential did not have an international regional attachment. Factors contributing to the development of towns played an important role in terms of the dynamics and quality of the formation of populated sites. Professor Andris Caune pointed out that settlements were given different names in medieval written historical sources. In trading towns of the subjugated lands on the Baltic coast, wooden churches for the townspeople parish were first built. Later, cities joined the Hanseatic League, and stone buildings replaced wooden churches.

In the 14th century on the Baltic and North Sea coasts, the Hanseatic League took over trade, and cities obtained an opportunity to accumulate funds to build magnificent buildings – churches and guild houses. Refinement was expressed in town hall buildings. In Hamburg, Danzig (Polish: *Gdańsk*), Königsberg (Prussian: *Kunnegsgarbs*, Lithuanian: *Karaliaučius*, Polish: *Królewiec*, from 1946 in Russian: *Калининград*) and Riga fabric trade was not so common, but rather a

corn trading. The need for the Town Hall building here arose early. Town halls of the Baltic Seacoast port cities differed significantly from their prototypes in Italian cities. However, the traditional planning canons of the Town Hall were preserved – the two-nave City Council Hall as the main room on the second floor, and the tower as the symbol of independence. In Medieval Europe, the development of cities was a long, complex process associated with ancient culture.

The topicality of the theme: it is necessary to study churches for the citizenship Catholic parishes and layouts of medieval towns organized around the market to preserve historical identity during the development of the contemporary urban environment. **Research goal:** analysis of the impact of churches for the citizenship Catholic parishes on the layout, visual image and architecturally spatial development of the Hanseatic cities. **Research methods:** analysis of archive documents, projects, cartographic materials and studies of published literature, an inspection of churches in nature, and photo fixation.

Planning of construction at fortresses in early centres of the Teutonic Order

On the River Vistula's right bank at the estuary of the Drewenz River (Polish: *Drwęca*), Thorn (Polish: *Toruń*) Fortress of stone (Fig. 1) was erected around 1230. Buildings were added to the inside edge of a ringwall (German: *Ringmauern*) built for a strongly fortified horseshoe-type castle instead of the Prussian-inhabited settlement on the right bank of the Vistula Waterway. The Mokra (also Bache) River flowed on the eastern side of the properly fortified complex. The first urban planning decision after moving to the current site in 1236 was the creation of the original castle defences on a slight rise, where the citadel used to be (Fig. 2). In Polish revision materials, a house for a convent was called the citadel (Polish: *dzieciniec*), the first outer part of the castle – the castle (Polish: *zamek*), the second outer part (Polish: *przygorodek*). The bergfried or a freestanding square tower of stone for the convent was in the middle of the yard of a horseshoe fortress. The subsequent process of urban structures creating was inscribed in a permanent relation with the ruler's seat. On the stronghold's western side next to the river, the regularly planned Old Town of Thorn formed around a marketplace and became the capital of the State of the Teutonic Order during the construction of Marienburg Castle. The Old Town of Thorn obtained Magdeburg Rights in 1233.



Figure 1 The layout of Thorn Fortress: yard, free-standing tower, house with a chapel, dansker, defensive wall (Guerquin, 1984, p. 310)

Figure 2 The model of the Thorn Fortress (online 25.05.2017, source: <http://www.rzeczpospolitaobojganarodow.pl/forum/wiewtopic.php?f=134&t=3032>)

Local weather conditions and relationships with the ruler determined the building's development: an urban construction decision on the citadel's formation on the relief elevation was made in 1236. The space of the Old Town of Thorn formed in two phases, starting with the creation of a watershed in 1251. Initially, the town took the shape of an elongated rectangle (Fig. 3) whose longer northern side adjoined the Vistula, and the eastern one adjoined the castle. Inner divisions defined residential blocks and the grid of streets conditioned by the topography and evoked the comb-shape model. The pre-charter housing and run of roads did not fit into modular regularity. The east-west St. Anny Street (now Kopernika), as well as Żeglarska, Łazienna and Mostowa Streets, perpendicular to the river, were highlighted. Church Square at the centre of this arrangement corresponded to the traditional location of the main square. Both areas accumulated the main functions of public space, religious and commercial. The first fifteen-year period of rapid development of urban structures of the Old Town also witnessed the foundation of principal sacral buildings. Cathedral Basilica of St. John the Baptist and St. John the Evangelist (Polish: *Bazylika katedralna Świętych Jana Chrzciciela i Jana Ewangelisty w Toruniu*; 1236–15th century) for the townspeople Catholic Parish whose construction commenced in the first decades of the 14th century and the first Franciscan Convent (1239) became architectural symbols of the town in Kulmland. Both buildings were based on the simplest pattern of a rectangular hall structure. The land granted to monks was located outside the borders of the town, as it was commonly practised in that period, and the two buildings stood far from each other. The distance in space and differing functions did not translate into a marked disparity in external appearance. The Teutonic Knights supported both projects, also financially (Kranz, 2013).

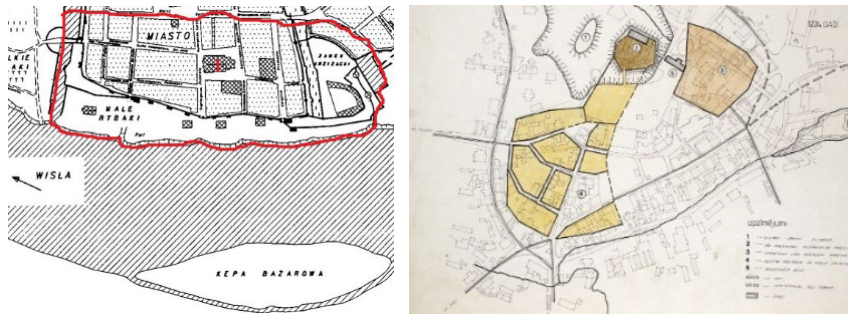


Figure 3 Plan of development of the Old Town of Thorn (Kranz 2013)

Figure 4 Architect Jānis Zlaugotnis. Reconstruction of Wenden planning: Riekstu Hill, Old-Wenden Castrum of brothers-knights, hypothetical German merchants' settlement, urban area with a marketplace, fortified building before a housing area of brothers-knights, roads and hypothetical road tracks in 1224. 1988 (Zlaugotnis, 1988)

The Teutonic Order came to Livonia, where started territorial changes. The population of the German power centres developed under the cover of the fortress, creating an urban construction structure, included in the common defence system. The territorial division was gradually replaced by parishes. Its borders changed in compliance with the new administrative system. In the lands inhabited by the Balts, churches for the Catholic Parish were built (Šterns, 1997, p. 105).

In Livonia designated Master (German: *Landmeister in Livland des Deutschen Ordens*; 1237–1238) Hermann Balk who provided a close link with the State of the Teutonic Order chose for his residence Wenden *Castrum* (Neitmann, 1993) built by the Livonian Swordbrothers. In Wenden (Latvian: *Cēsis*), this first fortification outside Riga to control the Gauja Great Waterway and the transit road became the central headquarters of the Teutonic Order. The Knights levelled all fortifications on Riekstu Hill (Latvian: *Riekstukalns*, German: *Nusberg*) to use it as a relief elevation and preserved former defensive walls and moats in the north and northeast. Four blocks arranged around a large fortified inner courtyard made by the Livonian Swordbrothers replaced old buildings of the *castrum* and together with former defensive walls created a closed partly rectangle *castellum*-type structure for a convent. Wenden *Castellum* did not get a regular layout due to buildings of the previous period (Caune & Ose, 2004, p. 120, 123). A wooden bridge connected a settlement of the locals on Riekstu Hill with the *castellum*. Trade routes stimulated the development of a fortified building complex consisting of *castellum*, where the Knights, riflemen and members of service lived, and the settlement, where streets from the centre led to town gates and divided the fortified area into residential building blocks unconnected with *castellum* planning. Water obstacles separated the castle from the settlement whose independent layout obtained the centre formed by houses around a marketplace on present-day Mazā Katrīna /Small Catherine/ Street that became the longitudinal axis of the medieval fortified town inhabited by the Latgalians, Wends, Livs and Germans. A church for the Catholic Parish outside the castle was

located by the defensive wall of the south outer part of the castle and near the marketplace at the traffic road, along which locals and German merchants and craftsmen established a settlement (Ozola 2020b). The first Town Hall was built from the town's side next to the entrance gate built-in the defensive wall of the north outer part of the castle probably located near the marketplace (Fig. 4) at the intersection of present-day Rīga and Kalēju /Blacksmith/ streets. The entrance from the countryside led through the fortified gate. Due to the lack of written sources, historians have not described the further development of irregular mixed-type buildings in the 13th century.

The city of Lübeck located on the Baltic Coast and the city of Hamburg developed on the coast of the North Sea signed in 1241 a trade agreement that can be considered as the origin of the German Hansa. Visby, the capital of Gotland became the centre of Hansa. German merchants from Lübeck needed new support places near big waterways and river estuaries on the South Baltic Coast. In 1246, Elbing Castle (Fig. 5) was built on the side of the Vistula Lagoon, where navigable strait in the spit provided access to the sea.

The Great War Route from the Prussian lands to Courland and Riga led to many places alongside the navigable Winda River. During the military occupation, in order to increase the impact of the Teutonic Order in Courland, Livonian Master (1242–1245) Dietrich of Grüningen decided to build a *castrum* for the traffic surveillance of the Winda Waterway and the earth road from the State of the Teutonic Order to Riga, where an important trading centre in Eastern Europe was established. The Prussians started their first revolt in 1243 (Milicers, 2009, p. 98); and Vice-Master (1240–1241, 1248–1253) Andreas of Felben (Latin: *Andreas de Velven*) and bishops of Riga, Dorpat, and Ösel-Wiek signed an agreement on 1 October 1243 to establish the Confederation of Livonia (Latin: *Terra Mariana*; 1243–1561) (Šterns, 1997, p. 105). Dietrich of Grüningen built a wooden fortress (1242–1245) for the military and power centre on the strategically convenient place southwards of Old-Kuldīga Hillfort and asked Roman Pope (1243–1254) Innocentius IV to acknowledge Courland as part of Prussia. On 7 February 1245, Wilhelm of Modena admitted Courland on part of Prussia (*Curonia seu Curlandia, cum sit pars Pruscie*). Pope confirmed this decision on 9 February 1245 (Šterns, 2002, p. 367). In Goldingen (Latvian: *Kuldīga*), the first wooden St. Catherine's Church for the townspeople Catholic Parish was made in 1252. Historical sources in 1263 mentioned a fortified settlement */oppidum/*.

Curonian-inhabited regions were added to the Confederation of Livonia. Master of Livonia and Prussia (1249–1254) Dietrich of Grüningen built Memell (Lithuanian: *Klaipėda*) wooden fortress (1252) instead of the ruined Curonian ancient town at the River Dange's mouth to monitor traffic on the waterway and earth road from the State of the Teutonic Order to Riga. Borders were clarified in April 1253. Authorised by the commissioner of the Teutonic Order's Grand

Master in Livonia (1251–1254) Eberhard von Sayn turned to the conquest of the lands that separated the State of the Teutonic Order from Livonia. During two months' time in 1253, Memelburg Castle of stone (*castrum Memele, castrum inter Mimelam et Dangam, Memelburg, castrum Mimmelburch, borch to Mimmelborgh*) was built on an island in the Dange River. This garrison placement furthest to the south on the borderland of *Terra Mariana* was used for subjugation of the lands inhabited by the Balts. In 1254, the Lübeck law (German: *Lübsches Recht*) was awarded to the newly founded merchants' settlement in order to promote trade (Caune, 2011, p. 56).

A large crusader army of the King of Bohemia Ottokar destroyed the Sambian wooden fort of Twangste in a strategically and geographically convenient place in 1255. There, on a high hill, earth ramparts for the fortress on the left bank of the Pregola River at the estuary into the Baltic Sea were made, and the construction of a stronghold for the surveillance of the waterway began. Ottokar called it in honour of 'Königsberg' and drew a large army of Prussians to the obligation for the construction. The first *castrum antiquum* was located at the place, where later the outer part of the castle was created for cuirassier barracks. At the same time, the expansion of the principal castle began. On the northwest side of Königsberg, a stronghold mentioned in the records for the first time on 29 June 1256, merchants from Lübeck created a settlement of regular layout. Just a few years after the construction started, the Battle of Durbe happened on 13 July 1260, and the Cours, Semigalians, Latgalians, and Prussians began protests in 1260. The construction of the defensive wall and bergfried was started in Königsberg Fortress (1255–1325), and it was fortified in 1260. The construction of the wooden fortress for the surveillance of the Pregola Waterway was completed in 1261. The construction of durable fortresses became topical. First of all, defensive buildings, a residential tower for the convent and a toilet (German: *Dansker*, also *Danzker*) above the brook were built between 1260 and 1273. Pope (1261–1264) Urbanus IV proclaimed a crusade in Livonia and Courland and against the Prussians in 1263. Fire destroyed Königsberg Castle in 1262. Therefore, an external defensive wall surrounded the area provided for the fortification in 1263. Two strong square towers were obtained on the north side. The eastern wall was preserved only in its northern part, beyond the Castle Tower (German: *Schlosstor*) in its further course to the south, however, by drawings of the 18th century. It had no intermediate towers like the western wall. Boulders (German: *Feldsteinmauerwerk*) made the lower part of the south wall and ended up very irregularly on the top. The moat dug around the fortress was filled with water. Around 1263, a significant centre of Königsberg with a trade port was made in the Baltic Sea region. Nevertheless, the foundation of the town was unsuccessful. In 1264, the construction of St. Nikolay's Church (dedicated to Saint Nicholas, who was a patron saint of seafarers, merchants, and fishermen, destroyed in 1828) for the citizenship parish, the oldest church in Königsberg,

began on the southern side of the fortress. After the completion of Königsberg Castle, the establishment of new fortified support places was temporarily interrupted in the Prussian-inhabited lands. During the 13th–14th centuries, small settlements dominated the urban landscape of the State of the Teutonic Order. The dominant feature of administrative structures in the State of the Teutonic Order was castles followed by newly founded towns (Kranz, 2013).

Churches for the townspeople parishes in important trading centres developed instead of triple planning building complexes built by the Livonian Brothers of the Sword

In Livonia, the inhabitants' living standard decreased in the 13th century due to the destruction of places populated by the Cours, Semigallians, Latgalians, Selonians and Livs. The Brothers of the Sword built fortifications for residences of rulers on steep banks protected by waters, and near it, an outer part of the castle and settlement created a triple-division building complex. The settlement, connected functionally with the residence, was included in the common defence system and became a separate structural unit. The German town laws were awarded to it. Towns of irregular layouts, surrounded by defensive walls beside castles, did not differ very much from the castle-like settlements. In medieval urban structures, a regular net of streets could be found. Both types of settlements – the town and settlement were formed alongside the residence-fortress, which took an important place in economic and political life and was a central part of the defence system. In manufacturing and trading areas, merchants and craftsmen's guilds were the uppermost, and in ideology – the church. Towns contributed to the formation of certain structures (Šterns, 2002, p. 176).

Kokenhusen (Latvian: *Koknese*) fortified building complex on the Latgalian-inhabited hillfort near the Daugava Waterway got a triangular outline, which had a former settlement of locals baptised in Orthodox. The castle settlement developed under the guise of two stone blocks mutually placed at a narrow angle built by the Swordbrothers subordinate to Bishop of Riga. Its 'line segment castle' building composition was determined by the linear arrangement of houses on both sides of the main street, which from Bishop's residence led to the main gate built-in the defensive wall. Pope (1254–1261) Alexander IV confirmed in 1255 that *castrum Kukonois* built by the Livonian Swordbrothers as the base for the conquest of the Daugava Waterway belonged to the Archbishop of Riga. Since 1256, the Cistercian monastery existed in the Kokenhusen castle settlement protected by a wall from three sides on the background of a two-storey building volume on the hilltop. Both residential blocks were included in the unified defence system created by defensive walls. On 13 July 1277, Archbishop of Riga (1273–1284) Johann I of Lune awarded the Riga law (German: *Rigisches (Stadt) Recht, Rigischen Statuten*) to the castle settlement. He determined the borders of the town

and mentioned that Kokenhusen Town Wall (destroyed in the 1680s to build new fortifications and an esplanade) had been built. The Water Gate facing the Daugava was made in the defensive wall adjoining the tower. Building of the settlement was arranged symmetrically on either side of the longitudinal axis orientated from the residence towards the Land or Town Gate with the zwingler in the north part of the Town Wall. Gutters from dolomite slabs for rainwater drainage were made on both sides of cobbled streets (Caune, 2014, p. 7). A pasture was behind the Town Wall. In the town of Kokenhusen (German: *Stadt Kokenhusen*) (Fig. 5), each of the three stone churches performed a specific function. The largest was St. Paul's Church (around 1225?) for the townspeople Catholic Parish at the market in front of the ruler's residence. The church with a tower of the Franciscan Monastery was on the east side at the defensive wall. Goods were stored in the Orthodox Church of the Russian merchants' yard. The Russians made merchants' yards with Orthodox churches also in Wenden and Gersika. In Visby, during the archaeological research of the Russian merchants' yard in 1971, the foundations of St. Nikolay's Church of rectangular layout and a semi-circular apse on the east side were uncovered.

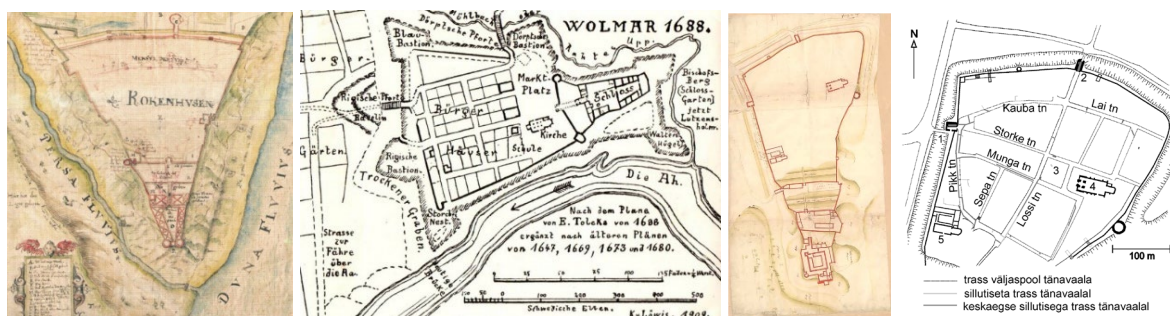


Figure 5 *Fecit Georgius Schwengell. Plan of Kukonois Castrum, its outer part and the site of a town: C – City Gate, E – town, F – church for the townspeople Catholic parish, H – tower, L – placement of the old wall, M – a tall tower, N – bridge over the moat, O – castle, P – towers, Q – Water Gate. Around 1630 (Stockholm, Kungl. Krigsarkivet)*

Figure 6 *Fortress researcher Karl von Löwis of Menar. Plan of Wolmar Fortress, its outer parts and an orthogonal planned residential area of the town with the location of St. Simon and St. Jude Church for the townspeople Catholic Parish. 1688 (Löwis, 1922)*

Figure 7 *Karl von Löwis of Menar. The layout of the Fellin Fortress and defensive wall trace in the 17th century. 1914 (Löwis, 1922, p. 146)*

Figure 8 *Archaeologist at the University of Tallinn Institute of History Arvi Haak. Town Plan of medieval Fellin with the street network and location of St. John's Church for the townspeople Catholic Parish. and walls reconstruction plan on the basis of the plan of 1688: 1 – the Riga Gate, 2 – the Dorpat Gate, 3 – a marketplace, 4 – St. John's Church, 5 – Franciscan monastery and St. John and St. Clara's Church. Around 2002 (Haak, 2002)*

In Kokenhusen, members of the noble von Tiesenhausen family were administrators in the 13th–14th centuries. A tall square tower with a cellar built until 1382 emphasised the northeast end of the two-storey block facing the Pērse

River. Since 14 July 1397, the *castrum* was transformed into a residence. The yard on the north side was marked off by an open gallery in front of the old refectory. Buildings next to a deep moat separated the residence from its outer part surrounded by a defensive wall that included towers (Caune & Ose, 2004, p. 253). Archaeological research (1961–1966) of archaeologist Ādolfs Stubavs (1913–1986) provided news about the population, the Town Wall, the outer part of the *castrum*, and the Hanseatic city of Kokenhusen.

Orthogonal town planning applied in the State of the Teutonic Order promoted the introduction of rational elements of urban structure and was employed in the fortified building complex of Wolmar (Latvian: *Valmiera*) whose orthogonal geometric grid layout obtained a symmetrical composition (Fig. 6). The longitudinal axis was determined by the road from the Riga Gate through the settlement and over the moat along the bridge up to the western wall gate of the *castrum*. Livonian Master (1282–1287) Willekîn of Endorp started to build triple-nave St. Simon and St. Jude Church for the townspeople Catholic Parish. A square meant for trading was created in front of the entrance of the stone church. A heavy, square-plan tower was added to the west wall of the basilica. As founding documents have not been preserved, the year 1283 was assumed to be the year of construction. The oldest mention of the church in Wolmar can be found in '*Hermann de Wartberge Chronicon Livoniae*' /Livonian Chronicle of Hermann of Wartberge/. Churches for the townspeople Catholic Parish further influenced the urban space of fortified towns established in German traditions. A special vacant interzone for trade and public activities in front of the ruler's residence and at St. Simon and St. Jude Church separated six symmetrically arranged residential apartment blocks to the west. Foundations of buildings and cellars uncovered during the excavations during 2006–2008 gave evidence about seven stone buildings (14th–17th centuries) (Caune & Ose, 2004, p. 533–534). However, due to economic stagnation, frequent wards, and fires, several pieces of land in small towns remained vacant; thus, a regular layout was quite often relative. Local features of nature, such as terrain, location of water reservoirs, road tracks, and greeneries also had an impact. Wolmar environment differed from the urban environment in Western Europe, where the architectural emphasis was placed on isolated squares in a residential area. In the northern part of the settlement, a gutter of flat surface stones for rainwater drainage was placed on both sides of the 5.5 metres wide cobbled street next to the defensive wall (partly knocked down in 1681, starting construction of new fortifications, and disappeared completely in the 18th century) (Caune, 2014, p. 8–9). A paved road to Riga started from the 3.3 metres wide Riga Gate. Wolmar townships adopted the Riga law in 1323 and joined the Hanseatic League in 1365.

In Fellin (from 1919 Estonian: *Viljandi*), the Teutonic Knights built a closed rectangle *castellum*-type structure for a convent, and the Tall Hermann Tower (Estonian: *Pikk Hermann*) was included in its northwest corner (Fig. 7). The

settlement behind the castle developed, and together with several outer parts of the castle for servants' homes and outbuildings, formed the fortified building complex of an orthogonal geometric grid layout adapted to the hillfort's relief and included in the common defensive system. Settlement's planning was not related to the placement of the *castellum* structure, from which the road led through the gate tower and took over the moat to the outer part and along the bridge to a fortified settlement and the defensive wall gate, marking the main axis of a symmetrical urban planning composition. After the fortress formation, the building initially developed at the defensive wall gate, but later, around the marketplace in the settlement centre (Fig. 8). The older population has not been recorded in this particular place (Haak & Russow, 2013, p. 77). Livonian Master Willekîn of Endorp awarded the Riga law to the settlement in 1283. The small town of Fellin became a member of the Hanseatic League at the beginning of the 14th century. Its layout consisted of three functionally different parts. Even after the construction of Fellin Town Wall, the area had undeveloped and uninhabited places bounded by the wall. However, a medieval street network has survived this period. St. John and St. Clara's Church (Estonian: *Johannesele ja Klaarale linnakirik*; 1466–1472, closed in 1560) for the townspeople parish was built eastwards from a market in the centre of Fellin, and it showed the trading town's independence from the ruler, which could not be noticed in Kokenhusen and Wolmar. There, the market was located in front of the ruler's residence.

Konrektor (1768–1804) at the Riga Imperial Lyceum, German pedagogue, ethnographer, and painter Johann Christoph Brotze (1742–1823) made the oldest Fellin plan with the street net. A librarian from Riga, the most famous fortress researcher in the Baltics until the 1930s Dr Phil. Dr Phil. Karl von Löwis of Menar (1855–1930), applied plans, drawn by Brotze and a Swedish topographer in 1650, and developed the first reconstruction picture (1914) with the placement of streets and church. History researcher and priest August Oswald Westrén-Doll (1882–1961) created a detailed medieval Fellin reconstruction drawing in 1929 according to inventory documents, compiled by the Polish. On the base of the map of 1650 and Brotze's drawing, American geographer John Leighly (1895–1986) made the medieval Fellin reconstruction picture. It was published in 1939. John Leighly, who was a graduate student at the University of Michigan and received the first PhD in geography to be granted by this university in 1927, with a dissertation on 'The Towns of Mälardalen in Sweden: A Study in Urban Morphology', became an Assistant Professor (Haak & Russow, 2013, p. 60). Analysing the archaeological research materials and plans, the structure of medieval Fellin was reconstructed.

In the Confederation of Livonia, the defensive wall of fortified Wolmar, Kokenhusen and Fellin building complexes on steep-sided promontories built by the Livonian Swordbrothers was part of the common defence system. Under the guise of Fellin and Wolmar castles built by the Teutonic Order, fortified towns

were founded on sites of settlements created by the Swordbrothers. The layout for these fortified building complexes of the 'line segment castle' consisted of the residence, and the outer parts of the castle and town determined by the road, which led from the castle to the main gate built-in the town wall, and the church for the townspeople parish near a marketplace. Residential houses were built in quarters symmetrically arranged along the compositional longitudinal axis.

Development of planning of the Teutonic Order power centres behind the early regular layout castles

The construction of the massive single-unit Thorn Castle of stone began around 1255, and the chapel mentioned already in 1263 was included. Walls, which followed the irregular outline of former protective structures, were enclosed from the side of the Vistula by a wing of a convent, a rectangular house with a narrow communications passage adjoining the courtyard. All principal elements of the Old Town architectural landscape had been put in place. Their form was to evolve, and their place in the topography of the town remained unaltered. In the second stage of development, there was a change in the spatial relations between the oldest religious buildings. The distance between them of course remained the same, the Franciscan Convent gained in status as located in the corner of the central square, while the church for the townspeople parish 'moved away' from the new compositional and functional centre of the town. The Merchant's House (1259) supplemented buildings, which organized inhabitants' public life. Defensive walls replaced the older fortifications of timber and clay, which originally protected the town. Fortifying them improved the shape of the early medieval town. In the same period, the new monumental structure underlined the strategic and symbolic location of the fortress in place of the citadel and the sign of power (Kranz, 2013). Perceiving the potential of the new urban centre and wanting to introduce some corrections in the original Kulm law (German: *Kulmer Recht*, Latin: *Jus Culmense vetus*, Polish: *Prawo chełmińskie*), the Knights granted a new one, which extended the patrimony of the Old Town. The Kulm law also Culm or Chełmno law named after the town, where it was signed, was a modification of Magdeburg Rights and expanded, independently from the Knights to a larger set of laws called *Alter Kulm*. The area of the town increased twofold, and this indicated a growth period. The northward expansion resulted in a more classic pattern with a central square surrounded by houses of irregular shape.

Elbing became a significant port in the State of Teutonic Order and obtained extra privileges in trade. Elbing Castle was rebuilt into a square-plan structure (Fig. 10), and a residential tower was included in the southeast corner of its construction volume. St. Nikolay's Cathedral up to the 14th century was used for religious and social activities.

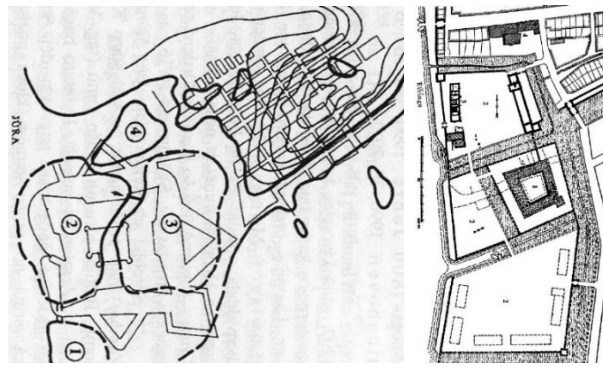


Figure 9 Archaeologist Vladas Žulkus. Plan of the River Dange estuary: 1 – the place of Memel Wooden Castle (until 1253), 2 – Memelburg Castle – the settlement, obtained an unofficial name Neu Dortmund /New Dortmund/, 4 – the island. The 16th – 17th-century fortifications were marked with fine lines. 1994 (Atskaņu hronika, 1998, p. 329)

Figure 10 Christian Probst. Plan of Elbing Castle with a tower at the southeastern corner: 1 – castle, 2 – outer parts of the castle with farm buildings, 3 – Landmarschall Castle, 4 – the Holy Spirit Hospital (online 03.07.2017, source: https://img-fotki.yandex.ru/get/4113/13719937.1cc/0_1164b6_cd42c320_XL.jpg)

The Teutonic Order did not keep a big navy, but it required free access to the Baltic Sea and unimpeded shipping to transfer the Knights to Livonia. In Memell, five parallel streets oriented perpendicularly to the Dange River flow and perpendicular side streets divided the town's area into regular residential building blocks (Fig. 9). Water obstacles separated Memelburg Castle at the River Dange's mouth from the town of an orthogonal geometric grid layout on the left riverbank, where craftsmen's workshops and the marketplace were located. St. John the Evangelist's Church for the townspeople Catholic Parish was built next to St. Nikolay and St. Mary's Churches.

Livonian Master (1263–1266) Konrad of Mandern began to build fortresses of regular layout on islands and promontories. He built a solid octagonal six-storey bergfried called the Tall Hermann Tower (1265–1266) also *Vallitorn*, one of the first stone fortresses for the Teutonic Knights. On a hill of the marshy River Paide's bank by the road to Reval, this central tower has been the core of the castle complex on the Pernau River's (Estonian: *Pärnu jõgi*) right bank. A wooden staircase led to the only entrance at a height of ten metres. Buildings added to the inner side of a thick defensive wall made a rectangular yard (Fig. 11). The monumental building *castellum* was introduced in Livonia, and peculiarities of relief were not any more important. A wooden church existed as early as the 13th century on the castle mound, and around it, the settlement with a marketplace formed. It gained the Riga law on 30 September 1291 and became the town of Weissenstein (*Wizenstein*, *Wittenstein*, also Low German: *Wittensten*, Estonian and Latvian: *Paide*, Latin: *Albus Lapis*), which means 'white stone' derived from the light limestone used for the construction of Weissenstein Castle, and a member of the Hanseatic League. A church for the townspeople Catholic Parish was built

in the town (Fig. 12) developed at the intersection of highways from New-Pernau (German: *Neu-Pernau*, Estonian: *Uus-Pärnu*, Latvian: *Pērnava*) or Embeck (German: *Embeck*) and Reval, and from Wenden, which was the most important fortress in Livonia. The centric layout city of Weissenstein, where the church for the townspeople Catholic Parish was included in the residential building, developed close to the fortress. In the 14th century, construction work was carried out at the fortress on a well-fortified island in the middle of a bog, and a chapel was built. In 1564, the Estonian name *Paide* was first recorded as *Paيدا*, which derived from the word *paas*, *pae* /limestone/.

In Livonia, the Teutonic Order started to build a square-plan Embeck Castle (Fig. 13) for the waterway's control. Water obstacles and a two-fold defensive wall surrounded a castle and its outer part on the left bank of the Pärnu River. A regularly planned castle settlement, not related to the residence planning, surrounded by the defensive wall and water obstacles, developed behind it. Instead of that, New-Pernau Town was founded, separated from the fortress by a water-filled moat. St. Nicholas Church (the late 13th century) on the corner of present-day Pika and Nikolai streets was built in the east of a square marketplace in the town centre, and the Town Hall was built in the north. The Town Hall was located in the north. The castle and town founded by the Teutonic Order on the coastal plain of the Baltic Sea were first mentioned in documents in 1265. Livonian Master (1309–1328) Gerhard of Jorke built in 1311 the four-block Embeck Castle and a two-fold defensive wall for the surveillance of waterways, leading to Novgorod. Streets of one of the first orthogonal planned settlements surrounded by water moved mainly towards the river, but others moved parallel to the river. The settlement gained the Riga law in 1318 and became a walled commercial town of New-Pernau with an ice-free port, and also became a member of the Hanseatic League. A water-filled moat separated the town of New-Pernau behind the castle, so it developed unrelated to the castle (Fig. 13). The construction of the New-Pernau Town Wall can be dated to the second half of the 14th century (Bernotas, 2012).

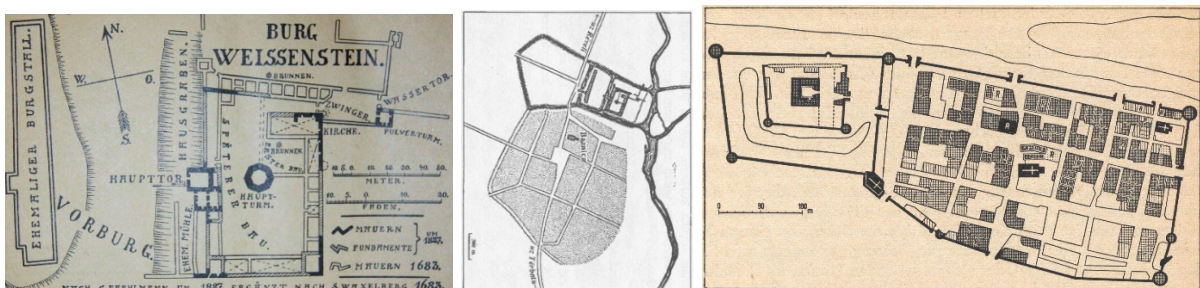


Figure 11 Karl von Löwis of Menar. Plan of the Weissenstein Fortress with the tower of an octagonal layout (Vartberges hronika, 2005, p. 183)

Figure 12 The site of the town of Weissenstein (Atskaņu hronika, 1998, p. 342)

Figure 13 Karl von Löwis of Menar. Plan of Embeck Castle and the town of New-Pernau in the 14th century on the basis of plans of 1640, 1688 and 1696. 1914. (Tuulse, 1942, p. 138)

In the Confederation of Livonia, the foundation of New-Pernau, Fellin, Weissenstein and Wolmar were closely related to the land conquest, formation of new power relations, military strategy, administration and Christian belief interest dissemination. New-Pernau and Memell towns of an orthogonal geometric grid layout and Marienburg, the capital city of the State of Teutonic Order, developed independently from the fortress. A church for the townspeople parish was built near a marketplace in the town centre (Ozola, 2020a).

***Castellum*-type structures in fortified building complexes of the Teutonic Order power centres**

The Teutonic Order suppressed the uprising in Livonia and Prussian-inhabited lands in 1273 (Milicers 2009: 42). Vogt of Samland (1278–1292) Dietrich of Liedelau built the north part of Königsberg Fortress of stone and octagonal Haber Tower (German: *Haberturm*, destroyed in the war during 1941–1945) in its northeast corner. In January 1286, the Old Town was founded. High and thick defensive walls and six towers were built, and a room for receptions was made in 1312. On its south side was a single-nave Castle Chapel that had four bays. The bell was installed in the tower with a tent-like roof. Later, the Castle Church was created (Fig. 14). Apart from the four corner towers, two more towers were built in the north and three in the south, therefore in total there were nine towers for defence. The remaining buildings, farm buildings, stables, etc., leaned against the ring wall from the inside of the courtyard. The convent house with the church, dining room and chapter house joined to the west. In 1387, a free-standing tower was built next to the external wall at the southwest corner of the convent house, and it was the architectonic dominant was in a rectangular yard, surrounded by functionally different buildings (Fig. 15). In 1387, a free-standing tower was built in the southwest corner of the monastery house next to the outer wall, and it was the architectural dominant in a rectangular courtyard surrounded by functionally different buildings. With the completion of this castle tower, the construction of Königsberg Castle was over. A regular-plan four-unit building with a courtyard formed a ‘fortress in a fortress’, which was not connected with the extensive yard of the fortified building complex. During the 14th century, colonization of the Prussian lands came to an end. Livonian economics stabilized in the second half of the 14th century.

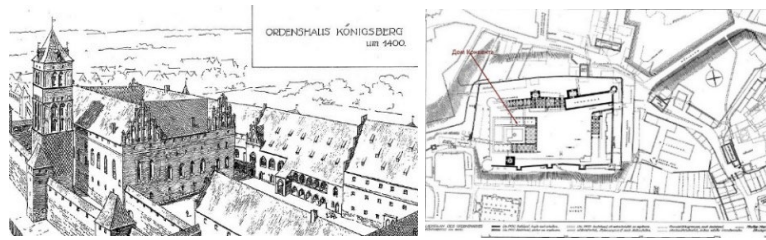


Figure 14 **Historian, Professor Dr hab. Tomasz Torbus. The view of Königsberg Fortress and the free-standing tower. 1998** (*Vartberges hronika*, 2005, p. 227)

Figure 15 **Architect, Professor Friedrich Lahrs (1880–1964). Plan of Königsberg Fortress and a site of church for the townspeople parish on its south side** (online 08.07.2017, source: <http://popadin39.blogspot.com/2016/01/4.html>)

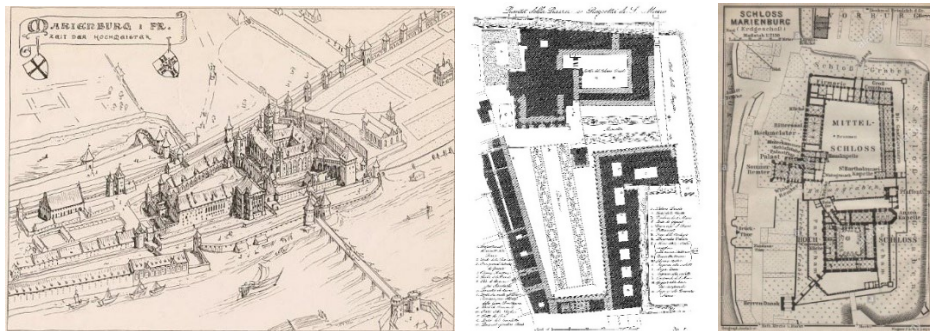


Figure 16 **Architect Conrad Emanuel Steinbrecht (1849–1923). The reconstruction drawing of the 15th-century Marienburg Castle** (Steinbrecht, 1885)

Figure 17 **Italian printmaker Moretti Dionisio (1790–1834). Plan of San Marco Square in Venice, in XVI. tables. 1831** (Moretti, 1987)

Figure 18 **Marienburg Upper Castle with a tower on the eastern side of Anna's Chapel** (online 26.06.2017, <https://hannselspipigeschichten.files.wordpress.com/2010/08/mariebgkartel.jpg>)

The Teutonic Order made a decision in 1271 to build the capital city (1308–1454) of the State of Teutonic Order on the right bank of the Nogat River by the Danzig–Truso Road (Guerquin, 1984, p. 209) in order to place the Grandmaster (German: *Großkomtur*) residence there. Defensive walls for the fortress were built, and the moat was dug (1274–1275). A triple layout Marienburg fortified building complex (Fig. 16) created in several stages consisted of the Meeting or Upper Castle (German: *Vorschloss*; 1276) or a monastery of a square layout. It also was the administrative and cult centre. A sacral building was included in the volume of the square Upper Castle (Fig. 17), to which a courtyard clung, and a solution was found in compliance with the idea incorporated in the Cistercian monastery's functional scheme. The courtyard was surrounded either with one or two-storey cloisters, creating an artistically rich wall plane. On 27 April 1276, Grandmaster (1273–1276) Konrad of Thierberg named the fortress (*Sencte Marie Burch*) after the Teutonic Order's patroness St. Mary as Marienburg and awarded the Kulm Law for the settlement.

In the late 13th century, in Venice, the number of people involved in justice affairs increased, and St. Mark's Square was transformed. In compliance with the

economic, political and social requirements, the complex was extended, making it open towards the city. In 1292, Christians lost their Holy Land, and the Teutonic Order's Grandmaster from Akko escaped to Venice, where he built (1291–1309) residence. On a flat relief, the castle of rectangular layout with a yard protected by a ringwall was made for the convent of the Knights. The garrison, household and warehouse buildings were arranged along the perimeter. In Venice, extending St. Mark's Square and the surrounding buildings, the fortified building complex of the Doge's Castle with St. Mark's Cathedral, included in its perimeter construction, became part of the city centre composition (Fig. 18). In 1309, Grandmaster (1303–1311) Siegfried or Zygfryd of Feuchtwangen moved his residence to Marienburg, the capital city of the State of the Teutonic Order. The sample of Venice was used as a solution. The Middle Castle (German: *Mittel-Schloss*; after 1310) (Fig. 16, 17) for the administrative centre was built in the middle part, to which the Lower Castle (German: *Hochschloss*) or the outer part for the economic base adjoined the riverbank. Under the cover of the outer part of the castle, the Middle Castle plan reminded of a spacious trapezoidal yard, surrounded by the perimeter building, which was joined to the regular planning monastery's courtyard. The perimeter building of the Middle Castle surrounded the Upper Castle, and a spacious yard was created (Fig. 19). The Middle Castle planning on the background of the outer part of the castle reminded of a spacious Order's *castellum*, where the trapezoid yard surrounded by buildings around the perimeter was linked with the courtyard of the monastery's regular building. The Juranda Canal (also *Młynówka*) joined with the Nogat River was dug (the turn of the 13th/14th century) for the improvement of the defence system of Marienburg and surrounded the fortified building complex. Each part of the Marienburg building complex had an autonomous layout. The administrative centre complex of brothers-knights' convent and a square-plan building with the central heating on the floor (German: *Luft- (Fußboden-) heizung*) was made. The construction of the principal tower was started under the guidance of Grandmaster Dietrich of Altenburg in Marienburg. Southwards from the Upper Castle, a church for the townspeople Catholic Parish was built at the marketplace in the central part of fortified buildings. The bergfriede and a chapel with corner towers orientated in the east-west direction clung to the square. St. Mary's Church (*Sankt Marien-Kirche*, 1344) was reconstructed and St. Anna's Chapel (German: *Sankt Annenkapelle*, 1331–1344) got under its auspices (Ozola, 2018, p. 192).

Grandmaster (1382–1390) Conrad Zöllner of Rothenstein started to build a four-storey castle (1382–1399). An autonomous plan was developed for each part of the Marienburg fortified building complex. In general, a united urban ensemble with a regularly planned four-block monastery building or the Upper Castle and administrative centre and also the Middle Castle in the middle part of the three-part planning was created. The Bridge Gate and a bridge (around 1450) over the Nogat were built opposite the Upper Castle. The defensive wall surrounded the

town in 1480. Complicated ensembles of medieval fortresses and monasteries were built gradually, and they acquired artistic harmony. The initial idea developed in a creative way. Elbing, Königsberg and Marienburg castles were early regular-layout fortifications.

Churches for the citizenship Catholic Parish in double cities of the State of Teutonic Order and medieval agglomeration of Livonia

The idea of creating the New Town of Thorn and bringing Dominicans (Polish: *Ojców Kaznodziejów św. Dominika*) in were maturing side by side at a certain stage of development. Bishop of Kułm, a Dominican Heidenryk wanted to invite predicants to Thorn. In the second half of the 13th century, the Teutonic Knights clearly distanced themselves from this order, opposing the election of their representatives for Bishoprics in the Prussian-inhabited lands and promoting the incorporation of cathedral chapters that aimed to weaken their competitors. On 2 April 1263, Dominicans arrived in the New Town of Thorn and built a monastery, financially supported by Bishop of Kulm. The church of the Dominican monastery was built in the northwest corner of the border territory of both towns. The number of inhabitants and economic potential increased in Thorn. Separate privileges were awarded to the Old and New Towns of Thorn. Both communities obtained complete independence, and each of them created its own legal, individual urban constructional formation. In exchange for letting Dominicans settle in Thorn, Bishop had to agree to the incorporation of the Kulm law into the Teutonic Order, and the Incorporation Act was signed. The New Town of Thorn was founded on 13 August 1264, according to the Kulm law. At the same time, the presence of another mendicant convent perfectly harmonised with the project of founding the New Town and was probably taken into consideration by both negotiating parties. The New Town had a lower economic potential. It was a result of spatial and demographic constraints. All components of the new town as the location northeast of the castle, preserving the central position of the ruler's seat relative to both towns and expanding the defence zone of the castle and the town followed the vision of the founder. It was important to a legal status identical to that of the Old Town of Thorn. A regular arrangement with the main square and a modular pattern of streets and blocks might be enriched by pointing to spreading out of important structures on the town plan – moving the main square closer to the castle, locating the Dominican triple-nave St. Nikolay's Church (Polish: *kościół św. Mikołaja i klasztor dominikanów*; 1334, destroyed in the middle of the 19th century) in the northeastern corner of the town and St. James's Church in the south-eastern corner, that was mirroring spatial relations between the main churches of the Old Town. The difference was that the church for the townspeople parish in the New Town was traditionally placed by the main square. The biggest church supplemented the complex in the New Town

of Thorn. The church and monastery were extended from 1350 to 1370. The Most Holy Virgin Mary's Church (Polish: *kościół Wniebowzięcia Najświętszej Marii Panny*, 1270–1300) was made with a nave covered with a ridged roof and without the main tower, whereas with asymmetric hall and narrow windows. Three octagonal towers, out of which the middle one was bigger, supplemented the construction volume of the chancel (Nawrocki, 1966). In 1351, fire partly destroyed the cathedral, and it was renewed during the third stage of construction. The lack of direct access to the Vistula River, usually perceived as a constraint in the development of trade imposed by the Teutonic Order, also meant a north-side extension of the border with the castle compound and hence the deepening of spatial relations with Komtur's seat. The Teutonic Order was the founder of both communities of Thorn. Since the structure of the New Town was established, it identified more with it. The Old Town was not involved in the process of creating a new urban centre. Disagreements between the two communities appeared soon (Kranz, 2013). Thorn was composed of three parts: the Old Town of a regular layout created in two stages of construction (Jasiński, 2008, p. 97) in the west, the New Town in the east and the castle in the southeast (Fig. 19). The broadcloth trading hall built according to the Flemish sample was the main building on the marketplace in Thorn. Later it was rebuilt for the needs of the Town Hall, whose monumental construction volume had a high prismatic tower. At the end of the Middle Ages, the broadcloth halls were knocked down, leaving only the Town Hall in the marketplace.

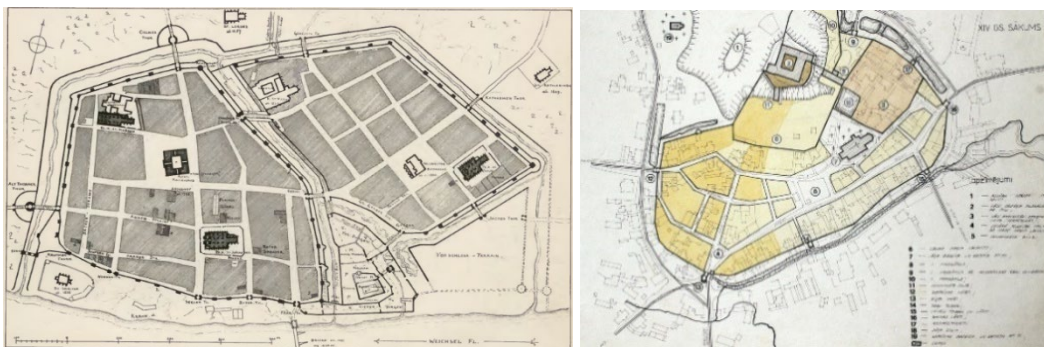


Figure 19 Conrad Emanuel Steinbrecht. Plan of the Old Town of Thorn and the New Town of Thorn. 1885 (Steinbrecht, 1885)

Figure 20 Jānis Zlaugotnis. Reconstruction of the early 14th-century Wenden planning: the hypothetical Wends' housing place on Riekstu Hill, Wenden Castellum, the hypothetical location of German craftsmen settlement, the oldest part of the town with a small, oldest market square, a large market square, St. John the Baptist's Church and cemetery around it, outer parts of the castle, fortified bridge, and Wenden Town Wall with built-in towers and gates (Zlaugotnis 1988)

In Wenden, Livonian Master Wilken of Endorp built St. John the Baptist's Church (German: *St. Johannis-Kirche*) for the townspeople Catholic Parish

(Fig. 20) probably instead of the first wooden church for the Wends' Parish. The main entrance of the church to the west wall was made through the perspective portal. On 24 June 1284, Archbishop of Riga Johann I consecrated this church. Buildings near St. John the Baptist's Church formed an urban centre around the marketplace (Fig. 20) at the intersection of present-day Rīga and Kalēju streets. It is possible that a market was moved by St. John the Baptist's Church; a well for drinking water was installed in the second half of the 14th century. Springwater stored in underground storage facilities was taken through wooden pipes from the side of Ronneburg to both the market wells. German immigrants built a warehouse or a barn with a sunken lower part for a semi-basement in the 1280s, and structures occupied the area of the present Old Town. It flourished and became an important political centre with a marketplace. Structures under the marketplace have not been found, and buildings without basements as in Riga and Lübeck were built on the edge of the square until the 17th century. A building for a convent was also a production centre, to which outer parts of the castle were made in the second half of the 13th century. Stables, buildings for vehicles and besiege machines, cannons, smithies for horseshoes and weapons, breweries, harness makers' and other workshops were built in outer parts of the castle, one from the other separated by moats and walls (Milicers, 2009, p. 158). Plan of oval configuration drawn by Johann Brotze shows Wenden *castellum* with several towers, three outer parts set up for the economic activity of the castle, and an improved town wall connected to fortifications next to the gate. On the east side of the plan, the Castle (Latvian: *Pils*) Gate near Pils /Castle/ Street was marked, and there was a tower called Wolmar Tower according to writer and historian Jānis Juškevičs (*Juszkiewicz*; 1886–1961). The Powder (Latvian: *Pulvera*) or Watch (Latvian: *Sardzes*) Tower was referred in documents of the 17th and 18th centuries. The Rauna Gate Tower (German: *Torturm*) was at the end of Rīga Street. The Water Gate Tower and the Tortue (Latvian: *Moku*) Tower without gate were at the end of modern Vaļņu /dam/ Street. On the west side of the plan, the strong Riga Gate Tower with a zwinger was marked near the oldest marketplace with a well (abolished in the 20th century) at the end of Rīga Street. Katrina Gate was at the end of Lielā Katrīna /Great Catherine/ Street; the semi-cylindrical Casting (Latvian: *Lējēju*) Tower without a gate located a little further. John's Pond (unpreserved today), which may have been saved from an older defensive system, was marked near the south outer part. The medieval agglomeration of the town was formed by building on present-day Mazā Katrīna Street, and around Liv Square (Latvian: *Līvu laukums*, the former marketplace) and the marketplace in front of the triple-nave basilica of St. John the Baptist's Church, now Rose Square (Latvian: *Rožu laukums*). The agglomeration consisted of craftsmen' and merchants' houses at the walls of the outer part of the castle in the eastern part of the settlement and the Liv houses arranged by Riga and Lemsal roads in the southern part. The Latgalian suburb was on Rauna Street. A medieval agglomeration of oval configurations included

also canons' houses and the Russian merchants' yard. In the inspection (1582) of Wenden Castle, it was mentioned that in the town, merchants from Kievan Rus' visited the Orthodox Church of a rectangular layout. In the original plan (1693) of Wenden Castle and the town drawn by Swedish surveyor Johan Abram Ulrich, the church with a semi-circular apse and entrance from the west was shown (Caune & Ose, 2010, p. 132). Artist Johann Brotze wrote in the explanation of a copy of the Wenden Castle plan that the Russians had churches and merchants' yards in other towns. The settlement that consisted of Liv Square and Rožu Square together with three single fortified extensive outer parts of the castle had the common defence system created by the town wall of dolomite with towers, gates and built-in three main exits. The border of the town went about along Riga Street, Kalēju Street, past the church for the rural Catholic Parish replaced by St. Catherine's Church of stone built outside Wenden Town Wall under the direction of Livonian Master (1494–1535) Wolter or Walter of Plettenberg. Then it led along the West Tower, walls of the south outer part and Mazā Līvu /Small Liv/ Street (Juškevics, 1934, p. 163–164). Around 1296, the Russian Gate built-in a defensive wall located near the marketplace, now Liv Square. Wooden buildings adjoined the fortress. Wenden acquired the Riga law in 1323. Wenden became the Hanseatic city in 1367. In the 14th and 15th centuries, Wenden was mentioned in the Hanseatic documents (Misāns, 2007). Historian Wilhelm Theodor Georg Lenz (1906–1976), born in Wenden, wrote about the relations between Lübeck and Wenden in the 14th century (Lenz, 1971). City walls with three towers, four gates, and three main exits were first mentioned in 1383.

Around the 13th century, river banks were used for berths in a suitable place, taking into account the small size of ships at that time. Goods transported by ships were loaded directly on the banks of rivers or seas. Finnish historian, Professor of General History (since 1955) at the University of Turku Teodor Vilhelm (Vilho) Niitemaa (until 1942 Nyman, 1917–1991), whose dissertation from 1949 deals with the medieval history of the Baltics, and Emeritus Professor of general history at the University of Turku Dr Phil. Kalervo Hovi (b. 1942) wrote a popular masterpiece '*Baltian historia*' /Baltic History/ (1959). Niitemaa studied early medieval seaports and identified hillforts (German: *Wallburgen*) and fishing tool sheds (German: *Fischermaien*) as the most important structures (Niitemaa, 1952), which were also useful as short-term stays. During the development, fishing villages could grow from fishing toolsheds.

In 1263, Livonian Master Konrad of Mandern and Bishop Heinrich signed the agreement about the Cours and Semigallians' port ownership (Malvess, 1937, p. 22). In the Early Middle Ages, the lower reaches of all rivers were called ports. Since it was difficult for foreign seafarers to distinguish many berths on riverbanks, they were interested in the shipping route of the whole river. Unlike many and varied berths on riverbanks, its lower part was designated as seaport *portus maris*, and called by the name of that river. The lower end of the Winda

River was called the Port of Winda mentioned for the first time in this document of 1263. On the Baltic Seacoast around 1270, a square-plan residential tower of stone on the hill was built for the surveillance of the economically important estuary of the Winda River by the road, which took to the Port of Winda and marketplace, and the construction of Windau Castle (around 1270–1280) begun. After the construction of the free-standing, four-storey tower, a defensive wall and the formation of the four-unit *castellum* followed. Palisades may have included wooden housing in the adjacent area between modern Jāņa /John/, Pils /Castle/, and Peldu /Bathing/ streets (Dirveiks, 2004). Documents do not show the time when a town was founded near the fortress. It is possible that not only the fortress but also the town already existed in the 1290s. The old road did not start from the gates of the medieval town (Fig. 21) but passed by, and only its branch was connected. From the ferry, which was probably connected to the town, the road may have gone to the Winda's mouth. The oldest layout of Windau was probably formed by building in present-day Užavas, Skroderu /Dressmakers/, Lielā /Great/, and Peldu streets. Fragments of original seven log buildings and stand-construction wooden residential houses were uncovered during archaeological excavations (2000–2001) carried out between Ostas /Harbour/, Kuģinieku /Sailors/, Nabagu /Paupers/, and Jāņa streets in the coastal quarter of a settlement. Dimensions and constructive solutions were identical to wooden structures with basements in Riga built by German townspeople in the 13th century. When the wooden buildings burned down, houses were restored several times in this quarter of the town (Caune, 2014, p. 19). The settlement of craftsmen and fishermen by the moat near the castle was densely built-up at the end of the 13th century. Urban planning in Courland developed, taking into account local peculiarities. Livonian Master (1298–1307) Gotfried of Rogge (Latin: *Gottfridus*) handed over the wooden church for the townspeople Catholic Parish in Windau to the Bishopric of Courland on 16 August 1298. Livonian Master (1340–1345) Burchard of Dreileben offered land to their countrymen for free and called them to promote the growth of Windau, which gained political independence and administration. The founding document of the town of Hasenpoth (Latvian: *Aizpute*) in 1378 mentioned the town of Windau, which already had the Riga law at that time. However, there is no direct documentary evidence of the time of the acquisition of town rights. The housing of German immigrants and local Curonians living in the neighbourhood formed a medieval settlement agglomeration (Caune, 2014, p. 16). Windau joined the Hanseatic League. Until the second half of the 15th century, the embankment of the Winda between a castle and a new defensive wall was not economically used.



Figure 21 *Fragment of Courland map with Windau Castle near the Winda River and town buildings around the church for the townspeople Catholic Parish. 1640 (the National Archives of Latvia, Fund 1100, Description 1, Case 70, Page 15)*

Figure 22 *Architect Irēna Bākule (1945–2013). Development of medieval agglomeration in Goldingen (on the basis of the Goldingen 1813 plan). The first stage (dark grey): A – castle; 1 – The Old Town of Goldingen with the church for the townspeople parish. The second stage (light grey): A – castle; 1 – the Old Town of Goldingen with the church for the townspeople parish, 2 – Curonian Hamlet, 3 – Hill Hamlet. 2001 (Bākule 2001: 129)*

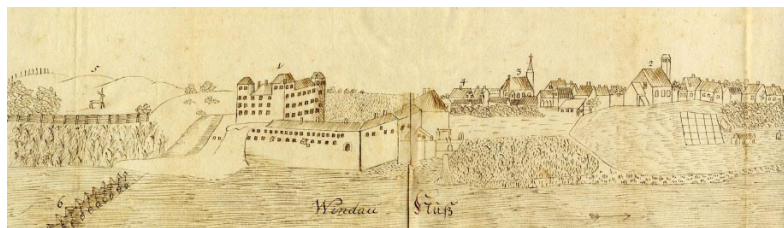


Figure 23 *Artist Johann Georg Weygandt (1680–1740). The view from the Winda Riverside to Goldingen Castle and buildings of the Old Town of Goldingen around St. Catherine's Church for the townspeople's Catholic parish. 1729. (Weygandt 1729)*

At least fifty years before the construction of the German fortress in Courland, the Curonian settlement existed on the River Winda's left bank. In the 13th century, the four-unit regular Goldingen Castle of stone replaced the wooden fortifications of the Commandry's Centre in Goldingen. In the late 13th century, *castrum Goldinghen* was replaced by square-plan Goldingen Castle of stone. As early as 1290, the Commander of Goldingen was appointed deputy to Livonian Master in Courland (Ligers, 1948, p. 115). One of the copies from 'Chronicon Lyvoniae' written by a merchant Jürgen or Georg Helmes showed a drawing with a four-unit regular Goldingen Castle and the Old Town of Goldingen with a wooden church for the townspeople Catholic Parish at the foot of the castle mound. In Livonia, the experience in the fortified yard building became useful for erecting rectangular castles of stone, for which location sites were chosen on the highest point of the relief. Later, the building type was improved, and stone castles were also built on plains, using the tower for defence. One or several outer parts

were developed at the castle. Towers were erected for their protection. The layout of an outer part near the fortress was affected by the peculiarity of local relief (Ozola 2018).

An area between the Winda River and St. Catherine's Church was given to Curonian inhabitants from Old Kuldiga Hillfort, and they moved to Curonian-inhabited Castle Hamlet (Latvian: *Pilsmiests*) to the northwest of St. Catherine's Church. The hamlet near the castle was formed over a long time; at the same time, there was the Curonian settlement at Old Kuldiga Hillfort. Ancient transit routes influenced the layout composition of the medieval settlement agglomeration (Fig. 22) created by Hill Hamlet and Castle Hamlet called the town. In the medieval agglomeration of Windau and Goldingen towns, each of the unrelated building units had its own layout—on both sides of the traffic road and around Market Square. Hill Hamlet developed on both sides of a road (now *Kalna* Street) paved with a small burial of pebbles on a clay base, which led from the castle along the left bank of the Winda to Mitau (now Jelgava Street). A settlement called 'the town behind the hill' (Latvian: *pilsēta aiz kalna*, German: *Stadt up dem Berge*) formed by structures of wooden pole construction was in the jurisdiction of the castle. There were half-basement rooms on the ground floor of these wooden buildings sunk into the ground. Thus, buildings near castles were built in settlements where German immigrants came to life in the 13th century (Caune, 2014, p. 17).

Livonian Master (1345–1359) Goswin of Herike (Latin: *Gosvinus von Ercke*) was granted the privilege in 1355. Ernst Hennig (1771–1815), the author of the edition '*Geschichte der Stadt Goldingen in Kurland*' /History of the town of Goldingen in Courland/, (Hennig, 1809) considered that Castle Hamlet was founded this year and already existed here as a town in the legal sense, characterised by the constitution, and was first mentioned in written sources of 1355. The defensive wall (possible palisades) was also mentioned in the same document. The Old Town of Goldingen as 'the town behind the hill' gained new lands. There were talks regarding Castle Hamlet within the Old Town of Goldingen, taking almost a quarter of the town and compensating for the recently allocated land, and also talks regarding the freedom of the town or townspeople (Ligers, 1948, p. 114). Six years since the privileges were granted to Castle Hamlet, Livonian Master (1360–1364) Arnold of Vietinghoff (Latin: *Arnoldus de Vitinghove*) granted to Hill Hamlet a privilege on 30 April 1361 declaring that the New Town of Goldingen 'up to the Mill River' (Latvian: '*līdz Dzirnau upei*') was granted all the rights and freedoms enjoyed by the Old Town of Goldingen (Asaris & Co, 2013, p. 15–16). In 1361, the municipality was granted a privilege in which the New Town was mentioned in addition to the Old Town of Goldingen. Settlements of local people and traders were not structurally and functionally connected in the urban space of the pyramidal power centre. Compact buildings were created and natural elements were involved for protection to create the

shortest possible palisade lanes. Not far from the fortress surrounded on the west side by a circular street (now Baznīca /Church/ Street), there was a customs and an irregularly planned marketplace with St. Catherine's Church of wood and the Town Hall in the point of contact of populated areas at the crossing of a roadway and waterway. Initially, buildings were built around the oldest market square on road's both sides and river banks. The planning of the town of Goldingen was determined by the environment and historical conditions, and not by the planning schemes. Goldingen (Fig. 23) won the privileges in 1378. When Hasenpoth got the same town charter as Goldingen and Windau in 1378, it was expressly pointed out that it was the Riga law (Ligers, 1948, p. 114–115). Livonian Master (1385–1389) Robin of Eltz expanded the area of the town of Goldingen in 1386. Goldingen became the Hanseatic city in 1398, although some scholars date this event back to 1277.

Conclusions

1. Thorn, an early town founded in the State of the Teutonic Order, was granted Magdeburg Rights, while in Livonia, early power and trade centres were founded under the influence of Lübeck determined the creation of planning and spatial environment. The construction was mainly arranged on both sides of the main street, to which attached the location of the church, Town Hall and market place.
2. The Teutonic Order initially used fortifications created by the Livonian Brothers of the Sword on promontories of riverbanks to establish power centres in Livonia. In fortified building complexes of Kokenhusen, Wolmar and Fellin, settlements developed behind the cover of fortresses and acquired the Riga law. In the residential area surrounded by defensive walls, dwellings were arranged on both sides of the main street, which led from the ruler's residence to the main gate built-in the town wall. The Knights employed an orthogonal geometric grid layout widely used for the creation of cities in the State of the Teutonic Order and established residential building blocks for dwellings in Wolmar and Fellin. A market square with a church for the townspeople Catholic Parish was near them.
3. In Memell and Goldingen, the newly founded power centres of the Teutonic Knights on Curonian-inhabited lands, the residential building developed near the fortress, and the layout was not directly related to the location of the castle, but rather to a waterway and the network of earth roads. A church for the townspeople Catholic Parish was built near the marketplace in the town.
4. In Livonia, the layout on a flat terrain of the towns of Weissenstein and New-Pernau developed independently of the position of the fortress, and it was influenced by the location of the marketplace in the town centre connected

with the creation of the street network and the choice of the construction site of the church for the townspeople Catholic Parish.

5. In Königsberg and Marienburg, dwellings were created close to fortified building complexes formed by *castellum*-type structures. The town behind the fortresses developed around the marketplace. Near, the church for the townspeople Catholic Parish was built.
6. A double city of Thorn was created in the State of the Teutonic Order, and each of the urban structures had its own centre, where the church was located. In Livonia, medieval settlement agglomerations developed in Goldingen and Windau. Their layouts linked to marketplaces, next to which a church for the townspeople Catholic Parish was built.

References

- Asaris, J., Lūsēns, M., & Jākobsone J. (2013). Viduslaiku Kuldīga = Medieval Kuldiga. *Kuldīga: arhitektūra un pilsētībūvniecība = Kuldiga: Architecture and Urbanism*. Kuldīga: Kuldīga District Municipality, 9–29.
- Atskaņu hronika = Livländische Reimchronik*. 1998. Rīga: Zinātne.
- Bākule, I. (2001). *Rātsnami Latvijas pilsētās*. Rīga: Zinātne.
- Bernotas, R. (2012). Medieval fortifications of Pärnu: an archaeological approach. *Zeitschrift für Archäologie des Mittelalters*, 40, 185–199.
- Caune, A. (2011). Livonijas robežpilis 13. – 16. gadsimtā. *Latvijas viduslaiku pilis, VII. Pētījumi un avoti par Livonijas ordeņpilīm*. Rīga: Latvijas vēstures institūts, 52–91.
- Caune, A. (2014). Arheoloģiskā pētniecība Latvijas 13. – 16. gs. mazpilsētās. *Latvijas Zinātņu Akadēmijas Vēstis*. Part A. Volume 68. 5–6, 4–22.
- Caune, A., & Ose I. (2004). *Latvijas viduslaiku pilis, IV. Latvijas 12. gadsimta beigu–17. gadsimta vācu piļu leksikons*. Rīga: Latvijas vēstures institūta apgāds.
- Caune, A., & Ose I. (2010). *Latvijas viduslaiku mūra baznīcas. 12. gs. beigās–16. gs. sākums*. Enciklopēdija. Rīga: Latvijas vēstures institūta apgāds.
- Dirveiks, I. (2004). Ventspils Livonijas ordeņa pils būvēstures agrīnais periods. 13. gadsimta otrā puse–14. gadsimts. *Ventspils Muzeja Raksti. IV*. Rīga: Ventspils Muzejs, 133–172.
- Guerquin, B. (1984). *Zamki w Polsce*. Warszawa: Arkady.
- Haak, A., & Russow, E. (2013). On the Development of the Town of Viljandi in the Light of Earliest Archaeological Find Complexes. *Estonian Journal of Archaeology*, 17(1), 57–86. DOI: 10.3176/arch. 2013.1.04.
- Hennig, E. (1809). *Geschichte der Stadt Goldingen in Kurland*. Mitau: J. F. Steffenhagen und Sohn.
- Jasiński, T. (1993). Die Rolle des Deutschen Ordens bei der Städtegründung in Preußen im 13. Jahrhundert. *Quellen und studien zur Geschichte des Deutschen Ordens*. Band 44. Internationalen Historischen Kommission zur Erforschung des Deutschen Ordens. Marburg: N. G. Elwert Verlag, 94–111.
- Jasiński, T. (2008). *Kruschwitz, Rimini und die Grundlagen des preussischen Ordenslandes. Urkundenstudien zur Frühzeit des Deutschen Ordens im Ostseeraum*. Marburg: N. G. Elwert Verlag.
- Juškēvics, J. (1934). Cēsis gadsimtu maiņās. *Aizsargs*. 4(130), 163–169.
- Kranz-Domasłowska, L. (2013). Double cities in the Teutonic State on the example of Toruń. *RIHA Journal 0068*, 8 March 2013.

Ozola, 2023. *The Influence of Churches of the Citizenship Catholic Parishes on the Layout and Urban Space of Medieval Towns in the 13th and 14th Centuries*

- Lenz, W. (1971). Beziehungen zwischen Lübeck und Wenden (Livland) im 14. Jahrhundert. *Zeitschrift des Vereins für Lübeckische Geschichte und Altertumskunde*. Band 51. 150 Jahre Veiren für Lübeckifdie Gefchichte und Ältertumskunde 1821–1971. Lübeck: Verlag Max Schmidt-Römhild, 81–89.
- Ligers, Z. (1948). *Geschichte der Baltischen Städte*. Bern: Paul Haupt Verlag.
- Löwis of Menar, K. von (1922). *Burgenlexikon für Alt-Livland*. Riga: Walters und Rapa.
- Malvess, R. (1937). Jelgavas ostas likteņgaitas. *Senatne un Māksla*. 3. Rīga: Pieminekļu valde, 21–31.
- Milicers, K. (2009). *Vācu ordeņa vēsture*. Rīga: Zvaigzne ABC.
- Misāns, I. (2007). Cēsis Livonijas ordeņa un Hanzas vēsturē. *Quo vadis, Cēsis? Vēsture un mūsdienų nosacījumi pilsētas attīstībai*. Cēsis: Cēsu pašvaldības aģentūras Vidzemes Vēstures un tūrisma centrs, 103–118.
- Moretti D. (1831). Venēcijas Sv. Marka laukuma plāns. *Quadri A. (1987). Il Canal grande di Venezia*. Venice: Vianello Libri.
- Nawrocki, Z. (1966). Pofranciszkański kościół NMP w Toruniu. Próba rekonstrukcji dziejów budowy. *Zeszyty Naukowe Uniwersytetu Mikołaja Kopernika, Zeszyt 21, Zabytkoznawstwo i Konserwatorstwo 2*. Poznań: Państwowe Wydawnictwo Naukowe, 47–80.
- Neitmann K. (1993). Riga und Wenden als Residenzen der Stadt Riga. *Quellen und Studien zur Geschichte des Deutschen Ordens. Band 44. Stadt und Orden: das Verhältnis des Deutschen Ordens zu den Städten in Livland, Preußen und im Deutschen Reich*. Marburg: N. G. Elwert Verlag Marburg, 59–93.
- Niitemaa, V. (1952). Der Binnenhandel in der Politik der Livländischen Städte im Mittelalter. *Annales Academiae Scientiarum Fennicae. Sarja – Ser. B. Nide-Tom. 76.2*. Helsinki: Suomalaisen Tiedeakatemia Toimituksia.
- Ozola, S. (2018). The tower house – the strategically significant component of power centres' fortified building complexes in Livonia and in the Teutonic Order State during the 13th–14th centuries. *Proceedings of the 60th International Scientific Conference of Daugavpils University. Part C Humanities*. Daugavpils: Daugavpils Universitāte, 166–198.
- Ozola, S. (2020a). The forming of *castellum*-type castles and four-unit building complexes with chapels in secular power centres of Courland and the State of the Teutonic Order. *Society. Integration. Education. Proceedings of the International Scientific Conference. Volume V. Lifelong Learning, Innovation in Language Education. Art and Design*. Rēzekne: Rēzekne Academy of Technologies Faculty of Education, Language and Design, 752–774. DOI: 10.17770/sie2020vol15.4873
- Ozola, S. (2020b). Specific development of Segwold and Wenden fortified urban structures created by the Livonian Brothers of the Sword. *Proceedings of the 62th International Scientific Conference of Daugavpils University. Part C: Humanities*, Daugavpils: Daugavpils University, pp. 81–108.
- Steinbrecht, C. (1885). *Die Baukunst des Deutschen Ritterordens in Preußen*. Band 1: Thorn im Mittelalter. Berlin: Verlag von Julius Springer.
- Šterns, I. (1997). *Latvijas vēsture. 1290–1500*. Rīga: Apgāds Daugava.
- Šterns, I. (2002). *Latvijas vēsture. 1180–1290: Krustakari*. Rīga: Latvijas vēstures institūts.
- Tuulse, A. (1942). *Die Burgen in Estland und Lettland*. Dorpat: Dorpater Estnischer Verlag.
- Vartberges Hermana Livonijas hronika*. (2005). Rīga: Latvijas vēstures institūta apgāds.
- Weygandt J. G. (1729). *Die Stadt Goldingen*. Own work (stored at the National Archives of Latvia, Fund 7363, Description 3, Case 951, Page 233).
- Zlaugotnis, J. (1988). *Cēsu pilsētas reģenerācijas projekts*. Part 1, Volume 1. Rīga: Latvijas PSR Kultūras ministrijas Restaurācijas institūts.

VISUAL SEMIOTICS IN THE STUDY OF ART PHENOMENA: SYMBOL AND SYMPTOM

Olga Senkane

Rezekne Academy of Technologies

Karine Laganovska

Daugavpils University, Rezekne Academy of Technologies

Abstract. *The study aims to use the approach of visual semiotics to analyse the ritual graphic signs of the Rezekne Jewish cemetery as a segment of the city in terms of "signifier" and "signified", or "expression" and "content". The Star of David, as the dominant sign of the ritual graphics, is gradually losing the status of a sacred symbol and in a series of tombstones confirms the structure of a symptom. The paper is devoted not only to clarifying the cultural and social causes of such changes but also to the study of the mechanism of mutual transitions between symbols and symptoms, the differences in the coding of these types of signs, which has not been done in visual semiotics so far.*

Theoreticians have hitherto not paid due attention to the study of signs of graves as a segment of the urban environment. Moreover, the theory of visual semiotics also lacks a description of the specificity of signs in ritual graphics. Ritual graphics is an important indicator of the regularity of cultural processes in an ethnically diverse environment. When surveying the Jewish cemeteries of the Latgale region, the difference in the choice of visual graphics in the city and the countryside is obvious. In rural cemeteries that are still in use, the content and structure of verbal messages, as well as decorative graphics are traditional, therefore predictable. In city cemeteries, there is a change in graphics, deviations from tradition, its modification and obvious violations of tradition. Along with the verbal report about the deceased, the ritual graphic, on the one hand, complements it as an integral part, on the other hand, lives an independent life, because the first, and the only sign that the observer notices is the visual or non-verbal sign. In terms of information, the visual sign is noticeably more capacious, as it is older than the verbal and requires much less time for perception. The focus of the study is the divergence between the meanings of the sacred hexagram and the secular yellow star or "badge", the causal relationships of their use and perception from the point of view of visual semiotics and cultural philosophy - phenomena of symbolization and desymbolization.

Keywords: *cemeteries as a segment of the city, codes of ritual graphics; symbol and symptom, symbolization and desymbolization, visual semiotics.*

Introduction

The Rezekne Jewish cemetery is a substructure representing the "others" in the culture of Latgale; it has specific linguistic and ritual graphic traditions,

valuable genealogical material, historical evidence of the fate of local Jews, and a distinctive cult of graves defined by the ethnically diverse environment. It is one of the largest and oldest Jewish cemeteries in Latgale (established in 1786, at the current 91 Andreja Upisa Street).

Jews have always nurtured and preserved their cultural distinctiveness, which is also characteristic of their traditions of arranging graves. Depending on the cultural and social trends of the time, it is possible to trace changes in the formation of inscriptions, graphics, form, etc. of the Jewish tombstones in Rezekne. The interaction with the traditions of the local majority, the Latgalians, shows the hybridization of Jewish cemetery culture. In the 20th century, Yiddish gradually disappeared from grave inscriptions, during the Soviet occupation the role of the sacred language - Hebrew - diminished, while the influence of the Russian language increased. In the last decade of the 20th century, grave inscriptions in Russian with a significantly reduced Hebrew already dominated. In the second half of the 20th century, the symbolic meaning of the grave graphics became less important, local Jews adopted Latgalian traditions in the design of tombstones, sacred symbols coexisted with the secular ones and experienced transformations in representation and meaning in many places (Senkāne, 2017).

A cemetery as a segment of a city with its distinctive signs has not been the focus of semioticians' attention so far. Visual semiotics does not pay attention to the peculiarities of expression and content of the ritual graphics. The ritual graphics are an important indication of the cultural processes. The variety of verbal and non-verbal signs used in Jewish cemeteries in the Latgale region depends on the location of a cemetery (urban or rural area). In rural cemeteries that are still in use, the structure of messages and the catalogues of visual symbols are traditional and predictable. In urban cemeteries, there is a change of verbal and non-verbal signs, modifications and apparent violations of the norms of style and rhetoric.

The aim of the study is to use the approach of visual semiotics to analyze some ritual graphic signs of the Rezekne Jewish cemetery as a segment of the city, clarifying the relationship between “signifier” and “signified” or expression and content in cases of symbolization and desymbolization of messages. The Star of David, as the dominant sign of the ritual graphics, is gradually losing its status of a sacred symbol and confirms the structure of a symptom (a simple message) in a number of tombstones. The paper is devoted not only to the clarification of the cultural and social causes of such changes, but also to the study of the mechanism of mutual transitions between symbols and symptoms, the differences in the coding of these types of signs, which has not been done (also in the visual semiotics of a city in general) so far.

Alongside the verbal message about the deceased, the Jewish ritual graphic, on the one hand, complements it as an integral part, on the other hand,

lives an independent life, since the first and the only (especially in the case of lack of knowledge of Hebrew and Yiddish) thing an observer notices is the visual or non-verbal sign. In terms of information, the visual sign is significantly more capacious, as it is older than the verbal one and requires much less time for perception. The study focuses on the semantic and pragmatic differences between the sacred hexagram and the secular yellow star or “badge” in the urban segment of the ethnically diverse culture - the substructure of cemeteries.

Visual Semiotics in Cultural Communication

Semiotics is an interdisciplinary approach; it functions and develops as an integration of various humanistic strategies, which range from the theoretical to the practical ones: from the philosophy of the visual image to the rules of interior design and table setting, book design and costume construction, etc. A sign is always a language tool because it participates in communication. Outside this communication, we are dealing only with symptoms. A sign includes within itself reading codes according to which it designates and signifies something specific and substitutes itself for something else (Eco, 1976). A sign consists of a signifier (*signifiant*) - a form a sign takes, and a signified (*signifie*) - a concept a sign represents. A sign is an entity, formed by the connection between the signifier and the signified (Saussure, 1983). The relationship between the signifier and the signified is the meaning.

Roland Barthes (1915-1980) uses cultural myths to analyze everyday phenomena as signs, thus demonstrating that semiotics seeks to include all sign systems (words, images, gestures, musical sounds, objects, etc.) and their diverse interrelationships that are the basis of cultural “behavior” and behavior within culture: rituals, norms, public perceptions, etc. (Barthes, 1957). Semioticians are interested in the process how meanings are being formed, what and how signs represent not only in the public sector, but also in the field of constructing and preserving reality - cultural creation. Umberto Eco (1932–2016) and Yuri Lotman (1922–1993), a representative of the Moscow-Tartu school of cultural semiotics, focus on signs in art (architecture, cinema, literature) and at the same time on signs in a city.

Eco recognizes that not only the space inhabited by humans, but also the world itself is a cultural phenomenon: what we see expresses how we see it. Wilderness depends on the setting of human “optics” and is culturally determined. The view from the window is often captured (and sold) as part of the interior. It is “semiotics that translates the natural into the social and cultural” (Eco 2006, p. 208).

At the end of the 20th century, a “visual turn” takes place in the humanities, as the status, functions, and use of visual information enter the scope of research (Chandler, 2000). Representation becomes inevitably the most relevant form of mediation of reality; there is a rapid shift of attention or perception from the verbal to the visual, to the layers of meaning that form and are formed by the visible signs. Visual reality is interpreted as a cultural formation that is subject to constant and continuous reading and interpretation. It turns out that segments of human-inhabited space contain mostly messages in the form of representations; they effectively translate current ideological, pragmatic and existential meanings.

Representations are cultural phenomena; they are sign systems, and therefore they participate in communication (Eko, 2006). Since human experience is multisensory, each representation of it is subject to the possibilities and limitations of the information channel used (Noeth, 1995). Vision is a channel of information transfer along with others (acoustic, verbal, tactile, etc.); visual semiotics is a separate case of semiotics. Its subject is communication that takes place in various optically organized forms of cultural expression. In other words, visual semiotics focuses on the communication tools of the visual channel in culture. Its aim is “to explain what we see by what is not visible to us, but thanks to which we catch the resemblance between the object and its representation” (Eko, 2006, p. 177). The meanings of representations can be perceived only in direct communication, in which there is either a diachronic interaction between the author and receiver, or a synchronous interaction of several information recipients. The visual encompasses multiple levels of communication and therefore also has multiple pragmatic effects, e.g. artistic representation (painting, theatre, sculpture, dance, architecture, etc.) transmits not only primary information or denotation, but also value priorities characterizing secondary connotations, generates emotional states, indexes local spaces, etc.

The readings of the visible take place in everyday practice; the visual reality as a sign system is learned in the human living space and human action. Optical messages provide large amounts of information in a short time. A visual image is more informative than a verbal expression because it is biologically older, more specific and able to influence a wider audience. “In this sense, a word is weaker than a painting” (Arnheim, 1957, p. 173).

A city is a human-inhabited space, which in its multiplicity of cultural and social segments can and does contain a maximum of producible and reproducible visual signs/texts, and in which intensive meaning-making, textual change and rapid development can be observed.

The subject of research in the urban visual semiotics is the strategies, practices and ways of organising traditional (elemental) and planned inhabited space, the principles of territory zoning and hierarchical order, optically fixed

landmarks of meaning and their systems of functioning, forms of representation of the identity of a city and a region, symbolic and graphic languages of a city, the explication of signs and expertise in clarifying their humanity, global and local, general and individual phenomena of cultural and social continuity, also the impact of visual aspects on person's world view, identities, well-being, actions, etc.

Signs are imprints of perception and understanding of reality. A city, saturated with art symbols and images, constantly renews and varies interpretations of reality and the past, present and future of culture. A city is a field of everyday communicative practices; it is a visual semiotic space having multiple layers and many meanings; the constant efforts of its inhabitants to act produce general, shared orientations of meanings, values, beauty etc. in discrete visible objects and their complexes. Visual semiotics shifts the emphasis from a city person or a person in a city to the humanity of a city or the human-like city.

In general, three fields of sign activity must be taken into account in the urban visual semiotics: 1) the anthropogenic environment; 2) the space of architecture, sculptures and other material objects; 3) intensive cultural and social communication.

Coding in Visual Semiotics: Parallels between Architecture and Tombstones

A city has a textually communicative nature. Its visual marking expresses not so much the functionality of individual objects and zones, but people's perceptions of the world, existential comfort, mythical and historical narratives, aesthetic, social and value prescriptions. Visual semiotics sees a city not as a physical place structured by discrete material objects, but as a specifically humanly organised and arranged complex communication environment, which reflects the particularities of human existence and translates his/her communication in time. Ensembles of urban objects are observed and read as texts that transmit ideological, mnemonic and suggestive (propositional) messages. Moreover, artistic images and symbols are not passive representations of reality, but active agents of meaning-making that initiate and take part in the creation and organisation of a new neighbourhood. Semiotics correlates with aesthetics and the science of art. Eco talks about semiotic aesthetics that views art as a communicative process (Eco, 2006). Semiotic and aesthetic aspects of imagery cannot be separated in practice, e.g. information of the deceased as a semiotic phenomenon and a tombstone as an aesthetic phenomenon (Eco, 2006, p. 266).

The sets of areas and objects that make up the architectonics of a city are saturated with meanings and presented in accordance with the requirements of the visual text: behind each visible representation there is a message that can be

attributed to the signified (object) in a certain way. The entire visual space of a city can be seen as a text created for potential readers. A city regularly transforms its “habitat”, the metaphors of which embody each and every model of the world order.

Eco analyses the semiotics of a city in his study “The Missing Structure. Introduction to Semiotics” (La struttura assente: introduzione alla ricerca semiologica, 1968) and Lotman does the same in works published after his death – “Simvolika Peterburga” (1996), “Arhitektura v kontekste kulʹtury” (2010). Both Eco and Lotman are interested in the iconic (similarity-based) or symbolic (according to Barthes) relation between the signifier and the signified: the task of visual semiotics is to clarify the type of relation between them, or the code. The code is a certain principle of correspondence between the signifier and the signified and the basic condition of the message they create (Eco, 2006).

For example, the signifier appropriates the perceptual conditions of the signified through the recognition code. The recognition code of the signified functions according to the list of graphical symbols adopted in the representation conventions. The recognition code allows the identification of the signified on the basis of features communicated by the iconic or similarity code. The iconic code helps to find a correspondence between the distinctive feature of the signifier and the content to be signified (Eco, 2006).

The iconic code is used to distinguish discrete units of meaning in a representation: figures (separate differentiated elements of an expression, e.g. colour, texture); signs (non-independent elements of an expression, which being a part always point to the whole - the overall visual image, a certain paradigm, excluding unrelated articulations from it, e.g. lancet window), and syntactic units of expression, or syntagms (Bart, 1994). Eco’s signs are not independent; they always form a reference or a pointer to the whole, to the result of the combination.

In the Eco’s hierarchy, the codes are arranged according to the type of articulation; the representations are characterised by the following codes: iconic – they ensure the recognition of discrete units of meaning; iconographic – they form composite conventional semes that can be recognised by permanent features and elements; the signifieds of the iconic code become the signifiers of the iconographic code, for example, the Annunciation paintings depict an angel, a woman and a dove or a ray of light in one plane; taste and sensibility – they hold together moving or changing connotations, cultural conventions (the ideal of beauty in certain periods of time); rhetorical – they are responsible for knowledge of conventions (accepted representations of the norm); they can be divided into rhetorical figures (tropes), premises (axioms), arguments (an appeal to tradition or vice versa); stylistic – they encourage the search for solutions

sanctioned by rhetoric (e.g. academic drawing), the author's individual stylistic discoveries (Eko, 2006).

Eco is convinced that the creation and perception of visual objects are determined by codes as specific conventions. By throwing a net of one or another code on experience, we make it poorer and put it in a frame, but we get safe conditions to pass it on.

Both Eco and Lotman address and cover only a few segments of the urban space that are linked to creativity and respond quickly to the demands of the era and their sign complexes (gesture, posture, costume, cinema, ornament, painting, sculpture, dance, sacred objects, architecture, interior design). A cemetery as a delimited substructure with its mainly unchanging catalogues of signs and worn-out metaphors does not attract semioticians: here the codes are constant in their tradition and therefore habitual, predictable. The graphics of tombstones have a certain functional affinity with the visually semiotic solution of the buildings discussed by Eco: both sign systems are the product of creativity and imply the operation of the iconic, stylistic, taste, rhetorical and other codes, both are related to the function of human "accommodation", meet the style requirements of the era and can fit into the urban territory and elsewhere, etc.

In architecture, the signifier or expression is the building itself, the signified or content is the function of the object or the purpose of the building. The architectural object stands for a certain idea of living or accommodation, i.e. the activities of using this object (Eko, 2006). Architectural messages convey ideas about the ideology represented by its designer. Architecture, as an act of communication, has several functions that can also be attributed to the complex formation of a tombstone: the aesthetic (it is a pleasure to see it); the imperative (its content determines a certain way of living); the emotive and the factual (it confirms communication and ensures the connection between the components of the urban environment). The imperative of a tombstone may be implicitly included in the epitaph or in the secular (representing the occupation of the deceased) sign. The discrete units of meaning visible in the facade of buildings can also be observed in tombstones: colours, textures, decorative elements, etc.

The code for the connection and transmission of the architectural visual signs is stylistic. The signs in architecture combine according to certain requirements: combinations of signs fit into a tradition or lay the foundations for a new one if they have their own, previously inarticulated stylistic code. A previously used code leads to an expected solution. By perceiving a recognisable sign (e.g. the spire of a tower), an observer will prepare for a certain paradigm and syntax, appropriate proportions, etc. The conventional codes of taste and sensibility connect to the assessment of the conformity of sign combinations. The sign, although recognisable as a separate discrete unit of

meaning, has a connection with the stylistic code and is only significant in the overall image of the building.

The combinations of visual signs on tombstones are mostly rhetorically and stylistically determined. If a tombstone as an object is the overall image, the signs are sacred, secular graphics and verbal inscriptions. If a decorative graphic sign has a symbolic connotation, it can be an independent unit of meaning and can fit into the paradigm of other signs without losing any of its self-sufficiency and completeness.

The denotation of an architectural sign, like that of a tombstone, is its utilitarian function, while the connotation is related to the ideology of the message. The connotation represents a system of conventions according to which an object can acquire symbolic meaning: the use of an object according to its symbolic content can displace the primary utilitarian (denotative) function (e.g. a chair-throne that is uncomfortable for sitting becomes a symbol of power). The hexagram ornament, popular in Europe and Arab countries, became a Jewish sacred symbol that started to appear engraved on Jewish tombstones in the territory of Latvia at the end of the 18th century (Melters, 2006). The symbolic (connotation) overpowers the utilitarian decorative denotation. The denotative function of the graphics can only be guessed by analogy with local tradition (the cross); the linguistic signs are perceived as the visual ones - with the connotation of the other, the foreign or the exotic. The remnants of Jewish culture in Rezekne and elsewhere in Latgale and Latvia can be observed precisely in the visual semiotics of architecture and tombstones (Senkāne, 2017).

If the code organises the relationship between the signifier and the signified, Eco calls it semantic and relates it to the symbolic nature of the sign structure. The semantic codes articulate the primary (windows, roof, stairs), secondary (pediment, column, tympanum) functions and the living ideology (kitchen, study, salon) of a building, as well as the social (station, hotel, summer cottage) and spatial (labyrinth, cruciform church) types of a building (Eko, 2006). The combination of primary and secondary functions marks the boundaries of the syntagm, where the third articulation of the semantic code - the living ideology - is realised. Eco speaks of internal (room layout) and external (facade), visual syntagms of a spatial structure, and the units of the living ideology implicit in them.

A tombstone as a complex visual object is also characterised by three articulations of the functions of the semantic code. If we assume that a tombstone, an inscription and decorative elements - each separately - can articulate primary and secondary functions, as well as the ideology of both, then there could be at least three syntagms per grave unit. In this sense, the Jewish decorative graphics (the Star of David, but also the menorah, the Hanukkah candelabrum): 1) denotatively fulfil a decorative function (as a hexagram

without a sacred symbolic context); 2) connotatively contain a symbolic meaning (as the Star of David); 3) reveal the principles of existence characteristic of a certain era (a yellow secular hexagram sign accompanied by a coloured figure, the so-called “badge”).

The architectural codes are based on the established, fixed rhetoric. Real art brings something new to the interpretation of its meanings. It takes place through the operation of “styling”, which is the application of new secondary functions on top of the fixed primary ones. The new secondary functions can change the ideology of the object. The use of the “styling” operation can be observed in the decorative graphics of tombstones, when figurative changes are made to the visual form of constant symbols. After the Second World War, the Star of David was replaced by a yellow “badge” on a number of Jewish tombstones: the decorative function of representing a certain ethnic identity was preserved, but the connotation of a sacred symbol was lost [see Figure 1. “The use of the “badge” in the decorative graphics of a tombstone. Rezekne Jewish cemetery.”]



*Figure 1 The use of the “badge” in the decorative graphics of a tombstone
(Rezekne Jewish cemetery)*

The correction of the Star of David (yellow colour, lack of abbreviations in the middle of the hexagram) shows a change of the code and thus of the connotation: the sign metonymically (hence rhetorically) refers to the Holocaust. The ethnic, religious and cultural identity of the deceased is no longer represented by a constant, semantically capacious symbol, but by a reference to a specific historical fact, acquiring new secondary functions: commemorating the victims, condemning the anti-Semites and honouring the rescuers.

An architect and a designer of a tombstone serve “the needs of a certain living ideology” (Eko, 2006, p. 238). He is forced to search for and use the codes of external semiotic systems in order to fit into the comprehensible rhetoric that the addressee expects from him.

Visual Sign in the Decorative Graphics of Cemetery: Symbol and Symptom

The public perspective of cultural communication envisages various forms of ethnic self-identification and representation: 1) ways of interpreting visual objects, sign systems and markers (as the basis of the identity of personalities, groups, ethnic groups) are sought; 2) types of cultural, national, civic, religious, professional identity construction are identified through visual means of representation and communication; 3) a typology of visual forms of cultural identity translation within individual cultures and the sphere of cultural contacts is summarized, etc.

Lotman discovers the representation of identities in a symbol. The symbol is always a complete text; it may not be part of a series of interrelated entities, but if it is, it retains its independence of meaning and structure, and can therefore be easily removed from one semiotic environment and inserted into another.

Every culture needs archaic layers of texts, and the symbol is a concentrate of the archaic. It will always be an envoy of other cultural eras. The memory of the symbol is always older than the textual environment surrounding it. It is capable of storing vast texts of cultural significance in a scrolled form. The symbol never belongs to a single synchronous cultural aspect, but always weaves through it vertically. As an important mechanism of collective cultural memory, the symbol transfers texts, plot schemes and other semiotic formations from one cultural layer to another.

Constant sets of symbols perform a unifying function; they prevent the culture from splitting into isolated chronological segments. The persistence and lifespan of a symbolic unit largely determine the national and areal boundaries of cultures.

The nature of the symbol is dual: 1) by interweaving cultural layers, the symbol asserts its invariant essence in repetition; 2) the symbol actively correlates with the cultural context, transforms under its influence and transforms it itself (Lotman, 1992). The symbol accumulates and organises new experiences around itself (Lotman, 1992).

The invariant essence of the symbol is realised in variants. The cultural context in which the “eternal” meaning of the symbol is subject to change is proof of its variability. In this sense, visual symbols in the semiotic space of a

city are certainly indicators of its variability. The most active symbols are characterised by a certain indeterminacy in text-expression and text-content relations: the potentials of the symbol's meanings are always broader than the given implementation. Therefore, it forms a reserve of meanings, due to which the symbol is able to enter into unexpected connections, changing its essence and unpredictably deforming the textual environment around itself. In terms of expression, simple symbols are the most semantically inclusive: “a cross, a circle, a pentagram have far greater potentials of meaning than Apollo skinning the satyr Marsyas” (Lotman, 1992, p. 194). It is the simple symbols that form the symbolic core of culture. The saturation with them indicates the symbolizing orientation of culture.

Symbolization allows texts or their fragments to be read as symbols, even though they do not presuppose such perception in their natural context; desymbolization turns symbols into simple messages (denotates); what is a symbol to the symbolising consciousness is otherwise a symptom. The symptom only ensures the presence of the primary function of the denotate in the sign.

Lotman explains the essence of the symptom in terms of a reminiscence: the symbol exists before and independently of the text into which it enters; it emerges in memory from the depths of cultural memory and revives in a new text “like a grain thrown into fresh soil” (Lotman, 1992, p. 195), while the reminiscence - a reference, a quotation - is an organic part that is only synchronously functioning in a new text; it is brought into memory from the new text. A symbol in the creative process is implemented as the reminiscence in perception. Depending on how recent in the past and to what depths of meaning the reminiscence leads, the reminiscence (reference, quotation) can be seen as a desymbolizing symptom.

Although a customer of the decorative graphics intended to engrave a sacred symbol on a tombstone, its enhancement or clarification with yellow colour makes a reader see only the reminiscence of the Holocaust in the hexagram. Whoever wanted this clarification was aware of the symbolic and/or symptomatic layers of its perception? Seeing a “badge” instead of the Star of David, a reference instead of an archaic symbol, in a Jewish cemetery, a question arises: is this a symptom of the other striving to be more easily seen and understood? Or the iconic code has been replaced by the rhetorical code - in terms of expression and content-, respecting the intolerance of the ruling ideology towards the representations of religious affiliation?

Conclusion

The replacement of the constant archaic symbols with the signs that deteriorate meaning can indicate not only the imposition of ideologies, but also

a change of the message recipient. Such a trend suggests peculiar tools for the implementation of intercultural dialogue, oriented towards the self-presentation of a separate ethnic group, using recognisable stereotypical features instead of specific cult symbols. In any case, communication still exists; at least objects of the cemetery culture are still capable of transmitting their functions in the form of semantically intensive archaic symbols and symptoms. In this way, the “other” can be noticed and understood.

Code-switching in object-function relations and adjustments in representation and message in such closed conservative segments can show unique trends in the scenery of local identities. Their encryption allows to reveal the regularities of ethnically diverse cultural and social processes in synchronic and diachronic perspective.

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References

- Arnheim, R. (1957). *Film as art*. Berkeley: University of California Press.
- Barthes, R. (1957). *Mythologies*. New York: Hill & Wang.
- Bart, R. (1994). *Izbrannyje statji. Semiotika. Poetika*. Moskva: Progress, Univers.
- Chandler, D. (2000). *Semiotics for Beginners*. Aberystwyth: University of Wales.
- Eco, U. (1976). *A Theory of Semiotics*. Bloomington: Indiana University Press/London.
- Eko, U. (2006). *Otsutstvujuščaja struktura. Vvedeniye v semiologiju*. Perv. V. Rexznik, A. Pogoņajlo, Sankt-Peterburg: symposium.
- Lotman, J. (1992). Semiotika kuļtury i poņatije teksta. J. Lotman. *Izbrannyje statji*. T. 1. Tallinn: Aleksandra, 129-132.
- Lotman, J. (1992). Simvol v sisteme kuļtury. J. Lotman. *Izbrannyje statji*. T. 1. Tallinn: Aleksandra, 191–199.
- Melers, M. (2006). *Ebreju kapsētas Latvijā*. Rīga: Šamir.
- Noeth, W. (1995). *Handbook of Semiotics*. Bloomington: Indiana University Press.
- Saussure, F. de (1983): *Course in General Linguistics*. Trans. R. Harris, London: Duckworth.
- Senkāne, O. (2017). Latgales ebreju kapu kuļtūra semiotiskā aspektā. No U. Neiburgs (red.), Uldis (red.). *Ebreju Rēzekne*. Rīga: Creative Museum.79–197.

KURZEMES NARATĪVS MŪSDIENU LATVIEŠU AUTORU IZZIŅAS GRĀMATĀS BĒRNIEM

Narrative of Kurzeme in Modern Children's Non-fiction Books by Latvian Authors

Sandra Okuņeva

Daugavpils University, Liepāja University (Latvia)

Abstract. *The aim of the article is to characterize the peculiarities of regional literature in a specific type of children's literature – non-fiction books. The research focuses on the analysis of the narrative of Kurzeme, the cultural and historical region of Latvia, in the books for children by four contemporary Latvian authors – Gundega Sēja, Vitauts Ļūdēns, Valdis Klišāns and Pēteris Blūms.*

Using the methodology of narrative and semiotic analysis, the research has identified the main trends in the representation of Kurzeme in the creation of content and story. In the books, the writers have included information about geography, the most important natural and cultural-historical objects, historical persons and events, the peculiarity of the language, as well as certain traditions. The formation of Kurzeme narrative is dominated by a dialogue between a child and an adult, with the adult playing the role of a wise companion, as well as the technique popular in travel literature – "story within a story".

The study shows the need to continue academic discussions on identifying the most appropriate term for non-fiction books in the research of Latvian children's literature and allows to conclude that non-fiction books about Latvia and Kurzeme written by contemporary Latvian authors can be considered as important revealers of regional color.

Keywords: *Kurzeme, Latvian children's literature, local color, narrative, non-fiction, regional studies.*

Ievads

Introduction

Reģionālas ievirzes pētījumu Latvijas literatūrzinātnē nav daudz, tomēr reģionālisma jeb reģionālajai literatūrai būtiskas iezīmes (izteikta vietējās ģeogrāfijas, topogrāfijas vai ainavas izjūta un attēlojums, cilvēku dzīves, sociālo paražu, izcilu vēsturisku personību, dialekta īpatnību un citu šīs teritorijas kultūras aspektu atainojums) saskatāmas dažādos tekstos. Interesi par reģionālo literatūru latviešu kultūrā noteikusi mūsdienu kultūras pētniecībā starptautiskajā akadēmiskajā vidē attīstījušies daudzveidīgie starpdisciplinārie pētījumi, kuru centrā ir attiecīgajās nacionālajās teritorijās esošo novadu savdabības tēlojuma interpretācija kā nacionālās literatūras daudzveidības daļa. Britu literatūrzinātnieks Kīts Snells (*Keith David Malcolm Snell, 1955*), raksturojot

reģionālās literatūras specifiku, norāda, ka reģionāla rakstura tekstu iespējams vērtēt kā nacionālā detalizētāku dalījumu, jo kāda reģiona dzīves atainojums ļauj lasītājam apzināties šai teritorijai raksturīgās iezīmes un uztvert atšķirīgo kā daļu starp citām kopējā dzimtenē (Snell, 1998, p. 2),

Neskatoties uz atsevišķu pētnieku (Ilze Stikāne (1957), Rudīte Rinkeviča (1969) u. c.) entuziasmu, bērnu literatūra Latvijas zinātniskajā vidē joprojām ir uzskatāma par marginālu izpētes objektu. Par to liecina ne tikai mazskaitlīgais akadēmisko pētījumu klāsts, bet arī mūsdienīgas latviešu bērnu literatūras vēstures trūkums. Šī raksta mērķis ir reģionālo studiju perspektīvā fiksēt un raksturot strukturālo un semiotisko tradīciju sintēzē Kurzemes vērtību atspoguļojuma īpatnības specifiskā bērnu literatūras paveidā – izziņas grāmatās. Šāda tekstu grupa bērnu literatūrā pastāv atbilstoši specifiskajai klasifikācijai, ko līdzās literatūrzinātnē ierastajam dalījumam daiļliteratūras veidos, paveidos un žanros ietekmē arī tādas lasīšanas praksi izzinošas un veicinošas zinātņu jomas kā pedagoģija, psiholoģija, bibliotēkzinātne u. c. Šāds starpdisciplinārs skatījums ņem vērā ne tikai teksta vēstījuma organizēšanas paņēmienus, izteiksmes veidu, tematiku, apjomu u. tml., bet ietver arī norādes uz vēl citām atšķirīgām komunikācijas formām, ko nosaka mērķauditorijas vecuma īpatnības, izglītojošie nolūki un bērnu literatūras tradīcijas.

Izziņas grāmatu jēdziens un specifika ***The concept and specifics of non-fiction books***

Bērnu grāmatniecībā pastāv vairākas galvenās grāmatu grupas, kuru nosaukšanai tiek lietoti atšķirīgi apzīmējumi (žanri, formas, tipi u. c.): bilžu grāmatas (*Picture books*), pasakas (*Fairytales & folklore*), dzeja (*Poetry & Verse*), fantāzija (*Fantasy fiction*), zinātniskā fantastika (*Science fiction*), vēstures stāsti (*Historical fiction*), reālo dzīvi tēlojoši stāsti (*Realistic fiction*), biogrāfijas (*Biography*) un *ne-daiļliteratūra (Nonfiction)*. (Galda & Cullinan, 2002, p. 8.) Līdzīgs dalījums tiek piedāvāts arī daudzos citos lasīšanas pieredzes izpētes un bērnu literatūras teorētiskajos aprakstos, kur, pastāvot atšķirīgam grāmatu kategoriju skaitam, galvenās nosauktās grupas tomēr ir vienas un tās pašas. (Mirzayeva, Karabayeva & Kuziyeva, 2020, pp. 96–98; Anderson, 2013)

Šī pētījuma uzmanības lokā ir, t. s., *ne-daiļliteratūras* grāmatu grupa, kuras galvenā iezīme ir tā, ka šāda tipa grāmatas piedāvā faktus par reālo pasauli, tās ir informatīvas grāmatas, kas izskaidro kādu tēmu vai ideju un/vai dod praktiskus padomus, to pamatmērķis ir sniegt lasītājiem viņu vecumam piemērotu zinātniski pamatotu faktu materiālu un tā padziļinātu skaidrojumu. Britu literatūrzinātnē pastāv arī atšķirīgs viedoklis, kas nodala enciklopēdiska rakstura grāmatas no daiļliteratūras loka (*Encyclopedia Britannica*). Tomēr pasaules bērnu literatūras praksē un pētniecībā tiek lietots arī *populārzinātniskās literatūras jēdziens (popular science books for children, Children's & / Teenage Science &*

Technology Books / Children's Science Reference Books and Encyclopedias). (Genres: Children's Literature) Arī latviešu bērnu literatūras pētniecībā vērojama daudzveidība un nekoncekvenču terminu lietojumā: literatūrzinātniece Anastasija Stikāne (1927–2008) rakstījusi par populārzinātnisko literatūru (Stikāne, 1977, p. 10), Jāzeps Osmanis (1932–2014) šādas grāmatas nodēvējis gan par populārzinātniskiem apcerējumiem, gan par izzinošām un izziņas grāmatām. (Osmanis, 1977, p. 250, 343, 407) Šī pētījuma ietvaros izglītojošas un populārzinātniskas ievirzes grāmatu bērniem nosaukšanai lietots termins *izziņas literatūra/izziņas grāmatas* kā jēdzieniski vispārīgākais apzīmējums, kas norāda uz zināšanu ieguves procesu šajās grāmatās, bet nenošķir tās no daiļliteratūras.

Kā jau iepriekš rakstīts, visas izziņas grāmatas vieno mērķis – sniegt lasītājam teorētiskas un/vai praktiskas zināšanas kādā jomā. Šādu grāmatu saturs var sakrist ar kādas zinātnes nozares vispārpieņemtā izpratnē (Piemēram, astronomijas, etnogrāfijas, fizikas, ģeogrāfijas, mākslas, vēstures u. tml.) priekšstatiem par informācijas kopumu, taču var aptvert tikai daļu no konkrētās zinātnes jautājumiem, sniedzot ieskatu šaurākas tematiskas ievirzes zināšanās, piemēram, par augiem, kukaiņiem, par uzvedības normām u. c. Zināšanu apjoms parasti korelē ar mērķauditorijas vecumu; jo jaunākiem lasītājiem adresēta izziņas grāmata, jo šaurāks un konkrētāks ir sniegtās informācijas tematiskais loks. Tomēr arī vienas tematikas izziņas grāmatu forma var būt ļoti atšķirīga, tāpēc izziņas grāmatas bērniem var nosacīti iedalīt vēl nelielākās specifiskās grupās, norādot uz teksta formas un vēstījuma organizēšanas iezīmēm, piemēram, enciklopēdijas, populārzinātniski stāsti, izglītojošas grāmatas ar daiļliteratūras elementiem, daiļliteratūras grāmatas ar izglītojošiem mērķiem. Šāda dalījuma pamatā ir faktoloģiski informatīvā un mākslinieciskā teksta proporcijas: no precīzi konkrēta un tieši uztverama vēstījuma enciklopēdijās līdz asociatīvi tēlainam – daiļliteratūras grāmatās. Bērnu literatūrā bieži vien šo grāmatu robežas pārklājas, tāpēc nereti nav iespējams stingrs dalījums zinātniskajās un daiļliteratūras grāmatās. Atsaucoties arī uz latviešu grāmatniecības pētnieka Valdemāra Ancīša (1921–2006) rakstīto, jāatzīst, ka teorētiski strikts dalījums nav iespējams un pat nav nepieciešams: “Stingri nodalīt “te ir zinātne” un “te ir māksla” nav iespējams. Bet tas nav arī obligāti vajadzīgs” (Ancītis, 1967, p. 59).

Ieskats izziņas grāmatu žanra attīstībā latviešu bērnu literatūrā *An insight into the development of the genre of non-fiction books in Latvian children's literature*

Par izziņas grāmatu tradīciju latviešu literatūrā rakstījis dzejnieks un bērnu literatūras pētnieks J. Osmanis, norādot uz tās aizsākumiem 20. gs. 20. gados jaunajiem lasītājiem adresētā žurnāla “Jaunības Tekas” zinātnes nodaļā publicētajos aprakstos par cilvēces un Latvijas vēsturi, dabas zinātnes u. c. tēmām,

kā arī hronikas un aktuālo ziņu nodaļā ievietotajiem materiāliem (Osmanis, 1977, p. 250.) Kā nozīmīgu izziņas tēlojumu attīstības posmu latviešu bērnu literatūrā J. Osmanis min 20. gs. 50. gadus, kad dabas tēlojumus radījuši vairāki rakstnieki (Anna Sakse, Roberts Sēlis, Uldis Plotnieks, Fricis Rūmnieks u.c.), bet īpaši izceļamas ir agronoma Rūdolfā Akera un ornitologa Kārļa Griguļa grāmatas: “Ar šiem darbiem 50. gadu latviešu bērnu literatūrā iesakņots jauns, savdabīgs žanrs – izziņošā daiļliteratūra, kas tēlainā formā sniedz izziņu par dabu, dzīvnieku pasauli un sadzīvi.” (Osmanis, 1977, p. 343–344) 20. gs. 60. un 70. gadus J. Osmanis raksturojis kā rosīgu un ražīgu periodu latviešu bērnu literatūrā kopumā un arī izziņas grāmatu jomā: “.. radušies daudzi darbi, kuri parāda daiļprozas un populāri zinātniskās literatūras žanru saplūdi.” (Osmanis, 1977, p. 407) un nosaucis virkni izziņas grāmatu autoru (Jūlijs Vanags, Uldis Plotnieks, Arturs Lielais, Alberts Gulbis, Kārlis Grigulis, Rūdolfs Akers, Zenta Ērgle, Žanis Grīva, Velta Zunde un daudzi citi), raksturojis nozīmīgākos darbus un ieskicējis to tematiku (putni, koki, ūdens iemītnieki, Ziemeļpola ekspedīciju apraksti, Latvijas vēsture, norises sabiedrībā u. tml.).

Arī 21. gs. tapušajā informatīvajā pārskata izdevumā “Zirgs, kas naktī dzied” (Tretjakova, Stikāne & Zandere, 2006, p. 16–20), kas konspektīvi atspoguļo latviešu bērnu literatūru līdz 21. gs. sākumam, ir koncentrēti raksturots atsevišķu izziņas grāmatu autoru (Jānis Baltvilks, Valdis Rūmnieks, Jānis Liepiņš, Vilnis Purēns u. c.) devums, izceltas divas 20. gs. otras puses populārākās izziņas darbu sērijas “Gribu visu zināt” un “Latvijas mazā enciklopēdija”, kā arī aplūkoti nozīmīgākie tematiskie loki (vēsture, bioloģija, sabiedrība, folklorā, ornitoloģija u. c.). Īpaša uzmanība ir veltīta dzejnieka Imanta Ziedoņa iecerei radīt bērniem grāmatas par pasauli un cilvēku tajā (Izdevumā raksturota gan tikai viena no I. Ziedoņa izziņas grāmatām: Kas tas ir — kolhozs? R.: Liesma, 1984., bet nav pat minētas divas citas, ne mazāk nozīmīgas: Sākamgrāmata. Rīga: Zvaigzne, 1985. un Es, cilvēks, pasaulē. Rīga: Preses nams. 1993.), raksturota izglītojošo komiksu cikla ideja un izdevumi, kā arī nosaukta virkne grāmatu par dažādām latviešu kultūras jomām.

21. gadsimtā radītas vairākas mākslinieciski interesantas un Latvijas kultūrvīdē unikālas izziņas grāmatu sērijas, piemēram, *Mazā Mula pēta*, *Mākslas detektīvi*, kuru centrā ir mākslas vēstures un teorijas jautājumi, kā arī, t. s., *Matīsa sērijas* piecas grāmatas, kuras vieno zinātkāra zēna Matīsa tēls un kas stāsta par dabu mežā, hokeju, autosportu, teātri un Latviju.

Latviešu autoru izziņu grāmatu aplūkojums ļauj secināt, ka šīs kategorijas grāmatu rakstīšanai pievērsušies daudzi autori dažādos periodos un ir konstatējamas stabili izveidojušās tradīcijas atsevišķām dabas tēmām veltīto grāmatu klāstā, piemēram, par putniem. Sazarota un niansēti izkopta ir arī Latvijas vēstures un kultūras jautājumus atspoguļojošo grāmatu grupa, kurā atrodamas gan enciklopēdijas, gan stāstu grāmatas dažādos formātos. Īpaši daudz šāda satura tekstu parādījās Latvijas simtgades kontekstā.

Kurzemes naratīva raksturojums ***The characterization of Kurzeme narrative***

Turpmāk rakstā pēc pārskata par Kurzemes atspoguļojumu enciklopēdiska tipa izdevumos lokālā kolorīta reprezentācijas analīzē kā dažādu izziņas grāmatu paveidu gadījumi detalizēti aplūkoti šādi darbi: Gundegas Sējas (1953) “Kā es ar opi braucu Latviju lūkoties” (2013), Vitauta Ļūdēna (1937–2010) “Sudraba kalējs, tērauda kalējs. Sarunas ar Laimiņu par seniem laikiem Latvijā” (1991, 2014), Valda Klišana (1964) un mākslinieces Gundegas Muzikantes (1964) “Matīss meklē Latviju. Aizraujošs zēna ceļojums Latvijas vēsturē” (2010) un Pētera Blūma (1949) “Rīgas peles Ēdolē” (2008).

Kultūrvēsturiskie novadi visplašāk ir reprezentēti tieši Latvijas izziņai veltītajās grāmatās, īpaši daudz informācijas par tiem atrodams bērnu enciklopēdijās, kur vērojamā pieeja informācijas daudzuma izvēlē un vēstījuma veidošanā kopumā ir līdzīga. Emocionāli neitrālā stāstījumā dots ieskats Latvijas reģionos (Lielākā daļa autoru raksta par četriem Latvijas kultūrvēsturiskajiem novadiem (Kurzemi, Zemgali, Vidzemi un Latgali), bet atsevišķās grāmatās minēti pieci novadi, akceptējot Sēliju kā atšķirīgu kultūrvēsturisku teritoriju.), norādot uz lokālo fenomenu galvenajām izpausmēm: “Latvijā ir pieci kultūrvēsturiskie novadi: “Kurzeme, Vidzeme, Zemgale, Latgale un Sēlija. Katrā no tiem veidojušās un saglabājušās atšķirības tradīcijās, valodā, tautastērpos, sadzīvē un saimniekošanas veidā” (Sēja, 2007). Konspektīvais faktu fiksējums par katra novada teritorijas, ģeogrāfijas un dabas īpatnībām un populārākajām (nereti – stereotipiski atpazīstamām, piemēram, Kurzeme raksturota kā vējainākais novads) lokālajām vērtībām ir vienojošais šo grāmatu vēstījumā: “Latvijas rietumu novada attīstību ietekmējusi tā atrašanās pie Baltijas jūras. Piekrastē izveidojušies mazi zvejnieku ciemati, kā arī ostas pilsētas – Liepāja un Ventspils. Kurzemes lepnums ir meži, Baltijas jūras stāvkrasti un salīdzinoši maz skartā piekraste, burvīgās mazpilsētas, kā arī Baltijas platākais ūdenskritums Ventas rumba” (Berga, 2010). Niansēs katrā grāmatā atšķiras faktu izvēle, apjoms un detalizācija tematiski nodalītos aprakstos par dabu, vēsturu, kultūru vai atsevišķām atpazīstamām parādībām konkrētajā apvidū. Gundegas Sējas, Daces Markotas, Guntas Šusteres, Ineses Bergas un daudzu citu autoru enciklopēdiskajos izdevumos bērniem Kurzemes savdabība tiek prezentēta pārlicinoši, pastāstot par lielākajām pilsētām (Liepāju, Ventspili un Kuldīgu), upēm un ezeriem, dabas rezervātiem, ēdienu (sklandrausi) u.tml. Tekstā ietverta informāciju būtiski papildina attēli, kuros atspoguļota novada teritorija, tautas tērpi, pilsētas, upes, ezeri, dabas parki.

Daudz plašāks un detalizētāks, arī emocionāli iekrāsots Kurzemes atspoguļojums vērojams Gundegas Sējas izziņas grāmatā “Kā es ar opi braucu Latviju lūkoties. Saistoši stāstiņi, interesanti fakti par Latviju un jautra spēle”, kurā faktoloģiskais materiāls ietērpts ceļojumu literatūras formātā. Autore

izmanto bērnu literatūrai raksturīgu vēstītāja pozīciju – Latvija tiek iepazīta no bērna skatījuma. Galvenie varoņi ir mazs zēns Roberts un viņa vectēvs, kuri kopīgos ceļojumos izzina dzimteni. Ceļojumu iespaidu ietvars ir vectēva un mazdēla sarunas, kas ievadā atklāj ceļošanas iemeslus un noslēguma daļās (*Lāča spēks* un *Dzimšanas diena*) formulē secinājumus par uzzināto un demonstrē spēcīnāto patriotiskumu. Bērna un pieaugušā dialogā par citu zemju vilinājumu, palikšanu un prombraukšanu atklāts ne tikai dzimtenes izzināšanas impulss, bet iezīmēta arī viena no mūsdienu Latvijas sabiedrības problēmām – liels ekonomisko emigrantu skaits un nereti sastopamā nievājošā attieksme pret dzimto zemi.

Kurzemes reģionālās specifikas atklāsmē G. Sēja izmantojusi ceļojumu literatūrā bieži lietoto struktūrveides paņēmieni “stāsts stāstā”, kurā grāmatas varonis – ceļotājs parasti ir vērotājs no malas (t. s., ārpusnieks) un uzklausa kādu stāstu par konkrēto teritoriju. Ārpusnieka statuss rada jaunatklājēja skatījumam piemītošo spēju saredzēt un raksturot reģiona savdabību spilgtāk. (Wilson & Ferris, 1989) Mūsdienu Latvijas kultūrā varam iepazīt līdzīgu Kurzemes reģiona iepazīšanu ārpusnieku skatījumā pieaugušajiem adresētajos tekstos, piemēram, franču rakstnieka un žurnālista Žana Pola Kofmana (*Jean-Pol Kaufmann*, 1944) grāmatā „Kurzeme ... francūža acīm” (Kofmans, 2011) vai latviešu izcelsmes norvēģu sociologa un rakstnieka Terjes Bindera (*Terje Binder*, 1943) romānā „Kur piedzimst vējš” (Binders, 2015).

Šāds paņēmieni latviešu bērnu literatūrā lietots arī iepriekš. Te minama Vitauta Ļūdēna grāmata “Sudraba kalējs, tērauda kalējs. Sarunas ar Laimiņu par seniem laikiem Latvijā” (Ļūdēns, 1991, 2014). Rakstnieks tēva un meitas Laimas sarunā aicina lasītāju iepazīt Latvijas senvēsturi nepastarpinātos piedzīvojumos, ceļojumā izpētot konkrētas vēsturiskas vietas, seno latviešu dzīves apstākļus un paradumus. Vēstījumā dominē plaši, detalizēti un skaidrojoši izvērsti tēva stāstījumi, kas kopā ar apskatāmo vietu secību kļūst par sižeta galveno virzītāju. Abi ceļotāji kā pirmo iepazīst Kurzemi, jo meitenes mamma ir kurzemniece. Šī personīgā saikne padara racionālo izziņas procesu emocionālāku, jo atsaucas uz kaut ko jau pazīstamu un izraisa līdzpārdzīvojumu. Ceļojums ir topogrāfiski precīzi aprakstīts un nostatīts ap atpazīstamām virzības asīm, ko iezīmē prom došanās pa Rīgas–Ventspils šoseju un atgriešanās pa Liepājas–Rīgas ceļu. Šādi iezīmēts ceļojuma maršruts ļauj lasītājam viegli izsekot tam līdzī arī kartē: sākuma mērķis ir Ugāle, tad vecvecāku mūžamāju apmeklējums Usmas kapos, pēc tam brauciens uz Ugāles muižu, Talsu pilskalna apskate, tā, nonākot vēl daudzās citās vietās un tās izpētot, tiek iepazītas kuršu ciltis, to ķēniņi, kurši kā lieli jūrasbraucēji, apmetņu iekārtojums, barbarīki, dzīvesveids u. c.

Kā V. Ļūdēna stāsta, tā arī G. Sējas izziņas grāmatas “Kā es ar opi braucu Latviju lūkoties” vēstījumā vērojamas arī iezīmes, kas piemīt līdzīgi organizētiem ceļojumu iespaidu tekstiem: trūkst spraiga sižeta, to aizstāj stāstījums par kādu kopienu un tās paradumiem tematiskās nodaļās. G. Sējas grāmatas struktūru

veido četri ceļojumi pa Latviju atbilstoši četriem tās novadiem. Pirmās nodaļas četrās apakšnodaļās (*Jūras viļņi rūtiņā, Pīle pilskalnā, Valodu koks un Kur zivis lido*) lasītājs kopā ar zēnu iepazīst Kurzemi vectēva izvēlētajā maršrutā no Lībiešu krasta ar tā zaļbaltzilo karogu un Dižjūras līdz Valātas pilskalnam Kazdangā. Kurzemes kolorīts atklājas kopīgi apskatītajos objektos, dabas vērojumos, dialogu jautājumos un atbildēs par vēsturi (Kurzemes hercogiste, hercoga Jēkaba personība, dažādu valstu iekarojumi), ekonomiku (kuģu būve, zvejniecība), īpašām piekrastes parādībām kā dzintars. Faktu izklāstu bagātina teikas (par zilo govī), tautas dziesmas, literāri teksti. Intertekstualitātē atklātas arī Kurzemes izloksnes kā valodas bagātība, dzejā demonstrējot *ventiņmēles* jeb tāmnieku dialekta skanējumu. Šie un vēl citi paņēmieni, kas sakņojas dažādu sajūtu pieredzējumos, padara Kurzemes naratīvu dzīvīgu, emocionāli iekrāsotu un saistītu gan ar konkrētu cilvēku un paaudžu attieksmi, gan saskarē ar laikmetu. Opis dzied komponista Raimonda Paula (1936) un dzejnieka Jāņa Petera (1939) 20. gs. radīto dziesmu par Kurzemi: “Gudra kā jūra visa Kurzeme dun,/ Vēji skrien pāri zelta gundegām,/ Un Nīcā un Bārtā brunči sarkani plīv,/ Kuršu pavards uguns krāsā dzīvs. [..]” (Sēja, 2013, p. 46.), papildu informācija tiek atrasta *youtube* u. tml. Bērna – jaunatklājēja skatījumā lasītājs bez didaktikas, ar mīlestību izzina un izjūt Kurzemes vērtības dabā, personībās, dažādos kultūras un vēstures faktos.

Ceļojums kā naratīva struktūras pamatelements ir lietots arī vēsturnieka Valda Klišāna (1964) un mākslinieces Gundegas Muzikantes (1964) izziņas grāmatā “Matīss meklē Latviju. Aizraujošs zēna ceļojums Latvijas vēsturē” (Klišāns, 2010), taču šis stāsts veidots vieglā zinātniskās fantastikas ievirzē, kur “uzmanība no zinātniskajiem atklājumiem tiek virzīta uz sižetisko struktūru un tēlu attīstību” (Simsone, 2023). Rīgas pamatskolēns Matīss pēc rosinošas sarunas ar skolotāju, izmantojot “nanotehnoloģiju jaunāko sasniegumu” hrononavigatoru, ar kuru iespējams pārvietoties laikā un telpā, iepazīst Latvijas pagātņi, lai uzzinātu, kad un kā radusies Latvijas valsts. Ceļojums aizsākas ar Kurzemes kā nozīmīgas Latvijas vēstures teritorijas izpēti; Matīss senajā Kursā satiekas ar Bandavas kuršu vadoni Viesalgu, vēlāk nonāk Kurzemes hercogistē un satiek gan Kurzemes un Zemgales hercogu Jēkabu Ketleru, kurš stāsta par savām iecerēm, gan viņa zemniekus Jurģi un Andreju, kuri palīdz ieskatīties kuģubūvē un vienkāršo ļaužu dzīvē senatnē. Latvijas valsts izveide skatīta no pirmsākumiem līdz valsts idejas dzimšanai un neatkarības kaujām, un katrā laikmetā Matīss saskata aizmetņus kādai mūsdienu Latvijas parādībai. Kurzemes iepazīšanas laikā Matīss uzzina dažādus kultūrvēsturiskus procesus un faktus: par līvu valodu, kas mazinās, un latviešu valodu, kas kļūst aptverošāka, izpēta seno Kuldīgu, uzzina par zviedru iekarojumiem u. c. Izziņas process ceļojuma struktūrā ir tradicionāls naratīva paņēmieni, ko šajā grāmatā papildina daudzveidīgais viedā ceļabiedra tēls, kura lomā tiek rādītas dažādu laikmetu vēsturiskas personības un iztēlē radīti cilvēki, kuru pieredzēto un zināšanas iniciācijas ritam līdzvērtīgā procesā pārņem

mūsdienu zēns Matīss, lai ceļojumam noslēgumā, atgriežoties 21. gs. skolas vidē, būtu zinošāks.

Atšķirīga no iepriekš apskatītajām izziņas grāmatām ir arhitekta Pētera Blūma (1949) radītā “Rīgas peles Ēdolē” (Blūms, 2008). Autors ir Latvijā pazīstams vēsturisko seno ēku arhitektonikas pētnieks, saglabāšanas un restaurācijas entuziasts un profesionālis, kurš savā darbībā lielu uzmanību pievēršis lokālās telpas apzināšanās lomai mūsdienās un savu nostāju ekspresīvi formulējis kādā intervijā: “Atslēgas vārds ir vietas izjūta. [...] Mana pārlicība ir – cilvēkiem vispār ir jāapzinās vieta, kurā viņi dzīvo. Tas viņus dara bagātākus, jo paplašina pamatus zem kājām, pasaules telpu. Tie, kuriem vietjūtes nav, dzīvo drausmīgi plakanā telplaikā” (Radzobe, 2008). Lai gan arī šajā vēstījumā vērojami tādi jau aprobēti paņēmieni kā ceļojuma struktūra, viedais pavadonis, dialogi, stāsts par Ēdoles pili Kurzemē veidots kā alūzija par pazīstamo pasaku par pilsētas peli un lauku peli. P. Blūma interpretācijā Rīgas peles, draudzenes Pīpija un Tīne, īsteno sapņu ceļojuma projektu uz Ēdoli, kur viduslaiku pils peļu labirintos viņas uzņem vietējais peļupuisis Konrāds. Autors radījis humoristisku un atraktīvu, piedzīvojumiem bagātu stāstu ar viduslaiku pils vēstures, arhitektūras un daudzu Kurzemes kultūras reāliju iepazīšanu (trakā drāna jeb suitu košais plecu lakats Alsungā, sklandrausis kā kurzemnieku ēdiens, Ēdoles saldie ķirši u. c.). Piedzīvojumu noslēpumainību papildina leģenda par Ēdoles pils Zaļo dāmu, bet fantāzijas un dokumentalitātes organiskas saplūsmes iespaids panākts ar piedzīvojumu stāstu papildinošiem vārdu un reāliju skaidrojumiem, atsaucēm uz izmantotajiem avotiem, kā arī grāmatas vizuālajā noformējumā izmantoto zīmēto un fotografēto attēlu savijumu. Lokālo kolorītu reprezentē arī vietējās izloksnes lietojums.

Nobeigums **Conclusion**

Latviešu bērnu literatūrā izziņas grāmatu žanrs kopš tā aizsākumiem 20. gs. pirmajā pusē ir būtiski attīstījies un kļuvis tematiski un žanriski daudzveidīgs, 21. gs. piedāvājot lasītājiem gan faktoloģiski piesātinātus, gan mākslinieciski spilgti risinātus stāstus par dažādām tēmām. Īpaši daudz izziņas grāmatu centrā ir Latvija un tās kultūrvēsturiskie novadi. Kurzeme atspoguļota gan enciklopēdiskos izdevumos, gan stāstos ar ceļojuma apraksta iezīmēm, gan pasakas struktūras tekstos. Raksturotas tādas Kurzemes savdabības izpausmes kā ģeogrāfiskais izvietojums, nozīmīgākie dabas un kultūrvēsturiskie objekti, populāras vēsturiskas personas un izšķiroši notikumi, valodas savdabība, tradīcijas. Kurzemes naratīvs veidots bērna un pieaugušā dialogā, kur pieaugušajam ierādīta viedā pavadoņa loma. Sižeta virzītājs parasti ir ceļojuma mērķim pakļauta kustība telpā no viena apskates un izpētes objekta uz nākamo, retāk – arī ceļojums laikā.

Pētījums uzrāda nepieciešamību turpināt akadēmiskas diskusijas par atbilstošākā termina identificēšanu izziņas grāmatu nosaukšanai un ļauj secināt, ka 21. gadsimtā tapušās izziņas grāmatas par Latviju un tās kultūrvēsturiskajiem novadiem ir vērtējamas kā reģionālā kolorīta spilgtas atklājējas un ir būtisks ieguldījums lasītāju kultūras identitātes un pašapziņas stiprināšanā.

Summary

Through the lens of regional studies, the article analyzes the representation of Kurzeme values in children's non-fiction books by contemporary Latvian authors. The aim of this study is to record the most significant manifestations of regional literature (local traditions, landscape, topography, local language, portrayal of popular personalities, important events and other aspects of the culture of the specific territory) and their narrative peculiarities in a specific type of children's literature - non-fiction books.

The article examines the use of terms for non-fiction books/reference literature in the practice and research of world and Latvian children's literature and provides an overview of the beginnings and development of non-fiction books in Latvian children's book publishing from the beginning of the 20th century to the present day, showing that established traditions can be found in the writing of books of this category.

The main part of the study is devoted to the analysis of Kurzeme narrative in several works for children by modern authors. Four non-fiction books were analyzed in-depth: “Kā es ar opi braucu Latviju lūkoties” (“How Grandpa and I Went to Visit Latvia”, 2013) by Gundega Sēja (1953), “Sudraba kalējs, tērauda kalējs” (“Silver Blacksmith, Steel Blacksmith”, 1991, 2014) by Vitauts Ļūdēns (1937–2010), “Matīss meklē Latviju” (“Matīss Looks for Latvia”, 2010) by Valdis Klišāns (1964) and “Rīgas peles Ēdolē” (“Rīga Mice in Ēdole”, 2008) by Pēteris Blūms (1949). Kurzeme is reflected both in stories with the characteristics of a travelogue and in texts with a fairy tale structure. Manifestations of local color are described, including geographical location, the most important natural and cultural-historical objects, popular historical figures and decisive events, language peculiarities, traditions. The Kurzeme narrative is created in a dialogue between a child and an adult, where the adult is assigned the role of a wise companion. The structuring technique “story within a story”, popular in travel literature, is often used. The plot in books of this type tends to be loose, because it's driven by movement from one point of interest to the next, dependant on the destination of the trip, less often - by travel through time.

The study shows the need to continue academic discussions on identifying the most appropriate term for non-fiction books and allows us to conclude that non-fiction books about Latvia and Kurzeme written by contemporary Latvian authors can be considered as important revealers of regional color and a

significant contribution to strengthening the readers' cultural identity and self-confidence.

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Literatūra References

- Ancītis, V. (1967) *Baltā nora: īss pārskats par pēdējos gados izdotajām latviešu autoru grāmatām bērniem un jaunatnei*. Rīga: Liesma.
- Anderson, N. A. (2013) *Elementary Children's Literature*. Pearson; Second Custom Edition for St. Petersburg College.
- Binders, T. (2015) *Kur piedzimst vējš*. Rīga: Valters un Rapa.
- Blūms, P. (2008) *Rīgas peles Ēdolē*. Rīga: Datorzinību centrs.
- Children's literature. *Encyclopedia Britannica*. www.britannica.com. Retrieved from: <https://www.britannica.com/art/childrens-literature#ref51235>
- Galda, L. & Cullinan, B. E. (2002) *Cullinan and Galda's Literature and the Child*. Belmont, CA: Wadsworth/Thomson Learning.
- Genres: Children's Literature. Retrieved from: <https://libguides.ashland.edu/childlitgen>
- Klišāns, V., (2010) *Matīss meklē Latviju*. Rīga: Zvaigzne ABC.
- Kofmans, Ž., P. (2011) *Kurzeme ... francūža acīm*. Rīga: Zvaigzne ABC.
- Ļūdēns, V. (2014) *Sudraba kalējs, tērauda kalējs. Sarunas ar Laimiņu par seniem laikiem Latvijā*. Rīga: Sprīdītis.
- Mirzayeva, H., Karabayeva, S. & Kuziyeva, D. Specific Features Of Children's Literature. *Contemporary Scientific Resaerch: Current Issues, Achievements and Innovations*. International Scientific and Current Research Conferences. 10.12.2020.
- Osmanis, J. (1977) *Saules akmens. Latviešu bērnu literatūras gadu gaita*. Rīga: Liesma.
- Radzobe, Z. (2008) Azartiski par vēsturi. *Diena*. 16.02.2008. Pieejams: <https://www.diena.lv/raksts/pasaule/krievija/azartiski-par-vesturi-13386659>
- Sēja, G. (2013) *Kā es ar opi braucu Latviju lūkoties. Saistoši stāstiņi, interesanti fakti par Latviju un jautra spēle*. Rīga: Zvaigzne ABC.
- Sēja, G. (2007) *Mana Latvija. Mana pirmā enciklopēdija*. Rīga: Zvaigzne ABC.
- Simsone, B. (2023) Zinātniskā fantastika. *Nacionālā enciklopēdija*. Pieejams: <https://enciklopedija.lv/skirklis/2026-zin%C4%81tnisk%C4%81-fantastika>
- Snell, K. D. M. (1998) The regional novel: themes for interdisciplinary research. *The Regional Novel in Britain and Ireland: 1800–1990*. Cambridge University Press.
- Stikāne, A. (1977) *Latviešu bērnu literatūra*. Rīga: Zvaigzne.
- Tretjakova, S., Stikāne, I. & Zandere, I. (2006) *Zirgs, kas naktī dzied. Bērnu literatūra Latvijā*. Rīga: Latvijas bērnu un jaunatnes literatūras padome.
- Wilson, Ch., R. & Ferris, W. (1989) Regionalism and Local Color. *Encyclopedia of Southern Culture*. University of North Carolina Press, 1989. Retrieved from: <https://docsouth.unc.edu/southlit/regionalism.html>

**PSIHOLOĢIJA UN
KOMUNIKĀCIJA**

Psychology and Communication

DIGITAL INTERMEDIATION, INTERNET USAGE AND THE DEVELOPMENT OF COGNITIVE STYLES

Aleksejs Šņitņikovs

Riga Technical University, Latvia

Abstract. *Application of information and communication technologies in education has changed not only the forms of organization of educational process but also the way students learn. Studies over the last decade have shown that availability of the internet has changed the way students search, perceive, remember and assimilate new information and knowledge. This paper uses the works of cultural-historical psychology, media studies and cognitive psychology to ground the idea that the use of the media affects the development of cognitive styles. Computer technologies are conceptualized as cultural means, as psychological tools and new forms of intermediation between the consciousness and productive activity. As such, computer technologies and specifically the internet have the potential of influencing the development of higher psychic functions, the forms of cognitive self-control and self-government. The paper discusses the application of Sternberg's conception of thinking styles to the problems of the influence of computer technologies on the development of styles of cognitive self-control. As empirical evidence the paper uses the materials of five focus group discussions with school and university teachers conducted within the project "The impact of internet usage patterns on the development of youth's cognitive styles".*

Keywords: *cognitive styles, digital technologies, intermediation, internet, students*

Introduction

Computer technologies and the internet have afforded new opportunities for organization of the learning process in education institutions and for students' independent learning. These developments in education are part of more general societal transformations brought about by information and communication technologies which have affected many other domains of human activity. Computer technologies and the internet have changed the way people connect with each other, how they work, how they entertain, how they participate in communal life and politics, and, of course, how they acquire new information and learn (Castells, 2001; Van Dijk, 2020). These changes have been fundamental and the internet has been recognized as a 'transformative technology' (Graham, 2000; Bücher, Hergesell, & Kallinikos, 2022). For the students and pupils the computer technologies provide a socialization environment and generally the computer serves as a "cultural interface" (Manovich, 2001) through which they perceive the world. The internet has empowered the students in their activities of self-directed learning.

In the field of education psychology, research has been done on effective methods of online education (Nilson & Goodson, 2018). There have been studies on how the use of the internet has influenced some cognitive faculties of the students, for example, memorizing and problem-solving (Sparrow & Chatman, 2013). There have been studies on perception, attention and reading in the online environment (Baron, 2008; Carr, 2020). Much attention has been paid to the study of online communication and socialization. But providing a more comprehensive model of the influence of the internet on cognitive development still remains a challenge. This paper sets forth the main ideas of the theoretical approach elaborated in the project “The impact of internet usage patterns on the development of youth’s cognitive styles”. It applies the conception of cognitive styles by Robert Sternberg and combines it with the insights from cultural-historical psychology founded by Lev Vygotsky. The common ground of these conceptions is the idea of self-government, or mastering of one’s psychic processes and behaviour, which is formed in the course of an individual’s psychological development. According to Vygotsky, the higher psychological functions develop in course of maturation of cognitive control of the individual over his or her psychological faculties and behaviour. According to Sternberg, individuals differ in the forms of their psychological self-control, or self-government. They develop different cognitive, or thinking styles. Sternberg classifies these thinking styles using the metaphor of the functions and forms of political government (legislative, judicial, executive etc.). These forms of individual self-government are relatively autonomous from cognitive abilities. Sternberg’s concept of thinking styles complements Vygotsky’s theory by adding variability to the outcomes of psychological and cognitive development. But Vygotsky’s theory is helpful in providing conceptual tools for explaining cognitive development by employment of cultural means of intermediation, which the individuals are mastering through socialization and learning.

This paper lays out the concept of digital intermediation by interpreting the ideas from cultural-historical psychology for the purpose of the study of the influence of the internet on psychological development of youth. It interprets the information technologies and digital media as a novel form of psychological intermediation. It sets out to show how the concept of cognitive styles can be applied in the study of the effects of the use of the internet on cognitive development and learning. On the basis of focus group discussions with school and university teachers it discusses how the use of the internet can foster the formation of particular thinking styles in terms of Sternberg’s theory.

Intermediation, psychological tools and cognitive development

The starting point of cultural-historical theory is the idea that the essential mechanism of human psychic development is the introduction of a system of

artificial stimuli which help the humans to master their own behavior (Vygotskij, 1984b, p. 77). The system of such artificial stimuli at the stage of the childhood is speech (Vygotskij, 1984b, p. 80). The individual is mastering himself or herself with the help of external means, the 'psychological tools', which are directed on one's psyche and behaviour. The word, the language is crucial in psychological and cognitive development because they enable one to generalize the experience, to analyze and to learn the experience of other humans. The *word* becomes the means for the development of conceptual thinking, which, according to Vygotsky, plays the central role for other psychic functions, such as attention, memory, perception and will (Vygotskij, 1984a). The development of conceptual thinking, which evolves through several stages, is the central process in overall psychic development during childhood and adolescence (Vygotskij, 1983). It is important to emphasize that the human psychological development becomes possible thanks to the existence of cultural objects, which have a history. Psychological development, according to cultural-historical psychology, has the direction from the external toward the internal, from inter-psychic toward intra-psychic (Vygotskij, 1982, p. 130). The major tools of individual psychological development are cultural means and objects shared by the community. Therefore, the concept of *intermediation* (*oposredstvovanie*) is crucial for understanding psychological development in the perspective of cultural-historical psychology. Luria and Leontiev further elaborated on the role and significance of language for the functioning of consciousness. Language, according to Luria, is the chief means of conscious activity of the humans (Lurija, 1979, p. 50). Language supports consciousness and thinking, it mediates one's operations with the objects of practical work and the relationships with other humans (Leontiev, 1981).

The general postulates of cultural-historical psychology may be correct. But language itself develops along with the technical means which are employed to make use of the language as a psychological tool – *the technical means of intermediation*. Cultural-historical psychology has not paid sufficient attention to the study of the effects of technological development of linguistic media on the formaton of cognitive functions in historical perspective. This gap can be filled to some extent with the studies in linguistics and media. Oral speech is common to all humans and in this sense may be said to be 'natural' to human species. But writing is indeed a wholly technical, artificial invention, which not all languages possess (Ong, 2002, p. 81). Social anthropologist Goody provided evidence on the influence of writing on restructuring of social institutions, such as religion, law and economy (Goody, 1986). Writing, according to Goody, encourages decontextualization of speech and abstraction in thinking (Goody, 1986, p. 12). Invention of writing had a fundamental impact on the development of the capacity of reasoning (Goody, 1986, p. 142). It permits subsequent checking, control and reviewing of statements – the 'backward scanning' – and therefore subjects thinking process to a greater discipline. It fosters greater coherence and reflexivity

of the thinking process. Therefore, humans develop their cognitive capacity not just by using the speech as a ‘prop’, but also by using the technical means such as writing for this purpose. Writing, Ong suggests, is essentially a consciousness-raising activity (Ong, 2002, p. 147). The invention of printing further strengthened the effects of writing. The social and psychological implications of printing were explored in the works of McLuhan. Printing, according to McLuhan, made the sense of sight especially salient for humans, ‘separating’ it from other senses and promoting the orderliness of perception. It encouraged the process of individualization, because greater access to books and the practice of reading brought about greater differentiation among people; their memories became more individualized. Reading fostered the development of greater “detachment” from the world and the attitude of objectivity (McLuhan, 1962, p. 87). Printing maximized the sense of closure of the text, its coherence and gave rise to new forms of creativity and artistic genres, such as novels (Ong, 2002, p. 156). Ong goes as far as to say that complex, ‘round’ human character is a creation of writing and printing culture (Ong, 2002, p. 148). Literary culture produced the concept of a complex human personality and a human lifeworld (Ong, 2002, p. 151).

The rapid development of broadcasting and later electronic media in the 20th century also have had significant social and psychological consequences. McLuhan was among the first scholars to explore these consequences. For example, McLuhan argued that radio has the effect of involving the individual lives of the people into the communal life, the public domain (McLuhan, 1994, p. 298). The TV has had the effect of simultaneous engagement the senses of hearing and sight in the moving images of the screen. Whereas printing promoted individualism, the broadcasting fostered greater cognitive and emotional involvement of the individuals in the common life of the society on local or global levels (McLuhan, 1994, p. 178).

Digital intermediation and the internet

Digital technologies and the internet have had transformational effects on culture and society. As a form of intellectual technologies and a particular kind of intermediation they have affected also cognitive processes. The essence of the process of digitization is that it divides the analogue sources and information into digits – combinations of ones and zeros. This is performed by computer processors, the software and applications. Digitization enables the convergence of all media, especially with the appearance of broadband internet connection (Van Dijk, 2020, p. 66). Originally, the internet was designed as a technology for knowledge sharing (Berners-Lee, 2000, p. 200). But it grew rapidly into an unprecedentedly multifunctional medium. The internet now fulfils various functions for the users: information, communication, transaction, sociability, education and identity building (Van Dijk, 2020, p. 213). Introduction of mobile

digital devices increased permeation of the internet in everyday life. The internet is accessed by using mobile phones, laptop computers and other devices.

As a medium with the screen networked computers may be said to have a similar effect as the TV, that is, they involve several senses simultaneously. But the networked computer is an even more involving medium due to the interactivity of the internet. The user can communicate with other users, send them messages, share text and audio files, images and videos. The functions of work, learning, entertainment and sociality can be performed on a single device of a portable computer or a smartphone.

The social and economic effects of these technologies are numerous. One of the major social effects of the internet is that it empowers the individual to perform the abovementioned functions exercising more choice and control (Amichai-Hamburger, 2017). In other words, the internet intensifies the trend of individualization. This pertains to different domains of individual's experience, from work and learning to intimate relationships. Another major effect is that the use of computers and digital technologies have led to steep increase of production of data and information. This has produced a side effect of information and communication overload (Van Dijk, 2020).

Digital technologies have provided the students with many new opportunities. The networked computers allow for employment of different channels of perception (audiovisual, iconic, textual) and modes of learning (instruction, enaction, participation). There appeared new opportunities for students' self-directed learning. Students have more possibilities to manipulate with the subject matter themselves, to learn by exploring and experimenting, to choose from several types of presentation, to 'play' with the study material, its visualization and simulation, to engage with the dialogue with the 'intelligent' study software (Van Dijk, 2020, p. 42). There are more possibilities to connect with the teachers and fellow students and for distance learning. The internet with its structure of hyperlinks has provided more possibilities for 'associative learning'. The internet search engines allow for quick search of information in different formats. The combination of these new opportunities has led to the unprecedented transformation of the education system and practice (Ibid).

But the use of digital technologies in the learning process has posed also risks and led to undesirable consequences. Information overload often leads the users to employ the strategies of selective perception and scanning (Van Dijk, 2020, p. 200). This results in superficial assimilation of information and shallowness of perception. The students get used to quick reading of selected fragments which apparently satisfies their needs and solves posed tasks but they may fail to develop the skills for deep reading. It becomes increasingly difficult to motivate the students to read whole books or long articles (Baron, 2008). The students often recourse to 'snippet reading' (Ibid). When reading on the internet the students may 'jump' to the inbuilt hyperlinks and lose the meaning of the text

they had been reading. The risk here is the loss of coherence in the process of learning and acquiring knowledge (Levy, 2001; Carr, 2020). Quick reading without deep concentration also causes problems with memorizing the content. Students may assume that memorizing big volumes of information is not necessary when it can be quickly found on the internet – the strategy known as cognitive offloading. But this strategy is risky because the students may fail to establish enduring conceptual connections in their thinking which is necessary in the process of deep learning and getting understanding of study subjects. It should be pointed out that the problem of fragmentation of knowledge is not just a matter of particular forms of perception and learning habits. It has its basis in the digital technology itself which implies dividing information into discrete bytes. This allows for its easy manipulability and recombination. These opportunities for creating new cultural objects, including texts, have changed the parameters of culture itself (Manovich, 2001; Miller, 2020). Texts, for example, tend to acquire a ‘pointed structure’, containing combined and recombined layers and fragments (Van Dijk, 2020, p. 193). Manovich has argued that in the digital culture there is an erosion of the coherent narrative as a cultural form and it tends to be replaced by the database (Manovich, 2001).

The internet culture has affected the language and brought about the rise of a particular form of language known as ‘Netspeak’ (Crystal, 2001, p. 238). It is characterized by informality, use of abbreviations, laxity in observing grammar rules, especially punctuations, use of symbols of expressions of emotions and attitude and a number of specific stylistic features. This form of language is used by the young people mostly in the context of online chats and instant messages but it has a ‘spillover’ effect on other domains of linguistic usage.

Lastly, digital technologies have provided more possibilities for ‘multitasking’. Digital convergence of media and internet connectivity enabled performing various tasks simultaneously or nearly so. In practice, a student may work, engage in communication and visit entertainment sites at the same time. Multitasking creates the problem of distraction, lack of concentration and loss of focus (Gazzaley & Rosen, 2016). This is recognized as a problem for studying, because memorizing, bringing the information into the long-term memory requires focused attention. This is especially challenging for the youth because their cognitive control is not yet fully mature and digital devices represent tempting attractions for them.

Cognitive styles

Sternberg put forward his theory of thinking styles in order to provide, from the point of view of psychology, an account for the differences in practical application of mental abilities of the individuals. People differ in the ways they prefer to make use of their cognitive abilities. He chose the metaphor of forms

and functions of the political government to describe the various ways in which individuals act while solving problems. While Sternberg's statement that forms of government are external reflections of what goes in people's minds (Sternberg, 1997, p. 17) is rather naive, the basic idea that people exercise a capacity for self-government, or self-control, is correct. This is taken as a fundamental human characteristic also in other psychological and sociological theories, for example by Lev Vygotsky and Norbert Elias (Elias, 2001), because humans possess the unique capacity to change, modify and transform their reactions to the external and internal stimuli. Sternberg's theory sets out to go farther by providing a typology of thinking styles according to the operations of societal government. These styles may be interpreted, from the point of view of the theories of Vygotsky and Elias, as particular and individualized ways of internalization of the constraints of social environment and intellectual procedures.

There are thinking styles which correspond to the functions of mental self-government: legislative, executive and judicial. *Legislative* people are those who like to determine their course of action, to create their own rules and prefer to deal with problems which are not prestructured. They tend to choose creating occupations (Sternberg, 1997, p. 20). *Executive* people like to solve given, prefabricated problems, to fill the gaps in the existing structures. They like to fulfil the plans rather than create the plans. *Judicial* people like to deal with problems by evaluating, judging and criticizing existing things, procedures and ideas. These people tend to choose occupations in which one can evaluate and analyze (Sternberg, 1997, p. 21).

There are thinking styles which correspond to the forms of government: monarchic, hierarchic, oligarchic and anarchic. *Monarchic* people typically are determined by a specific goal and are single-minded in reaching that goal. They often are led by a particular, singular interest in their life and follow a chosen method of solving the problem (Sternberg, 1997, p. 22). *Hierarchic* people have a hierarchy of goals and they are more open to accepting complexity of the world. They recognize the need to see the problems from different angles and tend to set their own priorities among the goals. *Oligarchic* people have several competing goals and find it difficult to set the priorities among them, they wish to attend to all of them at the same time. They tend to be influenced by the priorities set by other people in their environment (Sternberg, 1997, p. 23). *Anarchic* people have a number of goals which are difficult for them to sort out and prioritize. They attend to these goals and needs in a rather random way, and they are prone to reject systems and rules as confining and restricting them (Ibid).

Thinking styles are further characterized by levels, scope and leanings of mental self-government. By the level people are characterized as global and local. *Global* people when dealing with problems prefer to have the big picture, to see the forest rather than the trees and tend to be generalists. *Local* people concentrate on the details of the problem, they are down-to-earth and tend to see the trees

rather than the forest. *Internal* individuals tend to concentrate on their own ideas, to rely on themselves when solving problems and tend to be less socially aware. *External* individuals are outgoing and people-oriented, they prefer to solve problems together with others, working or learning in groups. Individuals with *liberal* thinking style like to go beyond the existing rules, they are anxious to try new things and experimentation and feel comfortable in ambiguous settings. *Conservative* individuals like to adhere to the existing rules and structures, they stick to familiar situations and prefer environment where ambiguity is minimized (Sternberg, 1997, p. 26).

In subsequent research thinking styles were grouped into clusters of styles designated as Type I and Type II. Type I included legislative, judicial, hierarchic, global and liberal and was associated with greater cognitive complexity, creativity and critical thinking. Type II included executive, local, monarchic and conservative and was associated with lower cognitive complexity, norm-following and dualistic thinking (Zhang, 2002, p. 183). Anarchic, oligarchic, internal and external styles were not included in either Type I or Type II. They are considered as more dependent on the context, can be included in both types but also were referred to as Type III (Zhang & Sternberg, 2005, p. 36).

Sternberg and Zhang have argued that the styles are rather states than traits and, as they research has shown, can be at least partly socialized and modified (Zhang & Sternberg, 2005, p. 37). It depends, for example, on experience and education. In their study on the development of intellectual styles Zhang and Sternberg found associations between types of culture and thinking styles and concluded that “culture is an important factor in the formation of styles” (Zhang & Sternberg, 2011, p. 148).

The effects of the internet on cognitive styles formation

As has been pointed out, digitization and internet technologies have had transformational effect on society. They have changed the conditions of creation and consumption of cultural objects. This gives ground to argue about the rise of digital culture (Manovich, 2001; Miller, 2020). It can be hypothesized, therefore, that digital and internet culture have the effects on the development and formation of cognitive styles. In order to test this hypothesis several research activities have been planned in the project “The impact of internet usage patterns on the development of youth’s cognitive styles”. At the beginning of the project focus group discussions were organized with school and university teachers. There were five focus groups overall: three focus groups with school teachers and two with university teachers. Two of the focus groups with school teachers took place in Riga, one in Liepaja. Both focus group discussion with university teachers took place in Riga, but in one of them there were participants from regional universities. In one focus group there were university teachers of humanities and

social science subjects, in another teachers of technical disciplines and natural sciences. All five groups were organized in May and June 2022. The total number of participants was 39.

In course of the discussions the moderator asked the participants questions about possible influence of the use of the internet on various aspects of learning, including the way the students learn while they work in the classrooms and when working independently. This section will not present a detailed analysis of these discussions but rather will make an overview of the tendencies in the expressed opinions of the participants in terms of Sternberg's theory of thinking styles. In general, participants in all groups confirmed that the internet has affected the way pupils and students learn, receive and assimilate information and knowledge.

Local. There were named a number of characteristics of students' learning habits and practices which can be categorized as local style. One of the expressions of that is what can be called fragmentation of knowledge. The teachers commented that students are losing the broader view on things, for example, historical processes. They *"don't see the interconnections because they process fragments of information, which do not make up a whole picture"* (university teacher, communication theory). This may be connected with variety and great volume of available sources of information. Another reason is decline of the ability to read deeply, which was observed by school and university teachers. Pupils prefer to read short texts, for example summaries of longer texts on the internet. They rather skim the texts and often read superficially. Other characteristics related to local style are empirical orientation and lack of abstract thinking. Pupils tend to have "very concrete thinking" (secondary school teacher, special pedagogue), and they lack theoretical skills: "very detailed analysis, but without generalization" (university teacher, sociology). "Abstract thinking is weak" and students often dislike theoretical classes and prefer practical lessons or watching videos on the subject (university teachers, medicine, physics).

Executive. Participants mentioned characteristics of students' learning which corresponded to executive style. Teachers expressed opinions that students lack creativity and imagination and are apt to perform tasks which are well structured and precise. *"It is difficult for them to figure out something. It is easier to find out on the internet and copy it"*, said a history teacher from the secondary school in Liepaja. Some said that it is difficult for the pupils to improvise, they want to do precisely as given in the task (secondary school, literature teacher). Social science and natural science university teachers mentioned that it is difficult for the students to formulate their own substantial questions and they lack critical thinking. Many students seem to be satisfied with the executive attitude. *"They do what they are asked to do"* (secondary school teacher, Latvian language and literature), they are prone to follow instructions and *"they need to be told, or written down, and the work has to be clear and concrete"* (school teacher, history and social sciences). Availability of the internet often was seen as a factor

diminishing the independent effort of the pupils, because many answers are available on the internet. As the consequence pupils expect precise formulations of study tasks: *“They are not interested in the essence... They are interested in maximally fast, superficial execution of work”* (school teacher and director, informatics).

Conservative. Focus groups participants mentioned traits which can be interpreted as conservative style. Some teachers pointed out that students are unwilling to be genuinely creative and in their projects they often use the materials available on the internet. In connection with this the problem of plagiarism was discussed in several focus groups. Students seek “the easiest way”, that is, what they try is to find readily available solutions. The availability of the perceived solutions on the internet negatively affects creativity of the students (university teacher, computer science). It reduces motivation and effort to be creative. Some participants pointed out to the lack of critical attitude and thinking with respect to the materials the students find on the internet (university teacher, Asian studies). According to some participants, pupils figure out solutions along with “algorithmic thinking or according to a template” (school teacher, special pedagogue). Dualistic and rigid thinking was mentioned as a characteristic of toddlers. ‘Traditional’ way of doing things characteristic of conservatives in the context of digital culture rather means greater reliance on the content students can find on the internet.

Anarchic. In the discussions participants pointed to anarchic traits of pupils and students. One of the expressions of that is lack of recognition of the authority of the teachers at schools. Pupils were said to have little respect for the teachers, and may ignore teachers’ instructions and requests. Pupils were said to have other authorities in the world of the media, the authority of the school and the teacher as a source of knowledge was said to be undermined by the perceived availability of knowledge on the internet. *“Pedagogues are not an authority, authorities are on the internet”* (secondary school teacher and director, Russian language and literature). Pupils were said to be learning what is interesting for them: *“I learn what I want, what is appealing to me. (...) And when you say that you should know this, they do not learn it. And then you move on, but they have not got it”* (secondary school teacher, Latvian language and literature). Another expression of anarchic style is the practiced multitasking of pupils and students. They try to do many things simultaneously but in a rather disorganized way. Digital devices also distract their attention. Pupils and students are striving to follow many streams of rapidly changing information and as a result they lose the capacity to focus their attention. School and university teachers also pointed to the phenomenon of “quasi-presence” on the lectures due to divided attention. Yet another expression of ‘anarchism’ is an informal style of communication adopted by many pupils and students in dealings with the teachers.

Traits of **judicial** style were expressed in a more indirect way. Pupils may become interested in a particular topic and learn about that from the internet materials, for example, on YouTube channel. Then they critically evaluate what the teachers or their fellow pupils say on this topic. Egocentricity and “heightened subjectivism”, pointed to by the participants, as an expression of the tendency of individualization reinforced by digitalization and the internet, in some contexts, especially in combination with dualism and rigidity of thinking, can be interpreted as a feature of a **monarchic** style. **Hierarchic** style was discernable from such characteristics as purposefulness of the pupils who are motivated to continue their studies and succeed in a selected career and a more purposeful and skillful use of the internet for study purposes. **Oligarchic** style could be inferred from the descriptions of popularity of messengers among pupils and students who use them for social and study purposes. With regard to the scope dimension of thinking styles the evidence from the focus groups varied. Some participants said that students and pupils readily communicate with each other, especially using messengers, when working on tasks and problems and like to work in groups. Other teachers pointed to out that students shy from direct interaction and communication with the teachers and that it is difficult to engage students in proper, substantial discussions during the classes. This evidence points to a mixture of **internal** and **external** styles. Some cognitive tendencies, such as preference of the use of visual, video and audio formats of study materials to reading the texts cannot be categorized in terms of Sternberg’s theory.

The bulk of the traits mentioned by the participants in connection with the use of the internet in the learning process correspond to Type II of thinking styles which is associated with superficial learning (Zhang & Sternberg, 2005, p. 16). It should be noted, however, that focus group discussions as a research method has its limitations. It encourages the expression of opinions by the participants but also may create bias by reinforcing particular points of view. This data may be taken as indicative of the existing trends and are in accord with the position of some informed critics of the internet and its effects on cognition (Carr, 2020). But rather than arguing for a complete characterization of the thinking styles of contemporary youth, this overview of focus group discussions materials demonstrates an application of the theoretical perspective outlined in the paper. In course of the research project, other research methods will be employed, including a representative survey and psychological testing.

Conclusion

This paper has provided theoretical explanation of the posited influence of digital technologies and the internet on learning and cognition from the perspective of cultural-historical psychology. This explanation involves the concepts of intermediation and psychological tool. According to cultural-

historical psychology, the development of higher psychic functions involves the cultural means of intermediation. In cultural-historical psychology such cultural means primarily are signs, speech and language. This paper extends the meaning of psychological tools to intellectual technologies, such as writing, printing, and information and communication technologies, including the internet. Social and psychological effects of these forms of intermediation have been observed in different historical periods by researchers in such disciplines as sociology, anthropology, media studies and linguistics.

Digital media and the internet have specific features and their great possibilities and wide application have had transformational effects on society. Over the last two decades digital culture emerged. Digital electronic devices are networked and multifunctional. They are used by the young people for many purposes, including learning. The internet is used by them as a source of information for studies and as the means for communication and cooperation. It is an important ‘prop’, or ‘scaffolding’, for their learning and cognition. Continuous presence of digital technologies in their lives has influence on the habits and practice of their learning, their beliefs about studies, information and knowledge. As a consequence, these practices have influenced formation of their learning or cognitive styles.

Participants of focus group discussions attested such influence of digital technologies and the internet on pupils’ and students’ learning and cognitive styles. Sternberg’s theory of thinking styles was applied to the analysis of focus group discussions materials. The content analysis identified local, executive, conservative and anarchic styles in these discussions as more prominent in connection with the use of the internet in the learning process. Local style was related to students’ inability ‘to see the forest behind the trees’, to form substantial generalizations and linked to fragmentation of knowledge. Executive style was found in students’ inclination to look for ready solutions available on the internet. Conservative style was observed in the tendency to follow a patterned, algorithmic thinking. Anarchic style was registered in students’ denial of authorities in formal education system and disorganized character of their learning under the influence of distraction and multitasking. Other styles associated with more complex thinking (Type I) and more purposeful and creative use of the internet also could be indentified but they were mentioned less frequently and applied by the participants to a smaller share of students.

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References

- Amichai-Hamburger, Y. (2017). *Internet Psychology: the basics*. London, New York: Routledge.
- Baron, N. (2008). *Always On: Language in an Online and Mobile World*. Oxford: Oxford University Press.
- Berners-Lee, T. (2000). *Weaving the Web. The original Design and Ultimate destiny of the World Wide Web*. New York, London: Harper.
- Bücher, S., Hergesell, J., & Kallinikos, J. (2022). Digital Transformation(s): On the Entanglement of Long-Term Processes and Digital Social Change. An Introduction. *Historical Social Research*, 47(3), 7–39. DOI: <https://doi.org/10.12759/hsr/47/2022.25>
- Carr, N. (2020). *The Shallows: How the Internet is changing the way we think, read and remember* (2nd ed.). London: Atlantic Books.
- Castells, M. (2001). *The Internet Galaxy: Reflections on the Internet, Business and Society*. Oxford and New York: Oxford University Press.
- Crystal, D. (2001). *Language and the Internet*. Cambridge: Cambridge University Press.
- Elias, N. (2001). *The Civilizing Process*. Oxford: Blackwell.
- Gazzaley, A., & Rosen, L. D. (2016). *The Distracted Mind*. London: MIT Press.
- Goody, J. (1986). *The Logic of Writing and the Organization of Society*. Cambridge: Cambridge University Press.
- Graham, G. (2000). *The Internet: A philosophical inquiry*. London and New York: Routledge.
- Leontiev, A. N. *Problemy razvitiya psihiki*. Moskva: Izdatel'stvo Moskovskogo universiteta.
- Levy, D. M. (2001). *Scrolling Forward: Making Sense of Documents in the Digital Age*. New York: Arcade Publishing.
- Luria, A. R. (1979). *Jazyk i soznanie*. Moskva: Izdatel'stvo Moskovskogo universiteta.
- Manovich, L. (2001). *The Language of New Media*. Cambridge, Massachusetts: The MIT Press.
- McLuhan, M. (1962). *The Gutenberg Galaxy: The Making of Typographic Man*. Toronto: University of Toronto Press.
- McLuhan, M. (1994). *Understanding Media. The Extensions of Man*. Cambridge, Massachusetts: The MIT Press.
- Miller, V. (2020). *Understanding Digital Culture*. London: Sage.
- Nilson, L. B., & Goodson, L. A. (2018). *Online Teaching at Its Best*. San Francisco: Jossey-Bass.
- Ong, W. J. (2002). *Orality and Literacy. The Technologizing of the Word*. London and New York: Routledge.
- Sternberg, R. J. (1997). *Thinking Styles*. Cambridge: Cambridge University Press.
- Sparrow, B., & Chatman, L. (2013). Social Cognition in the Internet Age: Same As It Ever Was? *Psychological Inquiry*, 24(4), 273-292.
- Van Dijk, J. (2020). *The Network Society* (4th ed.). London: Sage.
- Vygotskij, L. S. (1982). *Sobranie sochinenij* (Vol.1). Moskva: Pedagogika.
- Vygotskij, L. S. (1983). *Sobranie sochinenij* (Vol. 3.) Moskva: Pedagogika.
- Vygotskij, L. S. (1984a). *Sobranie sochinenij* (Vol. 4.) Moskva: Pedagogika.
- Vygotskij, L. S. (1984b). *Sobranie sochinenij* (Vol. 6.) Moskva: Pedagogika.
- Zhang, L. F., & Sternberg, R. (2005). *A Threefold Model of Intellectual Styles*. *Educational Psychology Review*, 17(1), 1-53.
- Zhang, L.-F. (2002). Thinking Styles and Cognitive Development. *The Journal of Genetic Psychology*, 163(2), 179–195. DOI: <https://doi.org/10.1080/00221320209598676>

Šnitnikovs, 2023. *Digital Intermediation, Internet Usage and the Development of Cognitive Styles*

Zhang, L.-F., & Sternberg, R. (2011). Culture and Intellectual Styles. In R. J. Sternberg, L.-F. Zhang, & S. Rayner (Eds.) *Handbook of intellectual styles: Preferences in cognition, learning, and thinking*. New York: Springer Publishing Company.

TEACHER'S SOCIAL EMOTIONAL HEALTH AND RESILIENCE IN SLOVAKIA AND LATVIA DURING DISTANCE LEARNING SITUATION

Eva Gajdošova

Pan-European University, Slovak Republic

Guna Svence

Latvia University, Latvia

Abstract. *The article brings the research results of the teachers' social-emotional health and resilience in Slovak Republic and in Latvia during distance learning situation. The sample consisted of 800 teachers, 400 teachers from each country, who completed Social-Emotional Health Survey-Teachers (SEHS-T) and Resilience Scale (RS) during months of May through July 2021. The research results showed the highest covitality level of Slovak teachers in comparison with Latvian teachers ($p < .001$, $r = .36$). There was found a big difference in covitality in the clue domain Belief in Self in favour of Slovak teachers ($p < .001$; $r = .44$), there were only average differences in other domains - Belief in Others, Emotional Competence, Engaged Living. Latvian teachers reached high scores in cognitive reappraisal and optimism ($p < .001$). There was statistical difference in the level of resilience between Slovak and Latvian samples ($p < .001$; $r = .35$). Slovak teachers scored higher. But the teacher's resilience in both countries had moderate level. Significant positive strong correlation was found between resilience and covitality in Slovak teachers $r_s = .76^{**}$ and in Latvian teachers $r_s = .66^{**}$. Significant high and moderate positive correlations were found also between resilience and covitality domains.*

Keywords: *Latvia and Slovakia comparison, resilience, social-emotional health, teachers.*

Introduction

The new education system is already focusing on the development of new types of collaboration between schools - pupils, teachers, management, and parents - to make the learning process more aware. Starting education, now it is necessary to change the accents of education, which is topical in Latvia and Slovakia many years. So, without the LearningCompass2030 program, we are all looking for what we can change in our work, including how to change our perceptions of what is new, how I should change my own pedagogical activity, as not only the education policy has changed, but also the new generation of students. For the next labour market solver to be able to do this, the educational environment must be oriented rather than it is no longer a matter of multiplying

the standard situation, the standard task and the truth, but creativity must be developed. The future will require addressing many different risk situations and challenges, such as natural disasters and migration processes, the creation of new technologies, and the provision of support masses in crisis situations, new types of services, new types of educational environments and others in the face of unforeseen factors. To do this as best you can, you need people who is able to act quickly and intelligently in unpredictable situations (Rasmitadila et al., 2020). We can model a situation where, as education systems change, teachers' approaches to lessons change, one teacher is more of an innovator, another is more of a stop with the usual methods, and there may be a situation where the child does not understand what is required of him, feels confused.

At a tremendous pace, there is no learning process focused on the acquisition of subjects and standards time to think, because creative work takes time to come up with a new idea, to create mind activation exercises first, to remember what is already known and to consult with a group, to create a 'brainstorming', listen, express opinions, generate ideas, give the brain time to relax, it may require four hours of work with mandatory hours of rest for games, fun.

That is why the teacher becomes one of the factors of change - how educated, intelligent, prepared for change, psychologically resilient, mentally healthy, supported will feel the teacher, so fast or the new approach to educational competences and pupil-centred learning in today's school will be slow to develop.

A 2009 longitudinal study in the United States found that teacher performance was statistically significantly predicted by two characteristics: life satisfaction and perseverance, which translates into perseverance toward long-term goals (Duckworth et al., 2007). Satisfaction with life affects learners with teacher enthusiasm -the higher their levels, the more, the more diverse the teacher's involvement in the teaching process (this also includes socio-emotional levels). Perseverance, on the other hand, manifests itself as more purposeful, intensive, more persistent action in challenging conditions, which includes training the environment (Duckworth, Quinn, & Seligman, 2009).

The challenges of the education system and the current changes require a high level of psychological resilience, vitality, emotional self-regulation for those who lead the process, and one of them is the teacher, therefore, studies show that with increasing levels of stress and the risk of emotional burnout, because the work of a teacher becomes more intense and complicated. It is scientifically proven that teachers who are happy to work promote students' academic achievement and involvement in the learning process; second, better coping with work - related stress and emotional burnout; third, they are more likely to take an active role in the workplace and contribute to school life (Klassen et al.,2012; Birkāne & Svence, 2019).

Various studies show that if a teacher is socially involved, he or she is sensitive to the student emotions, which in turn can affect exam results and

classroom relationships, and these worries build trust between the teacher and the students, but at the same time the teacher must be maintained their professional competence. It is important to emphasize that when it comes to emotional competence, a teacher's empathy for learners motivates them to better understand their needs, and thus encourages teachers to look for new teaching methods that are right for them (Al-Ruqaishi, 2017).

Resilience

Resilience is a person's ability and skills to withstand all challenges, to be able to accept them and adapt to the next shocks. Resilience is related to personality potential and the development of their resources. Resilience can be defined as the development of your ability throughout life based on knowledge of the capacity of the personality's positive resources - the development and improvement of lifetime (Ungar & Liebenberg, 2009, as mentioned by Svence, 2015).

In turn, according to the definition of other authors (Jackson & Watkin, 2004, as mentioned by Svence, 2015), living force has seven features: regulation of emotions, control of impulses, ability to analyse causes and consequences, self-efficacy, realistic optimism, empathy, and the ability to accept challenges.

But most often it connects resilience with the ability to recover from traumatic, risk-taking situations that involve both individuals' characteristics (optimism, internal control locus, positive self-esteem, sense of competence, communication skills, positive attitudes), both with relationships (family warmth, stable homes, secure support sources and identification models, links, etc. c.). Masten (2001) emphasizes that resilience should be linked to an emphasis on personality strengths and active resources.

In 2011, a group of scientists from Canada, Australia and the United States conducted research (Herrman, Stewart, Diaz Granados et al., 2011, Svence, 2015) - the same concept applies to the idea of positive adaptation and the ability to maintain mental health despite the hardships and misfortunes experienced as homeostasis, a self-regulated state of balance and harmony.

Researchers point out that resilience is important for teachers because it contributes to teaching effectiveness (Gu & Day, 2007) as well as the vitality of teachers as a feature in helping to adapt to education changing environmental conditions and be more resilient to stress (Gu & Day, 2007; Howard & Johnson, 2004).

Researchers have found that teachers' vitality is strengthened by individual factors such as self-efficacy, high motivation, ethical goals, flexibility and a sense of humour, as well as various social factors related to teacher work, such as the ability to work in effective administrative teams supervises support, a favourable psychological climate at school (Gibbs & Miller, 2014), good relationships with

colleagues positive professional performance assessment, material support and professional development opportunities (Crosswell & Beutel, 2013).

Researchers also refer to evidence from previous studies that teachers with higher resilience rates are more likely to be effective in their work (Gu & Day, 2007). In turn, reduced resilience could mean poorer health and absence from work for teachers, a less managed learning environment for learners, and a loss of self-esteem for good teachers for employers and a loss of investment in teacher training (Gibbs & Miller, 2014).

British researchers Gibbs & Miller (2014) have suggested that the resilience of teachers to keep them working and to ensure a well - motivated, consistent, and effective teaching process for children. Researchers refer to evidence from previous research that teachers with a greater degree of resilience are more likely to be effective in their work (Gu & Day, 2007).

In this context, a recent study by a group of US scientists (Richards et al., 2016) investigated the effects of resilience on perceived role stress and emotional burnout in primary and secondary school teachers (n = 415). The study found that role stress (dissatisfaction with one's role) predicts emotional burnout, while low resilience rates are associated with high levels of stress and burnout in both primary and secondary school teachers. Researchers have found that teachers with a higher level of resilience feel less successful, have more job satisfaction and are able to interact positively with others in the school environment (Richards et al., 2016).

Social Emotional Health

The research is based on the concepts of social-emotional health (Svence et al., 2022) and vitality (Wagnild, 2016). These concepts are closely related to other concepts in psychology, especially health psychology, such as psycho-emotional health. In turn, all of these concepts are generally supported by the bio-psycho-emotional health model.

Most health care professionals who are not involved in the treatment of mental illness traditionally do not pay attention to an individual's psychological factors, such as thoughts, beliefs, and attitudes. Today, however, these factors are receiving increasing attention in various difficulties.

Today, the World Health Organization (WHO) defines general health as a state of complete physical, mental and social well-being rather than a state without physical impairment or disease (WHO, 1984). Therefore, not only physical but also mental or psycho-emotional health is an important and integral part of an individual's overall health.

Similar to the WHO definition, psychological researchers (Westerhof & Keyes, 2010) point out that psycho-emotional health arises from emotional well-being (interest, happiness, satisfaction with life), psychological well-being (positive functioning and self-realization of the individual) and social well-being.

integration into society and a sense of worth in it). Individuals with a high level of social and psycho-emotional well-being and a low level of psychopathology are considered to be individuals with positive psycho-emotional health. Conversely, individuals with low levels of social and psycho-emotional well-being and psychopathological disorders are considered to be impaired.

Summarizing the researchers' understanding of psycho-emotional health, it can be concluded that strong or complete psycho-emotional health is determined not by the absence of illnesses or their symptoms, but by the psychological well-being of the individual.

At the same time, psycho-emotional health is affected not only by psychological but also by biological, social and environmental factors (WHO, 2004). Biological factors such as age, gender, including heredity and / or brain damage, can affect an individual's physical and mental development. Mental health problems and mental illness can present with a variety of symptoms, such as behaviour, emotional or thinking difficulties, and a variety of mental illnesses.

The study uses several keywords included in the biopsychosocial model: social support (SEHS-T), interpersonal relationships (SEHS-T), socioeconomic status (demographic issues), physical activity (RS), emotions (SEHS-T), self-esteem, attitude towards self (RS), faith or individual belief system (SEHS-T, RS), stress management (SEHS-T and-RS).

In 2014, Michael Furlong and his team developed a Social Emotional Health Survey (SEHS). This survey allows the measurement of the four constructs that make up social-emotional health (SEV) and the total SEV factor (Boman et al., 2020). The basic principle of SEHS is related to the assumption that an individual's sense of psychological prosperity is partly based on living conditions that promote the disposition of internal cognition or form individual schemes. These schemes are related to an individual's beliefs about themselves, others, emotional competencies and viability (Furlong et al., 2014).

The first design in the SEHS model is self-confidence. It consists of three components: self-efficacy, perseverance and self-confidence. Self-efficacy is defined as an individual's confidence in his or her ability to match his or her activities with the requirements of the environment. Perseverance is defined as an activity with a long-term goal. It also includes working with challenges, maintaining interest over the years, even when faced with failures and obstacles to achieving the goal. Self-confidence is defined as the ability of an individual to understand their strengths and weaknesses, as the ability to understand their emotions, reactions and motivations (Furlong et al., 2014; Klingbeil & Renshaw, 2018). The second construct of the social-emotional health model is confidence in others. This includes the support of the individual's family, educational institutions and peers. At the same time, these components are the processes of social exchange between the family, teachers and peers, which

develop the individual's cognitive processes and value system (Furlong et al., 2014; Klingbeil & Renshaw, 2018).

The third construct of the model is emotional competence, which consists of three lower-order constructs: emotional self-regulation, empathy, and self-control. Emotional self-regulation is defined as an individual's ability to express emotions according to a given situation. It is the ability to accept and feel different emotions and react flexibly to them. Empathy is an individual's ability to notice and feel other people's emotions. In turn, self-control manifests itself as the ability to respond appropriately to different situations (Furlong et al., 2014; Klingbeil, 2018).

The fourth construct of the model is viability, which includes gratitude, passion or optimism. Gratitude is described as the feeling that arises when an individual responds to receiving any kind of personal benefit. Passion / enthusiasm is defined as the ability of an individual to do things with enthusiasm and confidence. Optimism is characterized by an individual's faith in the future and life force (Furlong et al., 2014; Klingbeil, 2018).

Michael Furlong defines these four constructs as social-emotional health factors. In turn, the lower order constructs, interacting with each other, form these factors. In addition, the influence of these constructs in combination with other concepts of positive psychology is enhanced (Furlong et al., 2014).

Methodology

Participants and procedure

The study sample included 400 teachers from Latvia and 400 teachers from Slovak Republic. Data were collected online through Google forms platform during the months May, June and July 2021. Teachers were approached through pedagogical centres in Slovak Republic and the schools in Latvia. They were provided information about the purpose of the study and confidentiality. The administration time was approximately 20-30 minutes. All ethical aspects were considered and approved by the authors' university ethics committee.

Measure

Social-Emotional Health Survey-Teachers (SEHS-T) is a measure of social-emotional health for teachers - adapted the Social-Emotional Health Survey-Higher Education (SEHS-HE; Furlong et al., 2017) and modified by Eva Gajdosova in 10 items by the agreement of the author prof. Michael J. Furlong (2018).

SEHS-T assesses latent trait covitality and four primary domains – belief-in-self (BIS), belief-in-others (BIO), EC emotional competence (EC) and engaged living (EL). The first domain, BIS, consists of 3 subscales derived from the social-emotional learning theories and self-determination theory: self-efficacy,

persistence, and self-awareness (Bandura et al., 1996; Durlak et al., 2011; Malinen et al., 2013). The second domain, BIO, has 3 subscales related to resilience construct: family support, institutional support and colleague support. The third domain, EC, consists of 3 subscales based on constructs from social-emotional learning theories: cognitive reappraisal, self-regulation and empathy. The last domain, EL, consists of 3 subscales based on positive psychology constructs: gratitude, zest and optimism (Furlong et al., 2014).

Overall SEHS-T consists of 12 subscales and 48 items rated on a scale from 1 (very much unlike me) to 6 (very much like me), with covitality scores ranging between 48 to 288. The level of covitality has been interpreted as low, moderate and high, as shown in Table 2.

Internal consistency of SEHS-T in the present study was assessed with Cronbach's alfa. Covitality showed strong internal consistency with Cronbach's α . = 0.95 (Slovak sample) and .94 (Latvian sample). See Table 1.

Table 1 SEHS-T Internal consistency (Cronbach's alfa)

	Slovakia / Latvia
Covitality	.95 / .94
Belief-in-Self	.87 / .81
Belief-in-Others	.86 / .83
motional Competence	.84 / .81
Engaged Living	.91 / .83

Table 2 Scoring of Social-Emotional Health Survey-Teachers SEHS-T

SEHS-T	High level	Moderate level	Low level	Min.	Max.
	> 208	128-207	< 127	48	288
SEHS-T Domains	High level	Moderate level	Low level	Min.	Max.
	> 52	32-51	< 31	12	72
SEHS-T indicators	High level	Moderate level	Low level	Min.	Max.
	> 18	11-17	< 10	4	24

Resilience scale RS (Wagnild & Young, 1993) is a measure used to assessment an individual resilience with two subscales: personal competence and acceptance of self. RS contains of 25 items which are rated on a 7-point Likert style scale (1 = *strongly disagree* to 7 = *strongly agree*). Total score ranges between 25 to 175 and is interpreted as shown in Table 3.

Table 3 Scoring of Resilience Scale RS

Resilience Scale RS	Moderately high and high level	Moderately low to moderate level	Low level	Min.	Max.
	> 145	116-144	< 115	25	175

Wagnild & Young (1993) analysed 12 studies conducted with RS with samples of varied age, education and socioeconomic background and found Cronbach's alpha coefficients ranging between .72 to .94. RS has thus been shown to be a reliable and valid measure for assessment of resilience in various populations (Wagnild & Young, 1993).

In the present study reliability of RS was assessed with Cronbach's alpha coefficient. Reliability of the 25-item measure was very satisfactory, α .94 (in Slovak sample) and α = .89 (in Latvian sample).

Data Analyses

Data were analysed in SPSS (version 22). Internal consistency was assessed with Cronbach's alpha coefficients. Primary data were used to compute means, medians, standard deviations, and empirical ranges. Results were documented with boxplots and histograms. Relationships were analysed with Spearman's rank correlation formula; effect sizes were calculated with Eta coefficients. Normal distribution of data was assessed via histograms, skewness, and kurtosis of analysed variables, as well as with Shapiro-Wilk test. Due to non-normally distributed data, non-parametric tests, Mann-Whitney U Test, Wilcoxon Signed Rank Test and Kruskal-Wallis H Test were used for comparison of differences between the groups.

Results

Social-emotional health, covitality

Based on results of frequency analyses, high level of covitality was found in 91,2% Slovak participants and moderate level in 8,8% Slovak teachers. The same situation is in the Latvian sample. 76,10% of Latvian teachers reported high level of covitality, and 23,9% teachers had moderate level. None of the Slovak and Latvian participants reported low level of covitality.

Results for individual domains of social-emotional health are shown in Table 4 and Table 5.

Table 4 Covitality level of Slovak teachers (created by the authors)

	Covitality	Belief-in-Self	Belief-In-Others	Emotional Competence	Engaged Living
Low		.30	.80		.50
Average	8.80	11.50	12.80	8.50	16.50
High	91.30	88.30	86.50	91.50	83.00
Total	100.00	100.00	100.00	100.00	100.00

Table 5 Covitality level of Latvian teachers (created by the authors)

	Covitality	Belief-in-Self	Belief-in-Others	Emotional Competence	Engaged Living
Low		.50	.30	.30	.30
Average	23.90	38.00	27.30	14.80	24.70
High	76.10	61.50	72.50	85.00	75.10
Total	100.00	100.00	100.00	100.00	100.00

The research results showed the highest covitality level of Slovak teachers in comparison with Latvian teachers ($p < .001$, $r = .36$). There was found a big difference in covitality in the clue domain Belief in Self in favour of Slovak teachers ($p < .001$; $r = .44$), but in other domains there were only average differences (Tables 6,7,8). Analysis of covitality indicators results in Latvian and Slovak sample found big differences in level of gratitude, empathy, self-awareness, and family support in favour of Slovak teachers. Latvian teachers reached high scores in cognitive reappraisal and optimism ($p < .001$).

Table 6 Comparison of the covitality level in Slovak and Latvian teachers (created by the authors)

	Covitality	Belief-in-Self	Belief-in-Others	Emotional Competence	Engaged Living	Resilience
U	44599.00	39149.50	50689.00	52692.00	56562.50	47213.00
Z	-10.20	-12.51	-8.98	-8.37	-6.44	-10.03
P		<.001	<.001	<.001	<.001	<.001
r	.36	.44	.32	.30	.23	.35

Table 7 Comparison of the covitality indicators level in Slovak and Latvian teachers (part 1) (created by the authors)

	Self-Efficacy	Persistence	Self-Awareness	Family Support	Institutional Support	Colleague Support
U	50324.50	49432.50	34065.50	34039.50	79138.50	49800.50
Z	-9.16	-9.40	-14.14	-14.14	-.27	-9.31
P	<.001	<.001	<.001	<.001	.79	<.001
R	.32	.33	.50	.50	.01	.33

Table 8 Comparison of the covitality indicators level in Slovak and Latvian teachers (part 2) (created by the authors)

	Cognitive Reappraisal	Empathy	Self-Regulation	Gratitude	Zest	Optimism
U	65750.50	25859.00	54302.00	15383.50	78693.50	67841.00
Z	-4.39	-16.68	-7.93	-20.07	-.40	-2.90
p	<.001	<.001	<.001	<.001	.69	.01
r	.16	.59	.28	.71	.01	.10

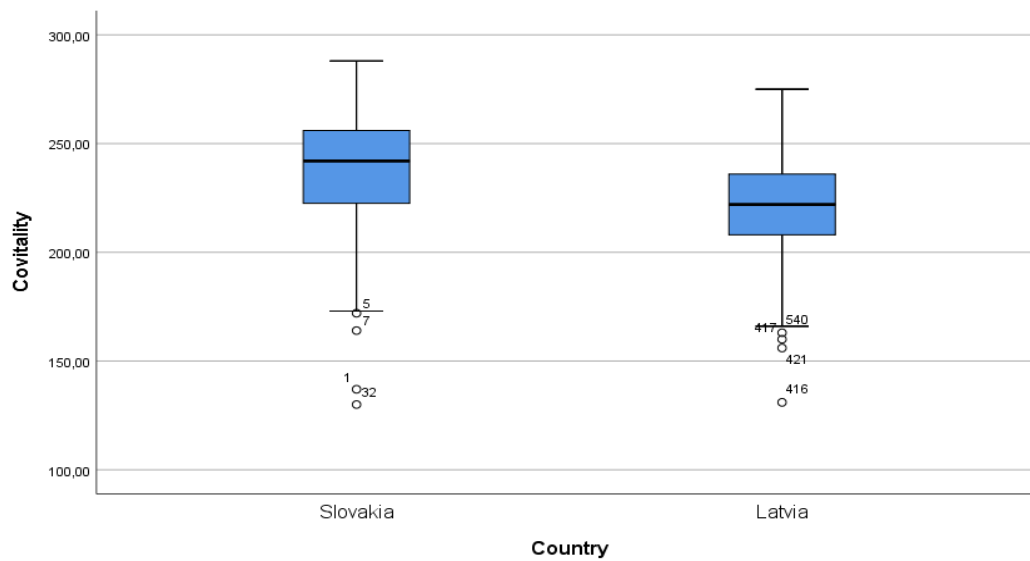


Figure 1 Covitality of Slovak and Latvian participants (created by the authors)

Descriptive statistics results showed high covitality median for Slovak sample ($Mdn = 242$) and for Latvian sample ($Mdn = 222$) and high scores for covitality domains. Covitality empirical range was 130-288 (Slovakia) and 131-275 (Latvia), empirical maximum of four covitality domains was at 68 -72 points, as presented in Table 9.

Table 9 Descriptive statistics of covitality and covitality domains (created by the authors)

Country		Covitality	Belief- in-Self	Belief- in-Others	Emotional Competence	Engaged Living	Resilience
Slovakia	Mean	238.65	59.65	59.51	60.66	58.84	142.08
	SD	24.75	7.22	8.14	6.53	8.04	18.71
	Median	242.00	60.00	61.00	61.00	60.00	145.00
	Minimum	130.00	19.00	25.00	36.00	16.00	28.00
	Maximum	288.00	72.00	72.00	72.00	72.00	175.00
	Kurtosis	1.23	2.06	1.46	.57	1.80	4.60
	Skewness	-.76	-.75	-1.03	-.63	-.89	-1.27
Latvia	Mean	221.54	53.16	55.32	57.10	55.91	130.60
	SD	21.96	6.66	6.36	5.84	6.07	15.23
	Median	222.00	54.00	56.00	57.00	56.00	132.00
	Minimum	131.00	18.00	26.00	22.00	30.00	87.00
	Maximum	275.00	72.00	70.00	69.00	68.00	167.00
	Kurtosis	.33	1.85	.52	3.11	.29	-.27
	Skewness	-.38	-.68	-.42	-.84	-.34	-.19

Resilience

Median score of resilience in Slovakia was 145 at high level of resilience, with empirical range 28 to 175 and median score of resilience in Latvia was 132

with empirical range 87-167. The results confirmed moderate level in teachers of both countries. Descriptive statistics are reported in Table 10.

According to frequency analysis results, very low and low level of resilience was found in 6,8% of Slovak teachers and 17,3% of Latvian teachers. Average level was found in 36% Latvian participants and 28% Slovak participants and high average level, and high level was found in 15,8% of Latvian teachers, with 47,6% Slovak teachers (Table 11,12). But there was statistical difference in the level of resilience between Slovak and Latvian samples ($p < .001$; $r = .35$). Slovak teachers scored higher.

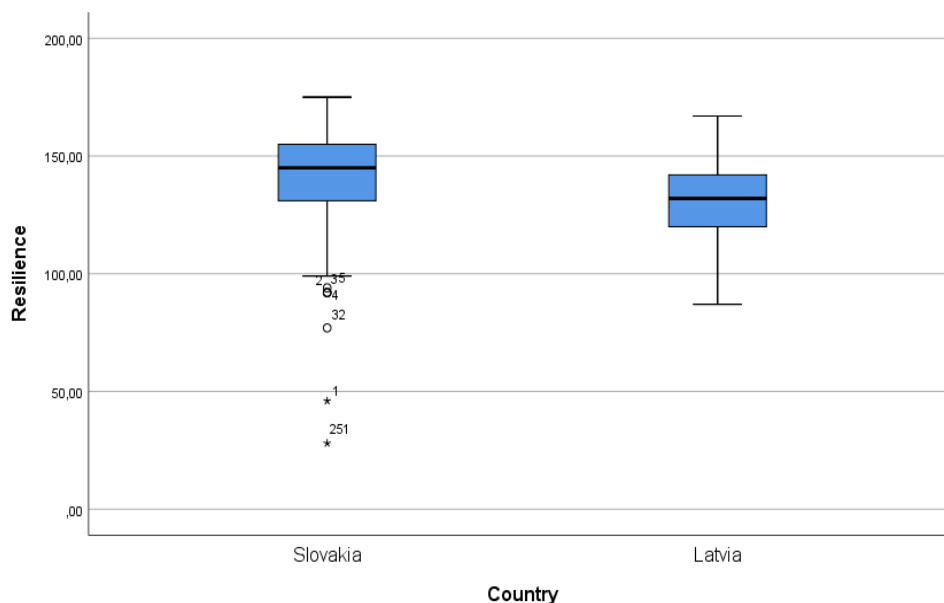


Figure 2 Resilience level (Slovakia/Latvia) (created by the authors)

Item frequency analysis showed some positive results, e.g., 84% Slovak teachers provided positive ratings to item “*My life has meaning*”. Teachers rated independence (83%), pride in accomplishment (81.6%), reliability (78.6%), ability to cope in life (82.6%) with highest scale scores 6 and 7 (1 = *strongly disagree* to 7 = *strongly agree*). Limits of Slovak teachers were found in admitting of problems (29.5% does not admit a problem, 25% has difficulties with admitting a problem). 39.8% teachers can face adversities, 35.8% do not dwell on things they can’t do anything about, 53,3% are able to get through hard times, 61% reported they have enough energy for everyday activities and 63.3% reported they are able find a way out of difficult situation.

70.1% Latvian teachers scored high in the item “*dependent on myself*” and 63.3% participants *kept interested in things*. 49.8% teachers in Latvia emphasised “*My belief in myself gets me through hard times*”. Only 43.6% Latvian participants provided high ratings to item “*I can usually look at a situation in a number of ways*”.

Correlations between resilience and covitality

Significant positive strong correlation was found between resilience and covitality, in Slovak teachers $r_s = .76^{**}$ and in Latvian teachers $r_s = .66^{**}$. Significant high and moderate positive correlations were found also between resilience and four domains and twelve covitality indicators: strong correlations were found between resilience and BIS ($r_s = .68^{**}$, $r_s = .57^{**}$), resilience and BIS ($r_s = .68^{**}$, $r_s = .57^{**}$), resilience and EC ($r_s = .61^{**}$, $r_s = .60^{**}$) and resilience and EL ($r_s = .72^{**}$, $r_s = .58^{**}$).

But there are differences in correlations between resilience and covitality in psychological indicators of Slovak and Latvian participants, e.g. resilience and colleague support ($r_s = .31^{**}$, $r_s = .56^{**}$) or resilience and institutional support ($r_s = .44^{**}$, $r_s = .65^{**}$). In Latvian sample there were correlations higher (Table 13).

Table 10 Correlations between resilience and covitality, covitality domains and indicators (created by the authors)

(Slovakia/ Latvia)	
	Resilience
Covitality	.76 ^{**} / .66 ^{**}
Belief-in-Self	.68 ^{**} / .57 ^{**}
Belief-in-Others	.49 ^{**} / .61 ^{**}
Emotional Competence	.61 ^{**} / .60 ^{**}
Engaged Living	.72 ^{**} / .58 ^{**}
Self-Efficacy	.66 ^{**} / .45 ^{**}
Persistence	.54 ^{**} / .49 ^{**}
Self-Awareness	.53 ^{**} / .55 ^{**}
Family Support	.39 ^{**} / .37 ^{**}
Institutional Support	.44 ^{**} / .65 ^{**}
Colleague Support	.31 ^{**} / .56 ^{**}
Cognitive Reappraisal	.63 ^{**} / .39 ^{**}
Empathy	.39 ^{**} / .56 ^{**}
Self-Regulation	.40 ^{**} / .54 ^{**}
Gratitude	.45 ^{**} / .44 ^{**}
Zest	.66 ^{**} / .51 ^{**}
Optimism	.65 ^{**} / .58 ^{**}

** $p < .001$

Covitality domains and indicators as predictors of resilience

Based on results of regression analysis, three covitality domains, EL, BIS and EC ($R^2=0.61$; $p<0,001$), and seven covitality indicators, self-efficacy, zest, self-regulation, optimism, cognitive reappraisal, gratitude, colleague support, were identified as predictors of resilience ($R^2=0.62$; $p<0,001$). Based on the results of frequency analyses and teacher responses most significant limits were identified for institutional support and optimism. These areas should be addressed by targeted activities aiming to support teacher mental health in the next project phase.

Covitality of Slovak and Latvian participants

Descriptive statistics results showed high covitality median for Slovak sample (Mdn = 242) and for Latvian sample (Mdn = 222) and high scores for covitality domains. Covitality empirical range was 130-288 (Slovakia) and 131-275 (Latvia), empirical maximum of four covitality domains was at 68 -72 points, as presented in Table 10. The item frequency analysis indicated that in the domain BIS, participants responded with 5 to 6 points (on a scale from 1 = very much unlike me to 6 = very much like me), to almost all items for individual psychological indicators self-efficacy and self-awareness (60 % – 85% of participants). In the domain BIO, over 70% of Slovak participants reported high scores in indicator family support. 86.3% of Slovak participants responded that family is their source of support in challenging times and 85.8% of Slovak participants rated high sense of togetherness in family. Latvian teachers scored lower in these items (51.5% and 60.8%). But 67.3% of Latvian participants scored high in indicator colleague support and 60.8% of teachers reported strong sense of togetherness at school. Only 35, 6% of Slovak teachers rated the item of colleague and school support at high level and 12.8% negatively (1 and 2 scale points). Very similar results were found for item “Outside of my friends, there are other people at school who care about my well-being“ (52.5%). 30.5% of participants responded with medium level ratings and 7% with low ratings.

Responses in the domain EC were rated with scale points 5 to 6 in both samples. In empathy indicator, 90% of Slovak participants responded with highest scores to following items: “I feel badly when my colleagues are put down“ (93,8%), “I’m aware of others hardships“ (91.8%) and “I try to understand how other people feel and think“ (85.6%). The Latvian teachers scored at lower level.

In the domain EL, only indicator gratitude was assessed with points 5 to 6 by over 90% of participants (“When I reflect on my life, there is much to be grateful for“(95.8%), or “I appreciate those who are close to me“ (98.5%). In this domain, in indicators zest and optimism, scores were found to be lower, e.g., for item “I feel energetic in my life right now “only 49.5% of participants used high ratings, 42.3% used medium ratings and 8.3% reported lack of energy. Situation is quite different and very positive in Latvian participants. E.g., 84.5% Latvian teachers scored very high in the item “I am able to stay positive even when facing uncertain situations”, but only 53% Slovak teachers. The same situation is in the item “Each day I look forward to having a lot of fun” (63.3% Latvian teachers and only 38.3% Slovak teachers).

Discussion

The aim of current study was to examine the level of covitality and resilience in Slovak and Latvian teachers and to investigate relationships between these constructs. Results showed that over 90% of Slovak and Latvian teachers reported high level of covitality and over 80% of teachers reported high level of covitality domains (BIS, BIO, EC, EL).

Limits in resilience were identified in the domain of problem solving and coping as well as in the domain of energy, enthusiasm for activities. The resilience of teachers in Latvia and Slovakia showed the level between high and average/moderate level.

The teachers' socio-emotional health was positively correlated with resilience. The correlations between the covitality and its key domains and the resilience are on very high level, especially the Emotional Competence and the Belief of Self. Namely, the optimism was highly positively correlated with the resilience.

The results of the research have several practical implications concerning the design and subsequent implementation of measures to improve the social and emotional health and resilience of teachers in the countries.

Author note

This study was conducted as part of the research project Erasmus+ „Supporting teachers to face the challenge of distance teaching (PERSONA)”, which primary aim is, based on research results, to introduce effective complex program for teachers targeting mental health and personal competencies to help them cope with present requirements in the field of education.

References

- Al-Ruqaishi, Salama Abdul Aziz Ahmed. (2017) Teachers' Engagement in an Omani University Foundation Programme. PhD thesis, University York. Retrieved from: <https://etheses.whiterose.ac.uk/20299/>
- Bandura, A., Barbaranelli, C., Carprara, G. V., & Pastorelli, C. (1996). Multifaceted Impact of Self-Efficacy Beliefs on Academic Functioning. *Child Development*. Vol. 67, No. 3, pp. 1206-1222. Retrieved from: <https://www.jstor.org/stable/1131888?origin=crossref>
- Birkāne, U., & Svence, G. (2019). Skolotāju iesaistes darbā, emocionālās izdegšanas un dzīvespēka rādītāju sakarības. *Baltic Journal of Psychology*. Rīga, Latvijas Universitāte. Pieejams: https://www.apgads.lu.lv/fileadmin/user_upload/lu_portal/apgads/PDF/Baltic_Journal_of_Psychology/Balt-Psy-Journal_2019-20.1-2.pdf
- Boman, T., Kjellberg, A., Danermark, B., & Boman, E. (2020). The Need for Support and Adaptation in the Workplace among Persons with Different Types of Disabilities and Reduced Work Ability. *Scandinavian Journal of Disability Research*, 22(1), pp.253–264. DOI: <http://doi.org/10.16993/sjdr.672>

- Crosswell, L. & Beutel, D. (2013). A bridge over troubling waters: a snapshot of teacher graduates' perceptions of their ongoing professional learning needs. *Asia-Pacific Journal of Teacher Education*, pp. 144-158. DOI: <https://doi.org/10.1080/1359866X.2013.777022>
- Duckworth, A. L., Peterson, C., Matthews, M. D., & Kelly, D. R. (2007). Grit: Perseverance and passion for long-term goals. *Journal of Personality and Social Psychology*, 92(6), 1087–1101. DOI: <https://doi.org/10.1037/0022-3514.92.6.1087>
- Duckworth, A. L., Quinn, P. D., & Seligman, M. E. P. (2009). Positive predictors of teacher effectiveness. *The Journal of Positive Psychology*, pp. 540-547. DOI: <https://doi.org/10.1080/17439760903157232>
- Durlak, J. A., Weissberg, R. P., Dymnicki, A., B., Taylor, R. D., & Schellinger, K. B. (2011). The Impact of Enhancing Students' Social and Emotional Learning: A Meta-Analysis of School-Based Universal Interventions. DOI: 10.1111/j.1467-8624.2010.01564.x
- Furlong, M. J., You, S., Renshaw, T. L., Smith, D. C., & O'Malley, M. (2014). Preliminary Development and Validation of the Social and Emotional Health Survey for Secondary Students. *Social Indicators Research*, 117(3), 1011–1032.
- Furlong, M. J., Gilman, R., & Huebner, E. S. (Eds.). (2014). Covitality: A Synergistic Conception of Adolescents Mental Health. *Handbook of Positive psychology in the schools*. New York: Routledge/Taylor & Francis.
- Gibbs, S. & Miller, A. (2014). Teachers' resilience and well-being: a role for educational psychology. *Teachers and Teaching*, pp. 609-621. DOI: <https://doi.org/10.1080/13540602.2013.844408>
- Gu, Q., & Day, C. (2007). Teachers resilience: A necessary condition for effectiveness. *Teaching and Teacher Education*, 23(8), 1302–1316. DOI: <https://doi.org/10.1016/j.tate.2006.06.006>
- Herrman, H., E., Stewart, D., Diaz-Granados, N., Berger, E. L., Jackson, B., & Yuen, T. (2011). What Is Resilience? *CanJPsychiatry*, 56(5), 258–265. Retrieved from: <https://journals.sagepub.com/doi/pdf/10.1177/0706743711105600504>
- Howard, S., & Johnson, B. (2004). Resilient teachers: resisting stress and burnout. *Social Psychology of Education. Volume 7*, pp. 399–420. Retrieved from: <https://link.springer.com/article/10.1007/s11218-004-0975-0>
- Jackson, R., & Watkin, Chr. (2004). SDR The resilience inventory: Seven essential skills for overcoming life's obstacles and determining happiness. Retrieved from: <https://www.semanticscholar.org/paper/SDR-The-resilience-inventory%3A-Seven-essential-for-Jackson-Watkin/69b08aae9a0974ff088665ca00353c6f6bb99887>
- Klassen, R. M., Aldhafri, S., Mansfield, C. F., Purwanto, E., Siu, A. F., Wong, M. W., & Woods McConney, A. (2012). Teachers' engagement at work: An international validation study. *The Journal of Experimental Education*, 80(4), 317–337.
- Klingbeil, D. A., & Renshaw, T. L. (2018). Mindfulness-based interventions for teachers: A meta-analysis of the emerging evidence base. *School Psychology Quarterly*, 33(4), 501–511. DOI: <https://doi.org/10.1037/spq0000291>
- Malinen, O. P., Savolainen, H., Engelbrecht, P., Xu, J., Nel, M., Nel, N., & Tlale, D. (2013). Exploring teacher self-efficacy for inclusive practices in three diverse countries. *Teaching and Teacher Education. Volume 33*, July 2013, pp. 34-44. DOI: <https://doi.org/10.1016/j.tate.2013.02.004>
- Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56(3), 227–238. DOI: <https://doi.org/10.1037/0003-066X.56.3.227>

- Rasmitadila, R., Aliyyah, R. R., Rachmadtullah, R., Samsudin, A., Syaodih, E., Nurtanto, M., & Suryanti Tambunan, A. R. (2020). The Perceptions of Primary School Teachers of Online Learning during the COVID-19 Pandemic Period: A Case Study in Indonesia. *Journal of Ethnic and Cultural Studies*, 7(2), 90-109
- Richards, K. A. R., Levesque-Bristol, Ch., Templin, Th. J., & Graber, K. C. (2016). The impact of resilience on role stressors and burnout in elementary and secondary teachers. *Social Psychology of Education*. K. Andrew R. Richards, Chantal Levesque-Bristol, Thomas J. Templin & Kim C. Graber. Volume 19, pp. 511–536. Retrieved from: <https://link.springer.com/article/10.1007/s11218-016-9346-x>
- Svence, G., Gajdasova, E., Petrulyte, A., Kalnina, L., Lagzdina, L., & Pakse, L. (2021). Teachers` social- emotional health indicators in the distance learning situation during the Covid-19 pandemic. *Problems of Psychology in the 21st Century*. 15(1). DOI: <https://doi.org/10.33225/ppc/21.15.26>
- Svence, G. (2016). Dzīvesspēka kategorija Pozitīvās psiholoģijas skatījumā : attīstības iespējas [Concept of resilience in positive psychology: developmental aspects]. Rīga: Zinātne. ISBN 9789934549045
- Ungar, M., & Liebenberg, L. (2009). Cross-cultural consultation leading to the development of a valid measure of youth resilience: The International Resilience Project.
- Wagnild, G. M., & Young, H. M. (1993). Development and Psychometric Evaluation of the Resilience Scale. *Journal of Nursing Measurement*, 1, 165-178.
- Wagnild, G. M. (2016). The Resilience Scale User`s Guide. Resilience Center. Worden, Montana.
- Westerhof, G. J., & Keyes, C. L. (2010). Mental Illness and Mental Health: The Two Continua Model Across the Lifespan. Retrieved from: <https://link.springer.com/article/10.1007/s10804-009-9082-y>
- World Health Organization. Regional Office for Europe (1984). *Health promotion : a discussion document on the concept and principles: summary report of the Working Group on Concept and Principles of Health Promotion, Copenhagen, 9–13 July 1984* (ICP/HSR 602(m01)5 p). Copenhagen: WHO Regional Office for Europe.

TRANSFORMATION OF LIFE AND PERSONAL VALUES SYSTEM OF MODERN UKRAINIAN YOUTH

Kateryna Kruty

Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University,
Vinnytsia, Ukraine

Nataliia Rodiuk

Jan Kochanowski University of Kielce, Kielce, Poland

Iryna Desnova

Mariupol State University, Kyiv, Ukraine

Olena Blashkova

Mariupol State University, Kyiv, Ukraine

Natalia Pakhalchuk

Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University,
Vinnytsia, Ukraine

Oksana Holiuk

Mariupol State University, Kyiv, Ukraine

Olena Stulika

Mariupol State University, Kyiv, Ukraine

Abstract. *The realities of modern Ukrainian's life at this historical moment of the struggle for independence in the conditions of social tension are quite complex and uncertain. Ukrainians are losing not only their material wealth, but life and personal values are changing in their minds. Everything that was important a year or two ago is not a priority now. The change of values, the search for a new meaning of life is one of the main fundamental principles of the modern Ukrainians' life. The main social task for every citizen is social and personal self-determination, as well as the active formation of a new worldview. Each individual is capable of realizing the value of his own life, as well as the lives of the people around him, based on his own worldview and his place in society. The formation of a person's ideas about values and value orientations presupposes their understanding and filling with specific content. The formation of values among modern Ukrainian youth occurs due to their connection with the outside world, the variety of social relations in which they are, and due to the knowledge of their own experiences. The main research methods: observation, survey, statistical analysis. The article emphasizes the identification of changes in personal values and value orientations of the youth of Ukraine. The main results of the research give reasons for asserting that the*

phenomenon of searching for life and personal values by a young person is one of the priority areas of scientific research. Due to the search, determination of the main and reshaping of the established value orientations of the modern youth of Ukraine, the worldview and meaning of life are changing. It is safe to say that such changes will help build own life path as a holistic process, as well as make one's abilities and opportunities of the environment as much as possible in solving life problems and achieving important goals. The author's interpretation of the terms "life values", "personal values", "value orientations of Ukrainian youth" is proposed.
Keywords: *life values, modern Ukrainian youth, personal values, value orientations of Ukrainian youth.*

Introduction

The transformational processes in Ukraine, which are characterized by serious changes in the development and defense of the state, have actualized the problem of forming values and value orientations of modern Ukrainian youth. The society must be clearly aware that the peaceful future of Ukraine depends on the level of development of the spiritual culture of young Ukrainians, their outlook on life and practical actions.

Taking into account the current cardinal changes in Ukraine, the objective and subjective factors of the historically complex social development of the state, it is necessary to analyze, forecast and influence the process of forming values and value orientations of modern Ukrainian students. As practice shows, the problem of forming spiritual values and value orientations of young people is also relevant because students can act as a driving, active force of social and political changes in the state.

Depending on what values are invested in these changes, what value orientations are formed, the future of Ukrainian society, its spirituality, culture and directions of socio-political transformations of the country will largely depend. That is why the presence and level of formation of value orientations of the individual are important. Society is interested in democratic values and culture.

The theoretical background

The formation of the individual as an independent and sovereign subject caused the growth of such forms of rationality, the foundation of which is a conscious choice of the idea of the Universe.

The construct of values became the subject of many scientists' attention. In the context of our research, works devoted to the problems of forming values and value orientations of youth are important. In particular, in the research "Personality traits and personal values: a conceptual and empirical integration" (Olver, Todd, & Mooradian, 2003) it is emphasized that "personality traits are largely endogenous characteristics, while personal values are learned adaptations

strongly influenced by the environment. Thus, these constructs appear to address nature and the interaction of nature and nurture, respectively" (Olver et al., 2003). The determining influence of the environment on the change of personal values is also revealed in other studies (Bardi & Schwartz, 2003; Rohan, 2000; Hoi-Wing, 2020; Aydin, Bagci, & Kelesoglu, 2022). The most promising in terms of our research are the views of Russ Harris on this issue. The author considers *the concept of values as deep human desires regarding the nature of interaction with the world, with other people and with oneself*. Values are a reflection of what a person wants to develop in his life, in the structure of his personality, what he wants to defend. It is values that set a certain direction for life (Harris, 2019).

In the works of the authors who investigate the problems of social unrest, *the values revealed in the citizens of Ukraine during the Russian aggression* are determined. In particular, the values of territorial integrity, attachment to Ukraine's territorial sovereignty through non-military means, national dignity, affective attachment to Ukraine's autonomy, the value of the sovereignty of Ukraine (Howlett, 2022; Murphy, 2022).

The basis of our work is also the study of the mental health crisis of young people and its impact on life and personal values. Thus, the immeasurably adverse consequences against the background of high rates of COVID-19 transmission, morbidity and mortality, will make people particularly susceptible and will seriously harm mental health in the coming years (Kalaitzaki & Tamiolaki, 2022). The authors also explore the possibility of "posttraumatic growth" (PTG) as a positive changes that an individual can feel inside, in others, and in the world as a result of dealing with life adversities. PTG covers spiritual and personal changes, opening up new opportunities, rethinking of oneself, others, events, appreciation of life, etc. (Tedeschi & Calhoun, 1996; Kalaitzaki, Tamiolaki, & Tsouvelas, 2021; Mohsen et al., 2021; Kalaitzaki & Tamiolaki, 2022).

So, Ukrainian society is in a transition period, in this regard, we have to teach the young generation to survive in the rather harsh conditions, and, at the same time, to educate a peculiar spirit, culture, morality and, in the process of transformations, to adapt to the new time. The Law of Ukraine "On Higher Education" (Article 26) provides that one of the main tasks of a higher education institution is "personality formation through patriotic, legal, ecological education, confirmation of moral values, social activity, civic position and responsibility, a healthy lifestyle, the ability to think freely and self-organize in modern conditions" (Zakon Ukrayiny Pro vyshchu osvitu, 2014). At the same time, taking into account modern civilization and ethno-national processes, the needs of society, the experience of other countries, patriotic, national-patriotic education of youth in Ukraine needs significant strengthening and improvement.

The need to find the meaning of life is reflected in the fact that the activities of student youth will not correspond to their own capabilities and will not be directed to the future without the emergence of values that determine the meaning

of existence for them. General worldview searches of students are reflected in the construction of life plans, which is very important in the process of formation of the motivational sphere of the individual. It is not only the complexities of social life that provoke interest of individual in the problems of the life meaning. This interest is formed in the process of person's socialization, his involvement in the norms of life and culture of society, in the process of learning and assimilation of experience accumulated by previous generations, as well as in the process of communication with other people.

The fate of the country, its national interests, as well as the value orientations that are formed in today's youth largely depends on the extent to which the young generation is nationally conscious, patriotic, ready to take responsibility for the development and preservation of the spirituality and cultural achievements of the Ukrainian state, to actively join to social processes, how effectively it participates in the process of socio-economic and political transformations.

The definition of "value orientations" was proposed by Dr. Vira Dub.

Value orientations are elements of the internal (dispositional) structure of the personality, formed and fixed by the life experience of the individual during the processes of socialization and social adaptation, which separate the essential from the non-essential for a specific person by accepting or not accepting certain values, which are perceived as content and basic life goals, as well as those ones determined by acceptable means of their realization (Dub, 2015).

In the dispositional structure of an individual, value orientations form a higher (as a rule, conscious – in contrast to social institutions) level of the hierarchy of attachment to a certain perception of life conditions, their evaluation and behavior both in the actual (here and now) and long-term (first of all) perspective.

Value orientations are most clearly explained in situations that require responsible decisions that have significant consequences and determine the future life of an individual. *Value orientations* ensure the integrity and stability of the individual, they determine the structure of consciousness, programs and strategies of activity, value orientations control and organize the motivational sphere, instrumental orientations to specific objects and (or) types of activities and communication as a means of achieving the goal.

Therefore, *value orientations* are, first of all, giving preference to or rejecting a certain content of the beginnings of life organization and the readiness to behave accordingly.

In this case, the content included in the concept of "value orientations" corresponds to the primary meaning of the word "orientation" as a determination of one's location in space. We can define *value orientations* as a certain general orientation of the interests and aspirations of the individual; the hierarchy of individual preferences and patterns; targeted and motivational programs; level of preferences; an idea of the reality and the mechanisms of selection according to

the criteria of significance; degree of readiness and determination (volitional components) to implement one's own "project" of life.

Value orientations are manifested in the ability to structure life situations, in decision-making and the ability to get out of problematic and conflicting situations by evaluating what a person puts on oneself or others. This can be traced to the lines of behavior chosen in existential and morally significant situations, the ability to cause and change the dominants of personal activity. The integrity and consistency of the system of value orientations is an indicator of the stability and autonomy of the individual. Accordingly, contradictions in the value system testify to the marginality of the individual, which is fixed on the inability to evaluate and make decisions or, on the contrary, to think only in stereotypes.

Value orientations of a person not only determine the motivation of individual behavior, but they are component of an individual's worldview. Since the interest to student youth as an important factor in the political life of society is constantly increasing, the education system should obviously focus on the humanities contributing to the formation of the necessary for society value orientations of students, because youth is a real political force.

Let's consider the value orientations of Ukrainian student youth.

Young people are characterized by a revaluation of values characteristic, their moral views are just being formed and structured, a characteristic focus on the future, physical and mental abilities that create certain arrogance, often turn into self-confidence. To analyze complex environmental phenomena, students often lack the flexibility and life experience of older generations. The presence of youthful maximalism and a high level of emotional excitement make this period in life quite difficult, but it is precisely in this period that value orientations are clarified and formed.

Studying the value orientations of this age group, researchers discovered such a pattern by 2022: young men prioritized their hobbies and interests, career and profession, money, and girls prioritized relationships with the opposite sex, family, and health in the family. In these features, first of all, social expectation is manifested.

According to the data of 2016, Ukrainian youth identified as equivalent for their value profile such judgments as (a) "find time to learn something for themselves and improve their abilities" /average score - 4.0/, and (b) "make maximum efforts, so that others admire their achievements" / average score - 4.0/, and (c) "to be a wealthy person", building over these most important life perspectives an "umbrella" that proclaims freedom / average score - 3.0 /, and (d) "demonstrate own opinion different from other people, be the owner of their ideas" / average score - 4.1/ (Dmytruk, Padalka, & Kireyev, 2016).

Value orientations are a dynamic phenomenon, as each new generation assimilates the values of the previous generation through the prism of its own perception, adding its own values. Youth of the last decade of the 20th century

and the beginning of the 21st century found themselves in a double situation: on the one hand, this generation was still brought up on "old" principles, and on the other hand, it is entering adulthood under the new conditions, which require the abandonment of many things learned earlier.

We believe that the value orientations of each individual are a set of values and goals inherent only to this person, which he chose as fundamental for his life. The peculiarity of this need lies in the uniqueness of its understanding by each person, and therefore it is impossible to define ready-made clichés of the most successful goals of existence, which creates difficulties in their study and development. Modern student youth are in extreme conditions: changes in the socio-economic situation are accompanied by global crises - a crisis of value consciousness, a crisis of spirituality, an economic crisis. Young people have to decide for themselves what is more valuable - enriching oneself spiritually or acquiring a high qualification, which provides the opportunity to adapt to new conditions; denial of former moral standards or flexibility and adaptation to the new reality; complete freedom of interpersonal, gender relations or family as a guarantee of successful existence, etc.

Methodology, organization and results of the research

In order to determine the transformation of the system of personal values and value orientations of Ukrainian youth the method of research of value orientations "Personality Profile" (PVQ-R) by Shalom Schwartz was chosen (Schwartz, 2016). The advantage of this method is the possibility to diagnose the structure of value orientations of both an individual and a group of respondents as a whole by determining the average value. A version of the questionnaire adapted by the authors was used to determine the personal values and value orientations of the respondents.

548 bachelor students, aged 17 to 23, who are studying at various institutions of higher education of Ukraine (Vinnytsia Mykhailo Kotsiubynskyi State Pedagogical University, Mukachevo State University, Khmelnytskyi Humanitarian and Pedagogical Academy, and Mariupol State University) took part in the study. The survey was conducted anonymously, online, without a time limit. Students were asked 40 questions, each corresponding to one of ten types of values: conformity, tradition, independence, kindness, hedonism, universalism, stimulation, achievement, power, and security. The survey was preceded by the following instruction: "Below are statements about some people. Read carefully and choose the answer that best describes you."

The results of the survey were processed by applying methods of mathematical and statistical processing: the method of comparing average values, the method of ranking.

The calculation of the results was preceded by the conversion of the scale of

the questionnaire into points, namely: "Very similar to me" - "4" points; "Just like mine" - "3" points; "Almost like mine" - "2" points; "A little not like I have" - "1" point; "Not like mine" - "0" points; "Not at all like I have" - "-1" point. Further data processing was carried out by correlating respondents' answers with the data processing key. Data analysis involved calculating the average score of the answers chosen by each respondent. Processing was carried out separately for each of the ten types of values. The value of the average score in relation to others made it possible to compare the degree of manifestation of the specified values for each respondent separately.

According to the average scores for each type of values, their rank ratio was determined. Each type of value was assigned a rank from one to ten. The first rank was assigned to the value type with the highest average score, the tenth rank was assigned to the value with the lowest average score. Thus, a rank from 1 to 3 determined a high degree of importance of the value for the respondent, and a rank from 7 to 10 determined a low significance of the corresponding values for students.

Data processing was carried out using SPSS Statics 17.0 for Windows and Microsoft Excel. The obtained research results are presented in Table 1.

Table 1 Ranking values of the criteria for the selection of values in higher education applicants (created by the authors)

№	Criteria	Priorities
1	Security	2.8
2	Tradition	3.0
3	Universalism	3.5
4	Stimulation	5.6
5	Independence	4.2
6	Hedonism	5.5
7	Kindness	4.1
8	Achievement,	4.3
9	Power	8.7
10	Conformity	4.7

The analysis of the obtained data gives grounds for asserting that the magnitude of the ranks occupied by the values allows us to draw a conclusion about their relative importance for students. Respondents give a significant preference to the value of security (indicator 2.8), which is relevant for Ukrainian youth in conditions of social unrest. Therefore, the feeling of peace, freedom, dignity, tranquility, love for others and the Motherland, harmony, stability in society and relations are the primary values for Ukrainian students.

Also, the value of traditions (indicator 3.0) and the value of universalism (indicator 3.5) have acquired a high degree of importance for modern youth in

Ukraine. Thus, the value of traditions is determined by the traditional way of behavior, the desire for group solidarity and unity of views. Patriotism and national dignity are manifested in the recognition of one's own traditions, observance and popularization of the customs and ceremonies of the Ukrainian people. The value of universalism is manifested in the form of tolerance, protection of the well-being of all people and nature.

Values such as: kindness, independence, achievement, conformity, hedonism and stimulation, acquired an average degree of importance for the respondents.

The value of kindness (indicator 4.1) is defined in the desire to preserve the well-being of people with whom the young person is in frequent personal contact, the life of those you love, friendship, mutual support, showing honesty, responsibility, indulgence, creating friendly relations, etc. The defining goal of the value "Independence" (indicator 4.2) is manifested in the autonomy of thinking, independent choice of actions, creativity and research activity, the desire to acquire autonomy and independence.

Thus, the value of achievement (indicator 4.3) characterizes the desire of young people in Ukraine to achieve success, to realize ambitious plans for the future, to become a competent person in a specific matter, to become a socially competent person and to receive social approval.

Conformity as a value (indicator 4.7) defines the desire to limit, stop actions, inclinations and aspirations that can cause harm to others or do not meet social expectations.

Hedonism as a value (indicator 5.5) characterizes the degree of youth satisfaction with life.

The value of stimulation (indicator 5.6) determines the respondents' need for deep and diverse experiences to maintain an optimal level of activity.

The value of power gained low significance (indicator 8.7), which is determined by the desire to achieve social status and prestige, the desire to control and dominate people. It is worth noting that the problem of political choice, social status and prestige is ambiguously perceived by the consciousness of modern Ukrainian youth. Thus, 10.6% of respondents categorically determined that the value of power is unacceptable for their personality ("Not at all like I have"); 25.2% of respondents noted the absence of any desire for power ("Not like mine"). The highest percentage indicator was recorded for the answer option "A little not like I have" (27.7% of respondents); 18.8% of young people characterize the value of power as being almost in line with their value orientations. 10.6% consider the value of power to be acceptable for them ("Just like mine"). However, only 7.1% of respondents indicated the value of power, which is of significant importance. Therefore, the distribution of percentage indicators by the value of "power" defines it as one that is not leading among the youth of Ukraine

Conclusions

Therefore, the value orientations of today's student youth will determine the way of life tomorrow. Studentship, which will strive to study the past, will better perceive the present, will confidently model its future. Each new generation draws its norms and principles of ideology and culture of its society from the experience of previous generations. Therefore, it is impossible to create a new and original system of values, spontaneously produced by modern youth. It can only be about specific perception and selection of existing values, about the positive influence on own experience of the formation and development of value orientations among Ukrainian student youth. We note that the development and outlook of Ukrainian youth in modern conditions is undergoing significant changes. It is debatable that compared to the previous decade young people are becoming more politically active and conscious in defining their own values and orientations, and they are beginning to orient themselves in the features of modern society. The obtained scientific results in general testify to the value attitude of Ukrainian student youth to such institutions as the state, nation, family, language, faith, history, culture. The students of higher education confirmed their understanding of the importance of the Ukrainian statehood existence, the sovereignty and territorial integrity of the native country, the national foundations of the development of Ukrainian society. The priority values for Ukrainian youth are love for others and the Motherland, security, freedom, dignity, mutual support, and the life of those you love.

References

- Aydin, E., Bagci, S. C., & Kelesoglu, I. (2022). Love for the globe but also the country matter for the environment: Links between nationalistic, patriotic, global identification and pro-environmentalism. *Journal of Environmental Psychology*, 80(5). DOI: <https://doi.org/10.1016/j.jenvp.2021.101755>
- Bardi, A., & Schwartz, S. H. (2003). Values and Behavior: Strength and Structure of Relations. *Personality and Social Psychology Bulletin*, 29(10), 1207-1220. DOI: <https://doi.org/10.1177/0146167203254602>
- Dmytruk, N., Padalka, H., & Kireyev, S. (2016). *Cinnosti ukrayins'koyi molodi*. Rezul'taty reprezentatyvnoho sociolohichnoho doslidzhennya stanovyshha molodi. Kyiv. Retrieved from: <https://dimp.gov.ua/rezultati-reprezentativnogo-sociologichnogo-doslidzhennya-standovishha-molodi-cinnosti-ukrainskoi-molodi-2016/>
- Dub, V. (2015). *Psyholohichni osoblyvosti stanovlennya cinnisno-smyslovoi sfery majbutnix pedahohiv u procesi pidhotovky do profesijnoyi diyal'nosti*. Avtoref. dys. ... kand. psyx. nauk. Kyiv. Retrieved from: https://kubg.edu.ua/images/stories/Departaments/apirantam/Avtoreferat/k.26.133.04/avtoreferat_dub.pdf
- Harris, R. (2019). *ACT made simple: An easy-to-read primer on acceptance and commitment therapy*. New Harbinger: New Harbinger Publications.

- Hoi-Wing, C. (2020). When do values promote pro-environmental behaviors? Multilevel evidence on the self-expression hypothesis. *Journal of Environmental Psychology*, 71(8). DOI: <https://doi.org/10.1016/j.jenvp.2019.101361>
- Howlett, M. (2022). The Russia-Ukraine war as a battle for a bordered land, not borderland. *Political Geography*. DOI: <https://doi.org/10.1016/j.polgeo.2022.102814>
- Kalaitzaki, A. E., & Tamiolaki, A. (2022). Russia-Ukraine War: Jeopardizing the mental health gains already been obtained globally. *Asian Journal of Psychiatry*, 78(4). DOI: <https://doi.org/10.1016/j.ajp.2022.103285>
- Kalaitzaki, A., Tamiolaki, A., & Tsouvelas, G. (2021). From secondary traumatic stress to vicarious posttraumatic growth amid COVID-19 lockdown in Greece: the role of health care workers' coping strategies. *Psychological Trauma: Theory, Research, Practice, and Policy*, 14(2), 273-280. DOI: <https://doi.org/10.1037/tra0001078>
- Mohsen, F., Bakkar, B., Melhem, S., Aldakkak, S., McHantaf, D., Marrawi M., & Latifeh, Y. (2021). Psychological health problems among Syrians during war and the COVID-19 pandemic: national survey. *BJPsych International*, 18(3). DOI: <https://doi.org/10.1192/bji.2021.16>
- Murphy, A. (2022). The modernist territorial order and the Ukraine crisis. *Political Geography*, 97(8). DOI: <https://doi.org/10.1016/j.polgeo.2022.102667>
- Olver, J. M., Todd, A., & Mooradian, T. A. (2003). Personality traits and personal values: a conceptual and empirical integration. *Personality and Individual Differences*, 35 (1), 109-125. DOI: [https://doi.org/10.1016/S0191-8869\(02\)00145-9](https://doi.org/10.1016/S0191-8869(02)00145-9)
- Rohan, M. J. (2000). A rose by any name? The values construct. *Personality and Social Psychology Review*, 4(3), 255-277. DOI: https://doi.org/10.1207/S15327957PSPR0403_4
- Schwartz, S. (2016). Coding and analyzing PVQ-RR data (instructions for the revised Portrait Values Questionnaire). DOI: <https://doi.org/10.13140/RG.2.2.35393.56165>
- Tedeschi, R. G., & Calhoun, L. G. (1996). The Posttraumatic Growth Inventory: measuring the positive legacy of trauma. *Journal of Trauma Stress*, 9(3), 455-471. DOI: <https://doi.org/10.1007/BF02103658>
- Zakon Ukrayiny *Pro vyshchu osvitu* (2014). Retrieved from: <https://zakon.rada.gov.ua/laws/show/1556-18#Text>

GENERAL AND SPECIFIC FACTORS OF FUTURE ORIENTATION LINK TO AWARENESS OF MEANING IN LIFE

Aleksandrs Kolesovs
University of Latvia, Latvia

Abstract. *Future orientation reflects individual orientation toward personal goals, including cognitive representations of these goals and goal-directed behavior. Recent meta-analytical studies confirmed the positive effects of future orientation in various life domains. The effect of goal-orientedness in developing meaning in life still needs to be explored. This study accounted for the variability of personal goals across the life span and socialization trajectories. It focused on the relationships between a complex factorial structure of future orientation and the presence of meaning in life in emerging adults acquiring tertiary education. In total, 555 students participated in the study (mean age was 21.13, SD = 2.45, 64% females). The Individual Future Orientation Scale and Meaning in Life Questionnaire were applied for measurement. The factor analysis demonstrated that the bifactor model of future orientation includes the general factor and additional specific factors of future-oriented behavior and family-related goals. The general future orientation and future-oriented behavior positively predicted the presence of meaning in life. The emphasis on future-oriented behavior in a complex prediction is in line with the significance of the purpose in life for subjective awareness of meaningful life.*

Keywords: *future orientation, general factor, meaning in life, specific factors.*

Introduction

Future orientation is a broad psychological construct addressing individual views of the future involving its motivational, cognitive, and behavioral components (for an overview, see Seginer, 2009). Pursuing meaningful life includes strivings for purpose in life (Baumeister & Wilson, 1996) and higher-order individual goals (Emmons, 2003). The model of the meaning in life (Steger, Frazier, Oishi, & Kaler, 2006) contains the presence of meaning and search for it and reflects mentioned strivings. The relationship between future orientation and meaning in life remains topical in psychological studies (Lui et al., 2022; Miconi, Geenen, Frounfelker, Levinsson, & Rousseau, 2022). Simultaneously, analyzing different approaches to future orientation and its complexity (Andre, Vianen, Peetsma, & Oort, 2018) provides the basis for re-investigating its structure. The

present study focused on the re-assessment of a factorial structure of future orientation and explored its links to the presence of meaning in life.

Structure of Future Orientation and Links to Meaning in Life

Approaches to future orientation represent it in various ways (Seginer, 2009). Simple indicators of future orientation reflect its unidimensional view representing the orientation as a sum of items within a single scale (e.g., Zimbardo & Boyd, 1999). Simultaneously, models of future orientation include multiple interrelated components, reflecting the multi-dimensional nature of the construct (e.g., Seginer, Vermulst, & Shoyer, 2004). Focusing on outcome variables often limits the level of a detailed representation of future orientation as a predictor, and researchers use relatively simple unidimensional measures (Lui et al., 2022; Miconi et al., 2022) or index variables, representing this orientation as a composite of subfactors (Kolesovs, 2017).

Recent meta-analytical findings (Andre et al., 2018) demonstrated that different elements of individual future time perspective – an overarching construct for future orientation – link to positive educational, occupational, and health outcomes. The analysis showed that the main element of future orientation is the individual focusing on personal goals and goal-oriented behavior. The meta-analysis of studies on each of the components of future orientation revealed positive links to motivational and behavioral outcomes. It emphasizes the significance of cognitive and behavioral components of future orientation, which are previously revealed in domain-specific models (Seginer et al., 2004; Seginer, 2009).

As a result, it is possible to assess the structure of future orientation accounting for two relatively stable tendencies: the generalization of its measures and the differentiation of specific components of future orientation. The bifactor model allows us to combine mentioned approaches. Under the logic of the bifactor model (e.g., Chen, Hayes, Carver, Laurenceau, & Zhang, 2012), it represents a construct under investigation as a combination of general and specific factors. The general one accounts for the shared commonality of items, while specific ones reflect the unique influence of additional components.

The cognitive component of future orientation refers to the representation of personal goals (Seginer et al., 2004), which can be grouped into self- and other-related goals (Nurmi, 2004). The behavioral component is related to goal-related exploration and behavioral commitment to selected goals (Seginer et al., 2004). Therefore, the current study considered future orientation as a combination of the general factor and three potential specific factors, representing self- and other-oriented goals and future-oriented behavior.

Testing the model's validity has based on the link between future-orientedness and perceived meaning in life. Higher-order personal goals are

associated with a sense of purpose and meaningful life (Emmons, 2003). This positive link remains topical in empirical studies (Kolesovs, 2019; Lui et al., 2022; Miconi et al., 2022). The suggested test of a structure of future orientation provides an opportunity for assessing complex links between the general and specific factors and meaning perception.

Accounting for separated cognitive and behavioral components (Seginer et al., 2004), it was expected that they could form independent links to perceived meaning because the presence of personal goals and pursuing them in individual behavior can provide the basis for purposeful life (Baumeister & Wilson, 1996). Another source of meaningful life can associate with goal-oriented behavior addressing personal efficacy and agency (Baumeister & Wilson, 1996).

Method

Participants. The study participants were 555 university students aged 18 to 29 ($M = 21.13$, $SD = 2.45$ years). Females constituted 64% of the sample; 14% of students were graduated, 38% percent were employed, and only 4% were married.

Measures. *The Individual Future Orientation Scale* (IFOS) (Kolesovs, 2017) represents future orientation. Participants used a seven-point Likert-type scale for answers. The scale was developed and applied in Latvian. For purposes of the present study, the scale was shortened and involved the cognitive component (the content of distant goals in seven domains) and the behavioral component.

The cognitive item pool represented the content of distant goals by asking: “To what extent do you associate distant goals with the following domains?” Specific domains included: education, work, property and money, personal growth, family, children, and friends.

The behavioral subscale assessed the exploration of opportunities for goal fulfillment and commitment to these goals. Three items included the definitiveness of distant goals, their specification, and the exploration of opportunities for their fulfillment. For example: “Do you have defined your personal goals?” represented commitment.

The Latvian version (Kolesovs, 2019) of *the Meaning in Life Questionnaire* (MLQ, Steger et al. 2006) was applied to measure two components of the meaning in life: Presence (five items) and Search (five items). Participants used a seven-point Likert-type scale from 1 (“absolutely untrue”) to 7 (“absolutely true”). The Presence subscale contains Items 1, 4, 5, 6, and reversed Item 9, representing the degree of the presence of meaning in their lives. An item example: “I have a good sense of what makes my life meaningful.” The Cronbach’s alpha for the Latvian scale version was .88. The Search subscale includes Items 2, 3, 7, 8, and 10, reflecting the search for meaning in life. For example: “I am looking for

something that makes my life feel meaningful.” Cronbach’s alpha for this scale was .87.

Procedure. Data were collected in 2019. Participation in the study was voluntary and anonymous. The scale was administered in Latvian. The sample size was calculated using a procedure suggested by Moshagen and Erdfelder (2016). For a confirmatory factor analysis, the minimal sample size was 520, considering the 26 degrees of freedom of the model, an alternate level of RMSEA of .05, the statistical power of .95, and alpha of .05. The primary sample ($N = 555$) was in line with this requirement.

For the structural equation modeling (SEM), the level of alternative RMSEA was selected at .08, representing a less solid but acceptable error level (Hu & Bentler, 1999). As a result, for 79 degrees of freedom, RMSEA of .08, the statistical power of .95, and alpha of .05, the minimum sample size was 105. The subsample completing MLQ ($n = 115$) fitted these requirements. A subsample of 40 students underwent the retest procedure after four weeks. It involved IFOS items.

Confirmatory factor analysis and SEM were performed by ‘lavaan’ (0.6-12) for R (Rosseel, 2012). The ‘BifactorIndicesCalculator’ 0.2.2 package (Dueber, 2021) calculated the bifactor model’s indices described in Rodriguez, Reise, and Haviland (2016).

Results

An assessment of the factor structure of future orientation included four models: 1) the unidimensional model with all items loaded by a single factor; 2) the correlated factor model presented the construct as multi-dimensional; 3) the second-order factor mediated the effect of future orientation by first-level components; 4) the bifactor model included the general and specific factors of future orientation.

The confirmatory factor analysis (Table 1) demonstrated that the bifactor model best fits the data. The unidimensional model had the worst fit, while the higher-order and correlated factors model demonstrated an exact fit because of the structure of the models.

Table 1 Fit indices of factorial models of future orientation (N = 555) (this study)

Model	χ^2	<i>df</i>	<i>p</i>	CFI	TLI	RMSEA [95% CI]	p_{RMSEA}	SRMR
1	502.05	35	.000	0.58	0.46	.155 [.145; .165]	.000	.099
2	145.87	32	.000	0.90	0.86	.080 [.069; .092]	.000	.065
3	145.87	32	.000	0.90	0.86	.080 [.069; .092]	.000	.065
4	82.94	26	.000	0.95	0.91	.063 [.049; .077]	.059	.036

Note. 1 – Unidimensional. 2 – Correlated factors. 3 – Second-order factor. 4 – Bifactor.

The factor analysis of the bifactor model (Table 2) confirmed that all items had factor loading above .30 on the general factor. In addition, family- and children-related goals had loadings above .60 on a specific factor. Similarly, exploring opportunities and specifying goals demonstrated high loading on their specific factor. Among self-related goals, only education had a loading above .60 on a specific factor.

The percentage of the reliable variance of the general factor was close to .80, indicating its significance within the model but allowing a broad interpretation of specific factors. The explained common variance of slightly less than .50 was in line with this effect. Other-oriented goals and future-oriented behavior were potential specific factors with a percentage of reliable variance close to .70. Additionally, factor determination scores of .90 and above and construct replicability over .70 (Rodriguez et al., 2016) confirmed the significance of the general factor and a specific factor of other-related goals. In contrast, self-related goals are predominantly loaded by the general factor of future orientation and do not form a specific factor with a low percentage of reliable variance and construct replicability.

Table 2 Factor loadings, reliability, and statistical indices of the bifactor model of future orientation (N = 555). (this study)

Items	FO-G	SRG	ORG	FOB
SRG Growth	.62	.21		
SRG Education	.41	.61		
SRG Work	.64	.31		
SRG Property	.79	-.16 ^a		
ORG Family	.42		.85	
ORG Children	.39		.71	
ORG Friends	.36		.13	
FOB Commitment	.38			.30
FOB Exploring Opportunities	.34			.73
FOB Specifying Goals	.39			.60
<i>M (SD)</i>	4.48 (0.83)	4.78 (0.97)	4.08 (1.34)	4.51 (1.06)
Test-Retest Reliability (4 weeks)	.83	.74	.82	.78
ω	.85	.78	.76	.71
ω_H/ω_{HS}	.66	.10	.52	.49
PRV	.78	.13	.68	.69
FD	.90	.71	.93	.82
H	.81	.43	.79	.65
ECV	.47			

FO-G – General factor of future orientation. SRG – Self-related goals. ORG – Other-related goals. FOB – Future-oriented behavior. ω_H – Hierarchical ω for the general factor. ω_{HS} – Hierarchical ω for specific factors. PRV – Percentage of reliable variance. FD – Factor determinacy. H – Construct replicability. ECV – Explained common variance.

^a Non-significant factor loading.

SEM analysis included predicting the presence of meaning in life by the general factor of future orientation and specific factors of future-oriented behavior and other-related goals (Figure 1). This exploratory model demonstrated a good fit to data (Hu & Bentler, 1999): $\chi^2(79) = 93.96$, $p = .105$, CFI = 0.968, TLI = 0.957, RMSEA = 0.042, 95% CI [.000; .067] $p_{RMSEA} = .670$, and SRMR = 0.059. This model explained 38% of the variance of the presence of meaning.

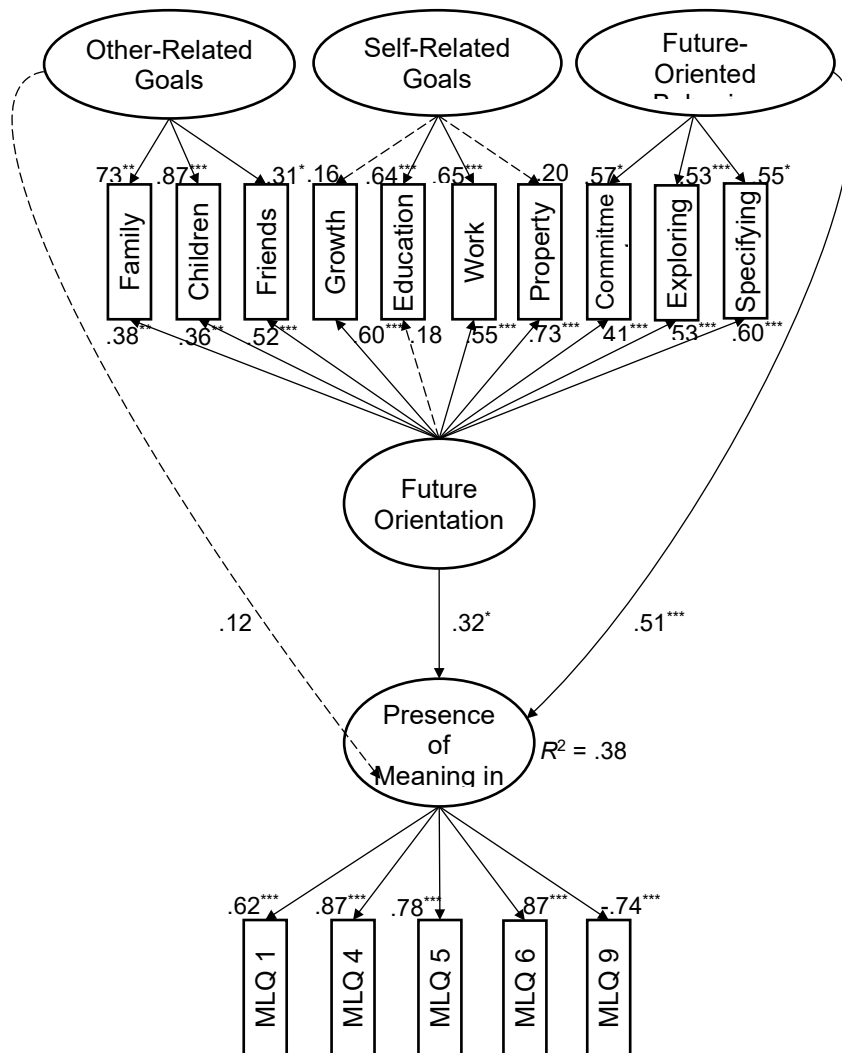


Figure 1 Predicting the presence of meaning in life by the general factor of future orientation and future-oriented behavior and other-related goals ($n = 115$; dashed lines present non-significant paths; * $p < .001$, ** $p < .01$, * $p < .05$) (this study)**

Exclusion of specific factors resulted in declining model fit: $\chi^2(81) = 103.31$, $p = .041$, CFI = 0.954, TLI = 0.939, RMSEA = 0.050, 95% CI [.020; .073] $p_{RMSEA} = .474$, and SRMR = 0.065. The fit remained acceptable, and the percentage of explained variance decreased only by 7%. It confirmed the significance of the general factor of future orientation.

Simultaneously, the effect of future-oriented behavior on the presence of meaning in life was higher than the effect of the general factor when the specific factor was linked to the outcome. However, after removing this specific effect, the general factor predicted the presence of meaning at a relatively high level ($\beta = .56, p < .001$).

Discussion

The analysis confirmed that future orientation results from complex interactions among general goal-orientedness (Seginer, 2009) and other constructs, adding to the general factor. The results of confirmatory factor analysis, reliability indices, and prediction of the meaning in life demonstrated that the general factor could represent the presence of future orientation in all selected items. However, a more comprehensive view should include specific factors, loading some items simultaneously with the general one.

Other-oriented goals form the content of a specific domain in the future orientation. It potentially links to individual socialization in the reproductive field (Nurmi, 2004) because the specific factor loads children- and family-related goals more than the general one.

Another specific factor included exploring goals and their specification. It forms an exploratory part of the behavioral component of future orientation (Seginer, 2009). It also indicates a possible link of future orientation to the process of channeling, which is associated with exploring opportunities for goal setting and fulfillment (Nurmi, 2004). Simultaneously, the expected positive role of this specific factor in predicting the awareness of the meaning in life points to its relationships with purpose in life (Baumeister & Wilson, 1996). Moreover, according to Baumeister and Wilson (1996), satisfying the need for efficacy in attaining personal goals forms another basis for a meaningful life, which can link to the agency.

The revealed complex structure is in line with the conclusions of Andre et al. (2018) on a complex approach to future views that remains a challenge for research on positive outcomes of future-orientedness. Positive associations of the general factor and future-oriented behavior with awareness of the meaning in life confirm the effect of both – future orientation in general and the additional factor of exploration of opportunities and striving for purpose and efficacy in pursuing personal goals.

It should be noted that the present study has various limitations. A relatively homogeneous sample of university students potentially affected the role of education-related goals in the context of future orientation. A broader sample of respondents could be helpful for the further examination of this kind of goal. A small number of participants completing MLQ allowed for exploring the links between these constructs. However, a more powerful investigation should involve

a sample of over 256 participants. The effect of self-oriented goals, predominantly explained by the general factor, can associate with cultural differences and should be explored in the context of individualism and collectivism.

Conclusions

The revealed complex structure of future orientation is in line with its nature. Integrating the general factor and additional effects of specific factors, the bifactor model reflects a complex interaction of future-orientedness with socialization processes. The links of future orientation to the awareness of meaning in life emphasize the significance of future views in strengthening the sense of purpose and efficacy.

References

- Andre, L., van Vianen, A. E. M., Peetsma, T. T. D., & Oort, F. J. (2018). Motivational power of future time perspective: Meta-analyses in education, work, and health. *PLoS One* 13: e0190492. DOI: <https://doi.org/10.1371/journal.pone.0190492>
- Baumeister, R. F., & Wilson, B. (1996). Life stories and the four need for meaning. *Psychological Inquiry*, 7(4), 322–325. DOI: https://doi.org/10.1207/s15327965pli0704_2
- Chen, F. F., Hayes, A., Carver, C. S., Laurenceau, J. P., & Zhang, Z. (2012). Modeling general and specific variance in multifaceted constructs: A comparison of the bifactor model to other approaches. *Journal of Personality*, 80, 219–251. DOI: <https://doi.org/10.1111/j.1467-6494.2011.00739.x>
- Dueber, D. M. (2021). *BifactorIndicesCalculator: Bifactor Indices Calculator*. R package version 0.2.2. Retrieved from: <https://CRAN.R-project.org/package=BifactorIndicesCalculator>
- Emmons, R. A. (2003). Personal goals, life meaning, and virtue: *Wellsprings of a positive life*. In C. L. M. Keyes & J. Haidt (Eds.), *Flourishing: Positive psychology and the life well-lived*, pp. 105–128. American Psychological Association. DOI: <https://doi.org/10.1037/10594-005>
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. DOI: <https://doi.org/10.1080/10705519909540118>
- Kolesovs, A. (2017). Individual future orientation and demographic factors predicting life satisfaction. In V. Lubkina, I. Barauskiene, & K. Mārtinsonsone (Eds.), *Society, Integration, Education: Vol. 1, Proceedings of the International Scientific Conference*, pp. 534–543. Rezekne: Rezekne Academy of Technologies. DOI: <https://doi.org/10.17770/sie2017vol1.2448>
- Kolesovs, A. (2019). Adaptation of the Meaning in Life Questionnaire in Latvian. *Sociālo Zinātņu Vēstnesis/Social Sciences Bulletin*, 1(28), 109–120. Retrieved from: https://du.lv/wp-content/uploads/2019/07/SZV_2019-1_7-Kolesovs.pdf
- Lui, W.-K., Chan, C.-K., Ng, K.-H., Chui, C.-F. R. C., Siu, N. Y.-F., Yung, C.-S., & Lau, K.-W. (2022). Awareness of meaning and quest for meaning: The mechanisms between future orientation and prosociality among youth during pandemic. *Frontiers in Psychology*, 13:1046803. DOI: <https://doi.org/10.3389/fpsyg.2022.1046803>

- Miconi, D., Geenen, G., Frounfelker, R. L., Levinsson, A., & Rousseau, C. (2022). Meaning in life, future orientation and support for violent radicalization among Canadian college students during the COVID-19 pandemic. *Frontiers in Psychiatry*, 13:765908. DOI: <https://doi.org/10.3389/fpsy.2022.765908>
- Moshagen, M., & Erdfelder, E. (2016). A new strategy for testing structural equation models. *Structural Equation Modeling*, 23, 54–60. DOI: <https://doi.org/10.1080/10705511.2014.950896>
- Nurmi, J. E. (2004). Socialization and self-development: channeling, selection, adjustment, and reflection. In R. M. Lerner and L. Steinberg (Eds.) *Handbook of Adolescent Psychology*, pp. 85–124. Hoboken, NJ: Wiley. DOI: <https://doi.org/10.1002/9780471726746.ch4>
- Rodriguez, A., Reise, S. P., & Haviland, M. G. (2016). Applying bifactor statistical indices in the evaluation of psychological measures. *Journal of Personality Assessment*, 98, 1–15. DOI: <https://doi.org/10.1080/00223891.2015.1089249>
- Rosseel, Y. (2012). lavaan: An R package for structural equation modeling. *Journal of Statistical Software*, 48(2), 1–36. DOI: <https://doi.org/10.18637/jss.v048.i02>
- Seginer, R. (2009). *Future orientation: Developmental and ecological perspectives*. New York, NY: Springer. DOI: <https://doi.org/10.1007/b106810>
- Seginer, R., Vermulst, A., & Shoyer, S. (2004). The indirect link between perceived parenting and adolescent future orientation: A multiple-step model. *International Journal of Behavioral Development*, 28(4), 365–378. DOI: <https://doi.org/10.1080/01650250444000081>
- Steger M. F., Frazier P., Oishi S., & Kaler M. (2006) The Meaning in Life Questionnaire: Assessing the presence of and search for meaning in life. *Journal of Counseling Psychology*, 53(1), 80–93. DOI: <https://doi.org/10.1037/0022-0167.53.1.80>
- Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271-1288. DOI: <https://doi.org/10.1037/0022-3514.77.6.1271>

TIEŠSAISTES LIETOTNES METODES “3D EMOCIJU KOMPOZĪCIJA SUPERVĪZIJĀ” APROBĀCIJA

Web Application Method "3d Emotion Composition in Supervision" Approbation

Marta Lillā

Rīgas Stradiņa universitāte, Latvija

Laura Millere

Rīgas Stradiņa universitāte, Latvija

Inese Paiča

Rīgas Stradiņa universitāte, Veselības psiholoģijas un pedagoģijas katedra, Latvija

Abstract. *The global pandemic has accelerated the development of the digital environment, face-to-face work is transferred online, so it is important to create tools adapted to the digital environment. The emergency of Covid-19 has raised the demand for online supervision. In supervision sessions, it is important to talk about experiencing emotions in a professional environment. Latvia lacks digital methods for working with emotions in supervision. The aim of the study was to adapt the 3DEC method, to create it as a web application for use in remote supervision and to approbate the web application "3D emotion composition in supervision" in individual online supervisions. The original method 3DEC is intended for the evaluation of emotional experience in the practice of art therapists (Lejstrauta, 2021; Vanadzina, 2021). The theoretical basis of the 3DEC method is integrative and includes the following principles: visual representation of emotions in a visible symbolic form; play and play space (Winnicott, 2007); distancing as one of the cognitive emotion regulation strategies (Powers & LaBar, 2019). 3DEC is also based on the Adaptive Coping with Emotions Model (ACE Model) (Berking & Whitley, 2014). The adapted method "3D composition of emotions in supervision" (3DECS) is intended for work in online supervision with the aim to promote awareness of emotions, their understanding and self-reflection. Using distancing and view of other perspectives, the method helps the client to reflect and become aware of emotional experiences, as well as provides an educational function about the meaning of emotions. The 3DECS method develops emotional awareness and adaptive emotion regulation skills. Main results: 1) the web application has been tested and is designed to work with emotions in supervision; 2) the data of the approbation stage show that the web application is sufficiently simple and intuitive; 3) the web application is secure because no information about the customer and the customer's actions in the tool is stored; 4) there are no restrictions on the use of the web application in relation to the duration of the cooperation between the supervisor and the supervision client.*

Keywords: *3D emotion composition, emotion regulation, online supervision, web application.*

Ievads *Introduction*

Nodarbinātību gan Latvijā, gan pasaulē būtiski ietekmēja Covid – 19 pandēmija un tās ietvaros noteiktie ierobežojumi (Vanadziņš u.c., 2021). Globālā pandēmija ir veicinājusi attālinātā darba izmantošanu arī konsultēšanā un supervīzijā¹. Turklāt, attālinātais darbs sekmē digitālās vides attīstību. Svarīgi izveidot konsultēšanā izmantojamus un digitālai videi pielāgotus rīkus, jo digitālās vides attīstība turpinās arī pēc pandēmijas (World Economic forum, 2020), bet konsultēšanā joprojām saglabājas attālināta pieceja līdzās tradicionālajam klātienēs formātam.

Attālinātas supervīzijas sniedz 1) iespēju brīvi izvēlēties laiku un telpu; 2) ekonomiskāku un pieejamāku profesionālo atbalstu, mazinot profesionālās vientulības izjūtu. Tiešsaistes supervīzija var norisināties jebkurā vietā, kur iespējams nodrošināt konfidencialitāti. Vides maiņa sesijās palīdz sasniegt supervīzijas sesijas rezultātus produktīvāk (Inman et al., 2019; Ozola, 2020; Pennington et al., 2020).

76% Latvijā strādājošo savu emocionālo labizjūtu darbā kopumā vērtē pozitīvi un 18% negatīvi. Iemesli negatīvajam vērtējumam ir augsts stresa līmenis, neatbilstošs atalgojums un nepietiekošas darba devēja rūpes par darbiniekiem (Kantar, 2022).

Supervīzijā nozīmīgi ir reflektēt par emocijām, kas rodas profesionālajā darbībā. Konkrētā situācijā emocijas var kaitēt, ja tās ir neatbilstošas intensitātes vai ilguma (Gross, 2014). Emociju regulācija² būtiski ietekmē cilvēku labbūtību (Webb et al., 2012) un sociālās attiecības (Cameron & Overall, 2018). Emociju regulācijas prasmes ir saistītas ar apmierinātību ar darbu un laimi (Mérida-López et al., 2019; Maffett et al., 2022). Labas emociju regulācijas prasmes palīdz attīstīt apzinātību, spēju pārvaldīt emocijas, zināt savas vajadzības un noturību stresa situācijās (Berking & Whitley, 2014).

Kvalitatīvai supervīzijas norisei tiešsaistē ir nepieciešamas tai pielāgotas lietotnes. Tā kā pandēmijas ietekmē konsultēšana un supervīzija no klātienēs formas strauji tika pielāgota attālinātam darbam, piemērotu digitālu metožu bija ļoti maz. Supervīzijā pielietotās lietotnes pārsvarā nav specializētas tieši supervīzijas procesam. Šādas lietotnes izmanto arī psiholoģiskajā konsultēšanā, koučingā un izglītības vidē. Kopumā Latvijā joprojām trūkst lietotņu tiešsaistes konsultēšanai.

¹ Supervīzija (*supervision*) – mērķtiecīgi organizēts konsultatīvs un izglītojošs atbalsts supervīzējamajiem (tostarp profesionāļiem, profesionāļu grupām, komandām vai organizācijām) par jautājumiem, kas saistīti ar profesionālo darbību (Nacionālā Enciklopēdija, n.d.).

² Emociju regulācija (*emotion regulation*) – spēja apzināties un izprast emocionālo pieredzi, pieņemt emocijas, kontrolēt impulsīvu uzvedību un izmantot situācijai atbilstošas emociju regulācijas stratēģijas, lai sasniegtu individuālos mērķus. Modificējot emocionālo reakciju veidu, ilgumu, intensitāti un situācijas, kad emocijas tiek piedzīvotas (Gratz & Roemer, 2004; Gross, 2015).

Raksta autores saskatīja potenciālu Rīgas Stradiņa universitātes maģistrantu un docētāju izveidotajā vizuālajā metodē³ “3D emociju kompozīcija” (3DEK⁴), ar kuras palīdzību klienti var izpētīt savu emocionālo pieredzi, lietojot ar 3D printeri izveidotas figūras. Oriģinālā metode ir taktila un paredz darbošanos ar figūrām, simboliskā veidā attēlojot gan sevi, gan savas emocijas tuvāk vai tālāk no sevis. Šo principu ērti īstenot arī digitālā formā.

Metodes 3DEK teorētiskais pamats ir integratīvs un ietver šādus principus: emociju vizuāla reprezentācija redzamā simboliskā veidā; spēle un spēles telpa (Winnicot, 2007); distancēšanās kā viena no kognitīvās emociju regulācijas stratēģijām (Powers & LaBar, 2019). 3DEK balstās arī uz adaptīvo emociju regulācijas prasmju modeli (The Adaptive Coping with Emotions Model (ACE Model) (Berking & Whitley, 2014).

Metode 3DEK sniedz iespēju izvērtēt klienta emocionālo pieredzi un atsevišķas emociju regulācijas prasmes mākslas terapijā. Metodes norise - klients saskaņā ar instrukciju uz baltas A3 papīra lapas izvieta ar 3D printeri izdrukātas figūras, kas simbolizē viņu pašu (simboliskā ES figūra) un astoņas emocijas: skumjas, bailes, dusmas, prieks, vaina, kauns, riebums, interese – kuba figūra). Emociju simbolizējošie kubi tiek novietoti uz lapas tuvāk vai tālāk no simboliskā Es figūras, atkarībā no tā, cik bieži vai reti tiek piedzīvota konkrētā emocija. Emociju intensitāte tiek attēlota, izmantojot kubu daudzumu (viens līdz trīs kubi). Metodes norisē ir iespēja pārvietot simboliskā Es figūru, kas ļauj mainīt perspektīvu. 3DEK sniedz iespēju redzēt no malas iekšējos emocionālos procesus, eksperimentēt ar figūru attālumiem un augstumiem, kas ļauj labāk izprast situāciju un reflektēt par to (Lejstrauga, 2021; Vanadzina, 2021).

Adaptētā metode supervīzijai (3DEKS) tiešsaistes lietotnes formātā saglabā oriģinālās metodes pamatprincipu - palīdz klientam “redzēt no malas” savus emocionālos procesus, tādējādi iegūstot citu perspektīvu un distanci. Tas ir svarīgs princips, lai notiktu pieredzes integrācija un jaunas izpratnes rašanās. 3DEKS gaitā neveic klienta emociju piedzīvošanas un emociju regulācijas prasmju izvērtēšanu, kā tas ir paredzēts oriģinālajā metodē, bet veic klienta izglītošanu par emociju funkcijām un reflektē par klienta emocijām saistībā ar supervīzijā pieteikto gadījumu.

Pētījuma mērķis bija adaptēt 3DEK metodi, izveidot to kā tiešsaistes lietotni pielietojumam attālinātai supervīzijai un aprobēt tiešsaistes lietotni “3D emociju kompozīcija supervīzijā” individuālās tiešsaistes supervīzijās. Atbilstoši pētījuma mērķim tika izvirzīti pētnieciskie jautājumi: 1) kāds ir supervīzijas klientu

³ Vizuālas metodes (*visual methods*) – pētījuma metodes (biežāk izmantotas kvalitatīvajos pētījumos), kuru gaitā vai nu 1) tiek izmantoti vizuāli materiāli, lai izraisītu pētījuma dalībnieka reakcijas un interpretētu tās, vai 2) pētījuma dalībnieku aicina iesaistīties vizuālajā darbībā, novēro viņa uzvedību vai interpretē viņa radītos vizuālos produktus, vai arī 3) pētnieks analizē jau eksistējošo, iepriekš radīto vizuālo materiālu saturisko jēgu un organizāciju (Mārtinsons un Pipere, 2021).

⁴ Pētnieku komanda, oriģinālās vizuālās metodes izveidotāji – lekt. Mg. sc.sal. Inese Paiča, Prof. Dr. psych. Kristīne Mārtinsons, Mg. sc.sal. Signe Vanadzina un Mg. sc.sal. Astra Lejstrauga.

viedoklis un pieredze, izmantojot 3DEKS metodes tiešsaistes lietotni; 2) kāds ir supervizoru viedoklis un pieredze, izmantojot 3DEKS metodes tiešsaistes lietotni.

Pētījuma sagatavošanas posms

Preparation for the research

Sākotnēji tika veikts pētījuma sagatavošanas posms, kurā tika adaptēta vizuālā izvērtēšanas metode "3D emociju kompozīcija" (3DEK) un izveidota kā lietotne izmantošanai supervīzijai tiešsaistē. Pētījuma sagatavošanās posms sastāvēja no trim daļām - pilotpētījuma, metodes adaptācijas un tiešsaistes lietotnes izstrādes.

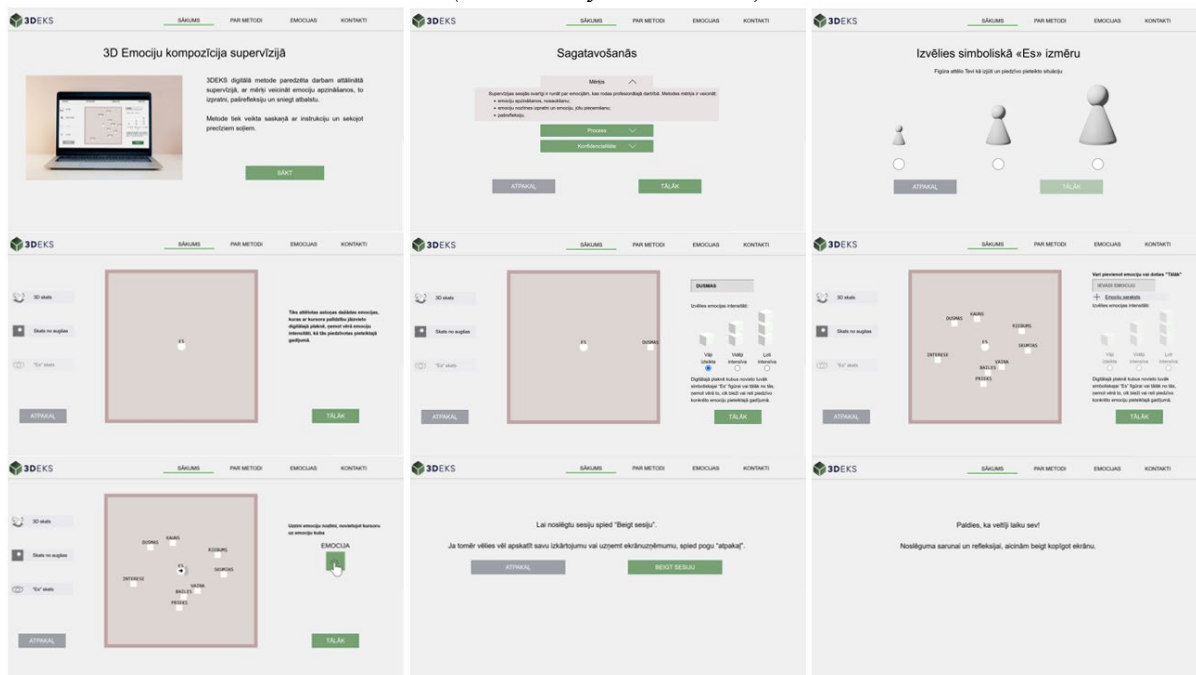
Pilotpētījumā (n = 10) tika noskaidrots, vai un kā 3DEK metodi var pielietot tiešsaistes supervīzijā, integrējot to sistēmiskās konsultēšanas tiešsaistes lietotnē "Online-systembrett" un iegūstot atgriezenisko saiti no klientiem par viņu viedokli un pieredzi (Online-Systembrett and online-Constellation-board, n.d.), izmantojot daļēji strukturētu interviju. Pilotpētījums tika veikts individuālās supervīzijas sesijās. Daļēji strukturēta intervija ietvēra jautājumus par metodes ieguvumiem, lietderību, izaicinājumiem un grūtībām. Pilotpētījums bija pirmais metodes adaptācijas prototipa mēģinājums uz jau esošas tiešsaistes lietotnes, kurā tika iegūta pozitīva klientu atgriezeniskā saite par metodes pielietošanu supervīzijas sesijā. Pilotpētījumā tika secināts, ka nepieciešams izveidot jaunu tiešsaistes lietotni adaptētajai 3DEK metodei, jo pilotpētījumā izmantotā lietotne "Online-systembrett" ir maksas, kā arī tā ir daļēji piemērota supervīzijas vajadzībām (Fjodorova, 2022; Millere, 2022).

Otrais pētījuma sagatavošanās posms tika veikts ar mērķi adaptēt 3DEK (Lejstrauta, 2021; Vanadzina, 2021) metodi un instrukciju tiešsaistes supervīzijai, un noskaidrot ekspertu vērtējumu par metodes un instrukcijas atbilstību supervīzijai. 3DEK metodes instrukcijas adaptācija supervīzijai tika veikta, balstoties uz pilotpētījuma rezultātiem. Adaptētā metodes instrukcija (Fjodorova, 2022; Millere, 2022), metodes demonstrācijas video, aptauja, emociju un garastāvokļu saraksts (*ERSQ* – 27; Berking & Znoj, 2008; latviešu valodā adaptēja Kristiņa-Everte, Paiča un Mārtinsone, 2021) tika nosūtīts e- pastā ekspertiem un tika saņemta atgriezeniskā saite par metodes adaptācijas atbilstību supervīzijai. Eksperti (n = 5) bija sertificēti Latvijas Supervizoru apvienības biedri un / vai Rīgas Stradiņa universitātes docētāji, supervizori, kuriem ir pieredze tiešsaistes supervīzijā. Adaptētā metode tika novērtēta kā atbilstoša pielietojumam supervīzijā. Tika veikti precizējumi metodes norises gaitā un instrukcijā atbilstoši ekspertu ieteikumiem.

Trešajā sagatavošanās posmā, balstoties uz pilotpētījuma un ekspertu atgriezeniskās saites rezultātiem, izstrādāts digitālā rīka tehniskais, dizaina un informācijas apraksts. Veikti individuāli lietojamības testi tiešsaistē, vadoties pēc scenārija. Lietojamība ir efektivitāte un apmierinātība ar to, kā lietotājs sasniedz

konkrētu mērķi (International Organisation for Standardisation, 1998). Pēc lietojamības testiem tika ieviesti labojumi prototipā un veikta pilnīga lietotnes izstrāde (Fjodorova, 2022; Millere, 2022). Lietotnes iterāciju, kas pieejama 3deks.rsu.lv skatīt 1. attēlā.

1.attēls. *Programmēta lietotnes iterācija (pieejama 3deks.rsu.lv) (Autoru veidota)*
 Figure 1 *Programmed iteration of the web application (available at 3deks.rsu.lv)*
 (Created by the authors)



Metodoloģija Methodology

Lietotnes aprobācijā tika noskaidrots viedoklis un pieredze gan no supervizoriem, gan supervizējamajiem, lietojot 3DEKS digitālo metodi.

Instrumentārijs.

- 1) *Aptauja supervīzijas klientiem* par pieredzi, izmantojot 3DEKS tiešsaistes lietotni.
- 2) *Aptauja supervizoriem* par pieredzi, izmantojot 3DEKS tiešsaistes lietotni.

Anketas izstrādātas, balstoties uz iepriekš veiktiem pētījumiem par faktoriem, kas ietekmē tiešsaistes supervīzijas procesu un lietotāju pieredzi (Ganeviča, 2020; Inman et al., 2019). Lietotāju pieredze (*user experience*) ietver sevī lietderību (*utility*), lietojamību (*usability*) un vēlamību, kā produkts izskatās un kādas izjūtas rodas, lietojot to (*desirability*) (NNGroup, 2008). Abās anketās tika iekļauti jautājumi par izaicinājumiem un priekšrocībām tiešsaistes supervīzijā, profesionālās ētikas, tiesiskajiem un datu drošības aspektiem, digitālā

rīka lietojamību, ieguvumiem un grūtībām, lietojot digitālo rīku. Anketās respondentiem bija iespēja novērtēt apgalvojumus pēc 4 punktu Likerta skalas.

3) Tiešsaistes lietotne "3D emociju kompozīcija supervīzijā" (3deks.rsu.lv).

4) Videokonferenču programma "Zoom".

Dalībnieki. *Supervīzijas klienti* (n = 10), no tiem sievietes (n = 9) un vīrietis (n = 1). Respondenti bija vecumā no 31 – 60 gadiem (M = 41.0; SD = 8). Izglītība – vidējā izglītība (n = 1), nepabeigta augstākā izglītība (n = 1), bakalaura grāds (n = 3), maģistra grāds (n = 5). Supervīzijas klientu profesionālās darbības jomas – izglītība / zinātne (n = 4), pakalpojumi / klientu apkalpošana (n = 2), administratīvais darbs / asistēšana (n = 1), ražošana / rūpnieciskā ražošana (n = 1), veselības aprūpe / sociālā aprūpe (n = 1) un sports (n = 1). Respondentu darba stāžs – 1 līdz 3 gadi (n = 1), 8 līdz 11 gadi (n = 2), 12 vai vairāk gadi (n = 7). Pētījuma dalībnieku iepriekšējā pieredze supervīzijā: ir klātienē (n = 2); ir tiešsaistē (n = 2); ir gan klātienē, gan tiešsaistē (n = 4); nav pieredzes supervīzijā, šī bija pirmā supervīzija (n = 2). Supervīzijas klientu sadarbība ar supervizoru, kurš pielietoja 3DEKS digitālo rīku: pirmā supervīzija pie šī supervizora (n = 4); apmeklējis 2 līdz 5 sesijas pie šī supervizora (n = 2); apmeklējis vairāk par 10 sesijām pie šī supervizora (n = 4).

Supervizori (n = 15), visas sievietes (n = 15). Respondenti bija vecumā 31 – 60 gadiem (M = 45.6; SD = 7.7). Pētījuma dalībnieki bija sertificēti supervizori (n = 10) un supervizori apmācībā (n = 5). Respondentu supervizora prakses pieredze: studē (n = 4); 1 – 2 gadi (n = 3); 3 – 4 gadi (n = 3); 5 – 6 gadi (n = 2); 9 – 10 gadi (n = 1); 11 – 15 gadi (n = 1); 15 gadi vai vairāk (n = 1). Lielākajai daļai pētījuma dalībnieku (n = 14) ir bijusi pieredze vadīt tiešsaistes supervīziju.

Procedūra. Pirms pētījuma sākšanas supervizori tika aicināti piedalīties izglītojošā tiešsaistes seminārā par metodes 3DEKS tehnisko specifikāciju un izmantošanu praksē. Pēc tam supervizori vadīja tiešsaistes individuālās supervīzijas sesijas, (60 min.), veicot metodi pēc instrukcijas. Pēc metodes izmantošanas sesijās tika saņemta atgriezeniskā saite gan no supervizoriem, gan supervīzijas klientiem. Respondenti tika informēti par pētījumu, konfidencialitāti, anonimitāti un datu drošību atbilstoši pētījuma ētikas prasībām. Dati tika iegūti no 2022. gada 7.aprīļa līdz 2022.gada 21. aprīlim, tiešsaistē, izmantojot Google veidlapu. Dati tika apkopti tekstuālā veidā no anketām. Dati tika kodēti, kategorizēti un pēc tam grupēti. Datu analīzei tika lietota programma *Microsoft Office Excel (Office 365)*.

Rezultāti

Results

Viedoklis un pieredze par izaicinājumiem, priekšrocībām, ētikas un datu drošības aspektiem, piedaloties tiešsaistes supervīzijā.

Supervīzijas klienti (n = 10)

Visiem pētījuma dalībniekiem nebija grūtību saistībā ar tiešsaistes supervīzijas tehnisko nodrošinājumu (tīkla nodrošinājums, "Zoom" programmas apguve u. c.) un problēmu ar tiešsaistes supervīzijas plānošanu. Respondenti savas digitālās prasmes novērtēja kā pietiekamas dalībai tiešsaistes supervīzijā (n = 10). Supervīzijas klientu viedoklis atšķīrās jautājumos par neverbālās komunikācijas uztveršanu tiešsaistē un attieksmi tiešsaistes supervīzijā. Pētījuma dalībnieki pie tiešsaistes supervīzijas priekšrocībām minēja: 1) plānošanas elastība (n = 8); 2) drošības sajūta piedaloties tiešsaistes supervīzijā ir lielāka, nekā klātienē (n = 6); 3) tiešsaistes supervīzija nodrošina alternatīvu klātienē sesijai (n = 7). Respondentiem nebija bažu par informācijas konfidencialitāti (n = 7) un ētiskajiem aspektiem (n = 9) izmantojot lietotni. Supervīzijas klientu pieredzes ietekmējošie faktori, piedaloties tiešsaistes supervīzijā, apkopti tabulā (skat. 1.tab.).

1.tabula. Supervīzijas klientu pieredzes ietekmējošie faktori, piedaloties tiešsaistes supervīzijā (Autoru veidota)
Table 1 Determinants of supervision clients' experiences of taking part in online supervision (Created by the authors)

Kritērijs	Ietekmējošie faktori
Neverbālās komunikācijas uztveršana (žesti, mīmika u. c.)	Redzama tikai daļa no cilvēka, grūtības izveidot acu kontaktu (n = 1) Pilnkrāna režīmā nav vizuālā kontakta ar supervīzoru, supervīzors nav redzams, tikai dzirdams (n = 1)
Attieksme un pieeja tiešsaistes supervīzijai	Klātienē sajūtas trūkums (n = 3) Klātienē supervīzijā izvietojumi ir elastīgāki, dzīvāki un daudzveidīgāki (n = 1)
Drošības sajūta piedaloties tiešsaistes supervīzijā no sev ērtas vietas (mājām, darba telpām u.c.)	Drošības sajūta supervīzijā, esot kopā vienā telpā ar supervīzoru, ir lielāka (n = 1) Konfidencialitātes nodrošināšana, ārēju faktoru ietekme (n = 2)
Informācijas konfidencialitāte izmantojot lietotni	Datu saglabāšanas vieta un ilgums (n = 1) Nav pārliecības, ka ir tikai divatā ar supervīzoru (n = 1)

Supervīzori (n = 15)

Supervīzori pieņēma tiešsaistes formātu (n = 9). Pētījuma dalībnieki pozitīvi vērtēja tiešsaistes supervīzijas plānošanas un laika ekonomijas priekšrocības (n = 12). Supervīzori savas digitālās prasmes vērtēja, kā pietiekamas, lai realizētu tiešsaistes supervīziju (n = 10). Respondenti pauda, ka tiešsaistes supervīzijā spēj nodrošināt supervīzijas funkcijas: administratīvo (n = 12), atbalstošo (n = 8) un izglītojošo (n = 13). Supervīzoru viedoklis atšķīrās jautājumos par informācijas konfidencialitāti un ētiskajiem aspektiem izmantojot lietotni. Supervīzoru

pieredzes ietekmējošie faktori, vadot tiešsaistes supervīziju, apkopti tabulā (skat. 2.tab.).

*2.tabula. Supervizoru pieredzes ietekmējošie faktori, vadot tiešsaistes supervīziju
(Autoru veidota)*

*Table 2 Factors influencing supervisors' experience of conducting online supervision
(Created by the authors)*

Kritērijs	Ietekmējošie faktori
Informācijas konfidencialitāte izmantojot lietotni	Supervizors var to nodrošināt tikai no savas puses (n = 1) Supervīzijas telpa nav redzama pilnībā, lai pārliecinātos par konfidencialitāti (n = 1) Tiešsaistes supervīzijā izmantoto platformu un lietotņu spēja nodrošināt konfidencialitāti (n = 1)
Tiesiskie un ētiskie aspekti izmantojot lietotni	Lietotnē nav sniegta informācija, lai pilnvērtīgi izvērtētu kritēriju (n = 1)

Viedoklis un pieredze par 3DEKS digitālā rīka lietojamību Supervīzijas klienti.

Supervīzijas klienti lietotnes funkcionalitāti novērtēja kā saprotamu (n = 8). Lielākā daļa pētījuma dalībnieku lietotni vērtēja kā ērti lietojamu un intuitīvu (n = 8). Respondenti nebija grūtību ar emociju izkārtošanu digitālajā plaknē (n = 8). Pētījuma dalībniekiem, atverot lietotni, bija saprotams lietotnes mērķis (n = 8). Supervīzijas klienti lietotni novērtēja kā vizuāli uztveramu (n = 9). Respondenti izmantotās krāsas, attēlus, tekstus un to lielumus atzina kā atbilstošus šai lietotnei (n = 9). Supervīzijas klienti navigāciju 3DEKS lietotnē vērtēja kā ērtu (n = 9). Pētījuma dalībnieku ieteikumi un komentāri lietojamības uzlabošanai apkopoti tabulā (skat.3.tab.).

*3.tabula. Supervīzijas klientu ieteikumi lietojamības uzlabošanai 3DEKS lietotnē
(Autoru veidota)*

*Table 3 Supervision clients' suggestions for improving usability in the 3DEKS app
(Created by the authors)*

Kritērijs	Ieteikumi, komentāri
Lietotnes ērta lietojamība (pogu novietojums u. c.)	Numerācijas ieviešana refleksijas jautājumiem, piemēram, 2 no 10 (n = 1)
Lietotnes intuitivitāte	Solī, kad izliek emociju kubus plaknē, labāk izprast, ja novieto emociju tālāk no centra, tad tā izpaužas retāk (n = 1) Atkarīga no supervizora prasmes to tādu padarīt (n = 1)
Emocijas izkārtošana digitālajā plaknē	Radās grūtības izvietot digitālajā plaknē konkrēti definētās astoņas emocijas (n = 2) Sākotnējā nesapratne, kā redzēt plakni dažādos skatos (n = 1)

Lietotnes vizuālā uztveramība	3D skata uztveramība, emociju nosaukumu tuvs novietojums (n = 2)
Izmantoto krāsu, attēlu, tekstu un to lielumu atbilstība lietotnei	Papildus emociju pievienošanas lauka uzlabošana, lai varētu saprast, ka tur var ievadīt tekstu (n = 1) Variēšana ar emociju figūru krāsām, formām un izmēriem (n = 4)
Izglītojošā informācija lietotnē par emocijām	Emociju dažādība ar aprakstiem - apraksti visām emocijām, kas ir "Emociju un garastāvokļu sarakstā" (n = 2) Reālāku emociju attēlu izveidošana pie emociju aprakstiem (n = 1)

Supervizori.

Supervizori lietotnes funkcionalitāti novērtēja kā saprotamu (n = 14) un lietotni kā intuitīvu (n = 6). Respondenti norādīja, ka lietotnē ir skaidras norādes (n = 12) un tekstuālā informācija lietotnē ir viegli uztverama (n = 9). Pētījuma dalībnieku ieteikumi un komentāri lietojamības uzlabošanai apkopoti tabulā (skat.4.tab.).

4.tabula. Supervizoru ieteikumi lietojamības uzlabošanai 3DEKS lietotnē (Autoru veidota)
Table 4 Supervisors' suggestions for improving usability in the 3DEKS app
(Created by the authors)

Kritērijs	Ieteikumi, komentāri
Lietotnes vizuālā uztveramība	3D skata uztveramība, emociju nosaukumu tuvs novietojums (n = 1) Nepārredzams "Es" skata attēlojums, emociju uzrakstu saplūšana (n = 4) "Es" skata uzlabošana, lai varētu redzēt ne tikai to, kas atrodas priekšā simboliskajam "Es", bet varētu "apgriezties ap savu asi" (n = 1)
Izmantoto krāsu, attēlu, tekstu un to lielumu atbilstība lietotnei	Variēšana ar emociju figūru krāsām, formām un izmēriem (n = 3)
Izglītojošā informācija lietotnē par emocijām	Emociju dažādība ar aprakstiem - apraksti visām emocijām, kas ir "Emociju un garastāvokļu sarakstā" (n = 1) Emociju iedalījums "patīkamajās" un "nepatīkamajās", apgrūtināja emociju normalizēšanu (n = 2) Papildus emociju vienkāršāka pievienošana (n = 2)
Tehniskās iespējas lietotnē	Emociju intensitātes un novietojuma maiņa sesijas laikā (n = 3) Iespēja supervizoram ieslēgt vai izslēgt refleksijas jautājumus, aprakstus (n = 2) Iespēja supervizoram un klientam darboties lietotnē vienlaicīgi (n = 1)
Digitālās prasmes	Problēmas pieslēgties lietotnei, uzņēmuma tehnisko ierobežojumu dēļ (piemēram, ugunsdzēsības) (n = 4) Supervīzijas fokusa novirzīšanās, nepietiekamu digitālo prasmju dēļ (n = 2)

Viedoklis un pieredze par ieguvumiem, izmantojot 3DEKS digitālo rīku *Supervīzijas klienti.* Supervīzijas klienti atzina, ka 3DEKS lietotne ir lietderīga, runājot par emocijām (n = 9). Respondenti izmantoja "Emociju un garstāvokļu sarakstu" (n = 8), tas palīdzēja nosaukt vārdā un identificēt emocijas (n = 3). Psihoizglītojošā informācija lietotnē tika novērtēta kā pietiekoši īsa, kodolīga un pārskatāma (n = 6). Supervīzijas klienti labprāt izmantotu atkārtoti 3DEKS lietotni tiešsaistes supervīzijās.

Respondenti, izmantojot lietotni guva jaunu informāciju par savām emocijām: 1) noskaidroja faktorus, ko nevēlas redzēt un risināt (n = 1); 2) noskaidroja emociju cēloni (n = 1); 3) izprata emociju mijiedarbību (*saprātu kur noslēpies mans prieks*) (n = 2); 4) ieraudzīja emociju piedzīvošanas biežumu pieteiktajā situācijā un emociju pielietošanu savā labā (n = 1); 5) veica emociju pieņemšanu, normalizēšanu (n = 3).

Supervīzijas klientu ieguvumi, izmantojot 3DEKS lietotni: 1) refleksija par izjūtām, kas radās distancējoties (n = 8); 2) nozīmes piešķiršanas savai situācijai (n = 1); 3) emociju normalizēšana (n = 1); 4) konkrētu soļu definēšana pieteiktajā situācijā (n = 1); 5) izglītojoša informācija par emociju nozīmi (n = 8).

Supervīzori. Supervīzori 3DEKS metodi novērtēja kā noderīgu un atbilstošu (n = 12). Respondenti min šādus ieguvumus izmantojot metodi: 1) izvirzītā supervīzijas mērķa sasniegšanas veicināšana (n = 10); 2) distancēts skats uz pieteikto gadījumu (n = 12); 3) supervīzējamā pašrefleksijas veicināšana (n = 11). "Emociju nozīmju" sadaļa lietotnē tika novērtēta kā lietderīga (n = 9). Supervīzori labprāt 3DEKS lietotni izmantotu arī turpmāk savā praksē (n = 12).

Diskusija ***Discussion***

Respondenti (gan klienti, gan supervīzori) savas digitālās prasmes novērtēja kā pietiekamas, lai piedalītos tiešsaistes supervīzijā, taču aprobācijas posma dati liecina, ka digitālās prasmes nav bijušas pietiekamā līmenī (*piemēram, problēmas pieslēgties lietotnei, uzņēmuma tehnisko ierobežojumu dēļ*). Gadījumā, ja supervīzijas klients nezina, kā lietot konkrētas tehnoloģijas, supervīzora ētiskais pienākums ir apmācīt supervīzējamā sesijās pielietoto tehnoloģiju lietošanā (Pennington et al., 2020). Var secināt, ka daļai no supervīzoriem, kas piedalījās pētījumā, arī nebija pietiekamas digitālās prasmes, lai veiksmīgi vadītu tiešsaistes supervīziju un izmantotu lietotni. Turklāt tikai 43 % Latvijas iedzīvotāju digitālās prasmes ir vismaz pamata līmenī (Eiropas Savienības vidējais rādītājs – 56 %), un virs pamatlīmeņa – tikai 24 % iedzīvotāju (Eiropas Komisija, 2021).

Supervīzijas klientiem radās bažas par konfidencialitāti, ārēju faktoru ietekmi, un bažas par to, ka supervīzijas virtuālajā telpā atrodas divatā ar supervīzoru. Latvijas iedzīvotājiem lielākoties ir zemas digitālās prasmes (Eiropas Komisija, 2021), turklāt zemas tehnoloģiju lietošanas prasmes var

izraisīt konfidencialitātes pārkāpumus (Vaccaro & Lambie, 2007). Ir secināts, ka Latvijas supervizori un supervīziju studējošie ir vāji informēti par informācijas tehnoloģiju izmantošanas riskiem tiešsaistes supervīzijā (Dubīņins un Mārtinsone, 2021). Supervizoriem un supervīzijas klientiem jābūt kompetentiem par attiecīgajiem likumiem, kas regulē attālinātas supervīzijas norisi (Brandoff & Lombardi, 2012). Izaicinājums un aktuāla problēma ir normatīvo aktu neesamība, kas regulētu tieši attālinātu supervīziju procesu. Nepieciešams aktualizēt un uzlabot profesionālos standartus, vadlīnijas un supervīzijas izglītības un profesionālo kompetenču pilnveidi (Dubīņins un Mārtinsone, 2021).

Aprobācijas dati liecina, ka ne visās supervīzijās process tika vadīts atbilstoši metodes instrukcijai, tā rezultātā klientiem radās grūtības izmantot lietotni (*piemēram, nebija saprotams, pēc kāda principa emocijas tiek izvietotas plaknē*). Šādas grūtības nerastos, ja supervizors būtu pilnvērtīgi iepazinies ar lietotnes funkcijām un metodes gaitu. Supervizora ētiskais pienākums ir palīdzēt klientam apgūt sesijās izmantotos rīkus. Lai gan supervizori apmeklēja apmācības par 3DEKS lietotni un tās izmantošanu, tomēr ir nepieciešams izveidot papildus video demonstrāciju par precīzu metodes pielietošanu.

Iegūtie rezultāti liecina par vairākiem ieguvumiem, izmantojot lietotni: 1) tiek dota iespēja reflektēt par izjūtām distancējoties; 2) nozīmes piešķiršana pieteiktajai situācijai; 3) emociju normalizēšana; 4) konkrētu nākamo soļu definēšana pieteiktajai situācijai; 5) psihoizglītošana. Dati saskan ar zinātniskajā literatūrā paustajām atziņām: 1) refleksijas rezultātā klients apzinās savas reakcijas, izprot mijiedarbības, analizē savas intervences, to sekas, un izzina alternatīvus rīcības variantus (Poudžiunas u.c., 2017); 2) supervīzijas izglītojošās funkcijas ietvaros tiek pilnveidotas prasmes, spējas un izpratne (Apine, 2017); 3) supervīzija palīdz regulēt un normalizēt savas izjūtas sarežģītās situācijās (Zahav et al., 2020). Metode attīsta un pilnveido adaptīvās emociju regulācijas prasmes: 1) spēju apzināties emocijas (*awareness*); 2) spēju atpazīt un nosaukt emocijas (*identifying and labeling*); 3) spēju saprast, kas ierosina un uztur konkrētas emocijas (*understanding*) (Berking & Whitley, 2014). 3DEKS lietotnes izmantošana attīsta arī kognitīvās emociju regulācijas prasmes – distancēšanos un reinterpretāciju. Supervīzijas klients palielina psiholoģisko attālumu starp sevi un izraisīto stimulu vizuāli izliekot emociju kubus plaknē, kas palīdz mazināt nevēlamās vai nepatīkamās emocionālās reakcijas. Reinterpretācija liek piešķirt citu nozīmi situācijai un pārvērtēt to (Powers & LaBar, 2019). Adaptācijas posmā tika noskaidrots, ka 3DEKS lietotni var izmantot arī pirmajās supervīzijas sesijās, kad tiek uzsākta sadarbība ar supervizoru, jo supervīzijas klientu pieredzi neietekmēja sadarbības ilgums ar supervizoru.

Secinājumi Conclusions

Pētījuma mērķis tika sasniegts - tika izveidota un aprobēta digitāla metode, tiešsaistes lietotne darbam ar emocijām supervīzijā. Apkopojot iepriekš minēto, var secināt, ka digitālās prasmes un normatīvo aktu neesamība attālinātu supervīziju procesa regulēšanai ir nozīmīgi faktori, kas ietekmē lietošanas pieredzi 3DEKS lietotnei.

Pētījuma stiprās puses un rezultātu praktiskais pielietojums: 1) izveidota un pārbaudīta Latvijā pirmā tiešsaistes lietotne darbam ar emocijām supervīzijā un tās instrukcija, lietotne ir pieejama 3deks.rsu.lv⁵; 2) adaptētā metode ir vērtīga un praktiski noderīga, proti, tiek bagātināts metožu klāsts par supervīzijā svarīgu tēmu – emocijas; 3) metode ir noderīga ne tikai supervīzijā, to var lietot arī tiešsaistes konsultēšanā un mākslu terapijā; 4) lietotne ir droša, jo netiek saglabāta nekāda informācija par klientu un klienta veiktajām darbībām lietotnē; 5) aprobācijas posma dati liecina, ka tiešsaistes lietotne ir pietiekami vienkārša un intuitīva; 6) 3DEKS lietotnes izmantošanai nav ierobežojumu saistībā ar sadarbības ilgumu starp supervīzoru un supervīzijas klientu, to var izmantot arī pirmajā supervīzijas sesijā; 7) apkopoti supervīzijas klientu un supervīzoru ieteikumi 3DEKS lietotnes uzlabošanai.

Analizējot pētījuma gaitu un rezultātus, noskaidroti pētījuma ierobežojumi - datu ieguves veids (anketas), proti, ar interviju palīdzību būtu iespējams ievākt precīzāku un daudzveidīgāku informāciju no respondentiem.

Summary

Employment both in Latvia and in the world was significantly affected by the Covid-19 pandemic and the restrictions imposed within it. The global pandemic has promoted the use of remote work in counseling and supervision as well. In addition, remote work contributes to the development of the digital environment. It is important to create tools adapted to the digital environment, as the development of the digital environment continues even after the pandemic.

The aim of the study was to adapt the 3DEC method, to create it as a web application for use in remote supervision and to approbate the web application "3D emotion composition in supervision" in individual online supervisions.

The first web application in Latvian language for working with emotions in supervision and its instructions was created and tested. The adapted method is valuable and practically useful, that is, the range of methods is enriched for an important topic in supervision - emotions. The method is not only useful in supervision, but it can also be used in counseling and art therapy. The web

⁵ Šobrīd lietotne pieejama ar autentifikāciju.

application is secure as no information is stored about the customer and the actions taken by the customer in the application. The data from the approbation stage shows that the web application is sufficiently simple and intuitive. The use of the 3DECS application has no limitations regarding the duration of the cooperation between the supervisor and the supervision client, it can also be used in the first supervision session.

Significant factors affecting the experience of using the 3DECS app are digital skills and the absence of regulations that directly regulate the remote supervision process. Therefore, it is necessary to update and improve professional standards, guidelines and improvement of supervisory education and professional competences. It is necessary to develop separate trainings for supervisors for the use of the 3DECS web application.

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Literatūra *References*

- Apine, E. (2017). Supervīzijas process. No K. Mārtinsones un S. Mihailova (sast.), *Supervīzija: Teorija. Pētījumi. Prakse.* (49. – 53. lpp.). Rīgas Stradiņa universitāte.
- Berking, M., & Whitley, B. (2014). The Adaptive Coping with Emotions Model (ACE Model). In: *Affect Regulation Training: A Practitioners' Manual* (pp. 19–29). Springer. DOI: https://doi.org/10.1007/978-1-4939-1022-9_3
- Brandoff, R., & Lombardi, R. (2012). Miles apart: Two art therapists experience of distance supervision. *Art Therapy*, 29(2), 93–96. DOI: <https://doi.org/10.1080/07421656.2012.683729>

- Cameron, L. D., & Overall, N. C. (2018). Suppression and expression as distinct emotion-regulation processes in daily interactions: Longitudinal and meta-analyses. *Emotion, 18*(4), 465–480. DOI: <https://doi.org/10.1037/emo0000334>
- Dubiņins, K., & Mārtinsone, K. (2021). Informācijas tehnoloģiju izmantošana attālinātās supervīzijas praksē: datu drošība. *Society. Integration. Education=Sabiedrība. Integrācija. Izglītība, 5*, 318–329. DOI: <https://doi.org/10.17770/sie2021vol5.6389>
- Eiropas Komisija. (2021). *Digitālās ekonomikas un sabiedrības indekss (DESI) 2021. gadā. Latvija*. Pieejams: <https://digital-strategy.ec.europa.eu/en/policies/desi-latvia>
- Fjodorova, M. (2022). *Metodes "3D emociju kompozīcija" adaptācija pielietojumam tiešsaistes supervīzijā*. [Maģistra darbs, Rīgas Stradiņa universitāte]. Pieejams: <https://dspace.rsu.lv/jspui/handle/123456789/9332>
- Ganeviča, I. (2020). *Digitālo produktu dizains. Priekšmeta Dizains un tehnoloģijas mācību līdzeklis*. IT Izglītības fonds. Pieejams: <https://static1.squarespace.com/static/5f06fd23a667bb31dbca5507/t/5f59fef4c21f38271ec0e7f0/1599733549480/Digitalais-dizains.pdf>
- Gratz, K. L., & Roemer, L. (2004). Multidimensional Assessment of Emotion Regulation and Dysregulation: Development, Factor Structure, and Initial Validation of the Difficulties in Emotion Regulation Scale. *Journal of Psychopathology and Behavioral Assessment, 26*(1), 41–54. DOI: <https://doi.org/10.1023/B:JOBA.0000007455.08539.94>
- Gross, J. J. (2014). Emotion Regulation: Conceptual and Empirical Foundations. In J. J. Gross (Ed.), *Handbook of Emotion Regulation, Second Edition* (pp. 3–14). Guilford Publications. Pieejams: www.guilford.com/p/gross
- Gross, J. J. (2015). Emotion Regulation: Current Status and Future Prospects. *Psychological Inquiry, 26*(1), 1–26. DOI: <https://doi.org/10.1080/1047840X.2014.940781>
- Inman, A. G., Soheilian, S. S., & Luu, L. P. (2019). Telesupervision: Building bridges in a digital era. *Journal of Clinical Psychology, 75*(2), 292–301. <https://doi.org/10.1002/jclp.22722>
- International Organisation for Standardisation. (1998). *ISO 9241 Part 11: Guidance on usability*. Retrieved from: <https://www.iso.org/obp/ui/#iso:std:iso:9241:-11:ed-1:v1:en>
- Kantar. (2022, November 28). *76% strādājošo savu emocionālo labsajūtu darbā vērtē kopumā pozitīvi, kamēr 18% – kopumā negatīvi*. Pieejams: <https://www.kantar.lv/76-stradajoso-savu-emocionalo-labsajutu-darba-verte-kopuma-pozitivi-kamer-18-kopuma-negativi/>
- Kristiņa-Everte, I., Paiča, I., & Mārtinsone, K. (2021). Emociju regulācijas prasmju aptaujas adaptācija latviešu valodā. *Society. Integration. Education=Sabiedrība. Integrācija. Izglītība, 7*, 146–158. DOI: <https://doi.org/10.17770/sie2021vol7.6227>
- Lejstraute, A. (2021). *Vizuālās izvērtēšanas metodes "3D emociju kompozīcija", emociju regulācijas pamatprasmju un optimisma rādītāju sakarības krūts vēža pacientēm ar depresijas simptomiem* [Maģistra darbs, Rīgas Stradiņa universitāte]. Pieejams: <https://dspace.rsu.lv/jspui/handle/123456789/3466>
- Maffett, A. J., Paull, D. N., Skeel, R. L., Kraysovic, J. N., Hatch, B., O'Mahony, S., & Gerhart, J.I. (2022). Emotion dysregulation and workplace satisfaction in direct care worker burnout and abuse risk. *Journal of the American Medical Directors Association, Vol.23* (7), p.1257-1261. DOI: <https://doi.org/10.1016/j.jamda.2022.03.001>
- Mārtinsone, K. un Pipere, A. (sast.). (2021). *Glosārijs. No Zinātniskās darbības metodoloģija: starpdisciplināra perspektīva*. (525. lpp.). Rīgas Stradiņa universitāte.
- Mérida-López, S., Extremera, N., Quintana-Orts, C., & Rey, L. (2019). In pursuit of job satisfaction and happiness: Testing the interactive contribution of emotion-regulation ability and workplace social support. *Scandinavian Journal of Psychology, 60*(1), 59–66. DOI: <https://doi.org/10.1111/sjop.12483>

- Millere, L. (2022). *Metodes "3D emociju kompozīcija" adaptācija supervīzijai - digitāla rīka izstrāde*. [Maģistra darbs, Rīgas Stradiņa universitāte]. Pieejams: <https://dspace.rsu.lv/jspui/handle/123456789/9319>
- Nacionālā Enciklopēdija. (n.d.). *Supervīzija*. Nacionālā Enciklopēdija. Pieejams: <https://enciklopedija.lv/skirklis/98499-superv%C4%ABzija>
- NNGroup. (2008). *User Experience*. Retrieved from <https://www.nngroup.com/articles/definition-user-experience/>
- Online-Systembrett and online-Constellation-board. (n.d.). *Online-Systembrett*. Retrieved from <https://www.online-systembrett.com/en/>
- Ozola, I. (2020). Supervīzija sociālajā darbā ārkārtējos apstākļos: supervizora pārdomas. *Sociālais Darbs Latvijā*, 1, 46–48. Pieejams: <https://www.lm.gov.lv/lv/media/7531/download>
- Pennington, M., Patton, R., & Katafiasz, H. (2020). Cybersupervision in Psychotherapy. In: H. Weinberg & A. Rolnick (Ed.), *Theory and practice of Online Therapy. Internet-delivered Interventions for Individuals, Groups, Families, and Organizations*. (pp. 79–95). Routledge.
- Poudžiunas, I., Antonsone, I., Kartupele, I., & Lauva, Z. (2017). Refleksija supervīzijā. No K. Mārtinsons un S. Mihailova (sast.), *Supervīzija: Teorija. Pētījumi. Prakse* (203. –226. lpp.). Rīgas Stradiņa universitāte.
- Powers, J. P., & LaBar, K. S. (2019). Regulating emotion through distancing: A taxonomy, neurocognitive model, and supporting meta-analysis. *Neuroscience and Biobehavioral Reviews*, 96, 155–173. DOI: <https://doi.org/10.1016/j.neubiorev.2018.04.023>
- Vaccaro, N., & Lambie, G. W. (2007). Computer-based counselor-in-training supervision: Ethical and practical implications for counselor educators and supervisors. *Counselor Education and Supervision*, 47(1), 46–57. <https://doi.org/10.1002/j.1556-6978.2007.tb00037.x>
- Vanadzina, S. (2021). *Vizuālās izvērtēšanas metodes "3D emociju kompozīcija" un emociju regulācijas pamatprasmju rādītāju sakarības pacienti ar depresiju un kontrolgrupā* [Maģistra darbs, Rīgas Stradiņa universitāte]. <https://dspace.rsu.lv/jspui/handle/123456789/3471>
- Vanadzīņš, I., Linde, A. A., Matisāne, L., Paegle, L., Rozentāle, S., Grīntāle, I., Arbidāne, I., Litavniece, L., Lonska, J. & Mietule, I. (2021). *Izvērtējums un priekšlikumi par nepieciešamajām izmaiņām rīcībpolitikā un / vai normatīvajos aktos, lai veicinātu nodarbinātību un drošu darba vidi (tai skaitā attālinātajā darbā) COVID-19 izplatības mazināšanai noteikto ierobežojumu apstākļos. Dzīve ar COVID-19: Novērtējums par koronavīrusa izraisītās krīzes pārvarēšanu Latvijā un priekšlikumi sabiedrības noturībai nākotnē. VPP-COVID-2020/1-0013 Projekta papildus rezultāti Nr.31*. http://stradavesels.lv/Uploads/2021/01/05/31_zinojums_c.pdf
- Webb, T. L., Miles, E., & Sheeran, P. (2012). Dealing with feeling: A meta-analysis of the effectiveness of strategies derived from the process model of emotion regulation. *Psychological Bulletin*, 138(4), 775–808. <https://doi.org/10.1037/a0027600>
- Winnicott, D.W. (2007). *Playing and reality*. London, New York: Routledge.
- World Economic forum. (2020). *The Future of Jobs Report 2020*. Retrieved from <https://www.weforum.org/reports/the-future-of-jobs-report-2020>
- Zahav, R. R. E., Refaeli, T., Shemesh, S., Gottlieb, S., & Ben-Porat, A. (2020). Supervision Satisfaction Among Social Work Students in Israel: Supervision Components, Peer Support, and Trauma-Related Factors. *Research on Social Work Practice*, 30(8), 884–894. <https://doi.org/10.1177/1049731520936755>

**SOCIĀLI EMOCIONĀLĀ KOMPETENCE UN
PROFESIONĀLĀ ĒTIKA: POLICIJAS DARBINIEKA
PROFESIONĀLIE IZAICINĀJUMI
MULTIKULTURĀLĀ SABIEDRĪBĀ**
*Social Emotional Competence and Professional Ethics: Professional
Challenges of the Police Officer in a Multicultural Society*

Ēriks Treļš

Valsts policijas koledža, Latvija
Rīgas Stradiņa universitāte, Latvija

Ivans Jānis Mihailovs

Rīgas Stradiņa universitāte, Latvija
Latvijas Kultūras akadēmija, Latvija

Juris Matisāns

Rīgas Stradiņa universitāte, Latvija

Abstract. *In every profession, where basic activities are carried out in direct interaction with people, often solving diverse problem situations and providing assistance to victims, cooperating with representatives of different cultures, not only professional knowledge and skills are important, but also interpersonal cooperation and emotional skills. The aforementioned raises the issue of socio-emotional competence, which directly interacts with the professional ethics of a police officer, so that it is possible to effectively perform official duties and overcome personal and professional challenges, including in the context of a multicultural society. The purpose of the article is to describe important aspects of the interaction between the socio-emotional competence and professional ethics of a police officer, providing proposals for their promotion in professional everyday life, which would allow the police officer to overcome personal and professional challenges while performing official duties in a multicultural society. The research uses the analysis of documents and scientific literature, methods of interpretation of legal norms (historical method; teleological method; grammatical method; systemic method), analyzing regulatory acts, as well as induction and deduction methods, drawing conclusions and making proposals for the improvement of regulatory acts and police service practice.*

Keywords: *ethnics, multicultural society, policing, socio-emotional competence.*

Ievads *Introduction*

Ikvienā profesijā, kurā pamatdarbība īstenojas tiešā mijiedarbībā ar cilvēkiem, bieži vien risinot daudzveidīgas problēmsituācijas un sniedzot palīdzību cietušajiem, sadarbojoties ar dažādu kultūru pārstāvjiem, ir svarīgas ne tikai specifiskas profesionālas zināšanas un prasmes, bet arī starppersonu sadarbības un emocionālās prasmes. Arī starp nozīmīgākajām prasmēm arvien biežāk tiek minētās tās prasmes, kuras iekļaujas sociāli emocionālajā kompetencē (piemēram, Top 10 skills of 2025). Jāatzīmē, ka saistībā ar šo terminu latviešu valodā joprojām var vērot terminoloģisko daudzveidību: sociāli emocionālās prasmes, intelekts, inteligence, mācīšanās, kompetence u.c. (Elsiņa & Perepjolkina, 2017).

Īpaši svarīgas šīs prasmes ir sabiedriskās drošības jomā, it sevišķi šobrīd, kad sabiedrība joprojām saskaras ar Covid-19 pandēmiju, ekonomiskās situācijas pasliktināšanos, kā arī ar spriedzi, kura ir saistīta ar militāro darbību starp Latvijas kaimiņvalsti – Krieviju un Ukrainu un tās sekām, piemēram, ukraiņu bēgļiem.

Turklāt, kā ir konstatēts pētījumos, sabiedriskās drošības speciālisti, kuriem ir spēcīga sociāli emocionālā kompetence ne tikai spēj labāk pildīt profesionālus pienākumu, bet viņiem ir labāka labbūtība, viņi spēj labāk pārvarēt personīgo un kolektīvu stresu u.tml. (Black, 2022). Ne mazāk būtiskā ir sociāli emocionālā kompetence uz sabiedrību vērstā policijas darba (angl. *Community Policing*) kontekstā, jo šīs sadarbības ietvaros policijai ir jāspēj identificēt un iespējami proaktīvi risināt sabiedrības vai kopienas iedzīvotāju problēmas, mazināt bailes un stiprināt sistemātisku sadarbību vai partnerību (Beyer, 2022; Bērziņa-Ručere, Avota, Grūbis, & Tošovskis, 2012). Šī pieeja no policijas darbinieka prasa ne tikai normatīvajos aktos noteikto pienākumu precīzu pildīšanu, bet arī ētisku jūtīgumu, tostarp apzinoties savas emocijas un problēmas, kā arī spējot uztvert citu personu vajadzības un problēmas un spējot reaģēt un pielāgoties dažādām vidēm vai kultūru specifikai (Kobe, Reiter-Palmon, & Rickers, 2001).

Minētais aktualizē jautājumu par sociāli emocionālo kompetenci, kura tiešā veidā mijiedarbojas ar policijas darbinieka profesionālo ētiku, lai būtu iespējams efektivizēt dienesta pienākumu pildīšanu un pārvarēt personīgus un profesionālos izaicinājumus, tostarp multikulturālās sabiedrības kontekstā. Jāatzīmē, ka līdz šim sociāli emocionālās kompetences un profesionālās ētikas mijattiecības policijas darbinieka profesionālajā ikdienā Latvijā netika pētītas. Turklāt sociāli emocionālā kompetences policijas darbinieka profesionālās darbības kontekstā ir salīdzinoši jauns jēdziens.

Raksta mērķis ir raksturot nozīmīgus policijas darbinieka sociāli emocionālā kompetences un profesionālās ētikas mijiedarbības aspektus, sniedzot priekšlikumus to sekmēšanai profesionālajā ikdienā, kas attiecīgi ļautu pārvarēt

policijas darbinieka personīgus un profesionālos izaicinājumus, pildot dienesta pienākumus multikulturālā sabiedrībā.

Pētījumā, kas tika veikts starpdisciplināri, tika izmantotas tādas metodes kā dokumentu un zinātniskās literatūras analīze, tiesību normu interpretācijas metodes (vēsturiskā metode; teleoloģiskā metode; gramatiskā metode; sistēmiskā metode), analizējot normatīvos aktus, kā arī indukcijas un dedukcijas metodes, izdarot secinājumus un izsakot priekšlikumus normatīvo aktu un policijas dienesta prakses pilnveidei.

Sociāli emocionālā kompetences jēdziens un saturs *Concept and content of socio-emotional competence*

Kā atzīst Latvijas Universitātes profesore Baiba Martinsone profesionālā darbība tieši saistās ar “spēju pārvaldīt savas emocijas, veidot pozitīvas attiecības, izvirzīt reālus mērķus, risināt problēmas un pieņemt atbildīgus lēmumus” (Martinsone, Niedre, Bērziņa). Kopā ar saviem kolēģiem viņa uzsver, ka sociāli emocionālās kompetences mērķis ir attīstīt iespējas:

1. saprast sevi (apzināties un atpazīt savas emocijas, domas un uzvedību, izprast to cēloņus un saistību; apzināties savas stiprās puses un grūtību jomas/attīstības iespējas, izvirzīt reālus mērķus, saglabāt optimismu un pozitīvu attieksmi); pārvaldīt sevi (aizvien patstāvīgāk kontrolēt savas emocijas, domas un uzvedību dažādās situācijās, motivēt sevi, lai virzītos uz mērķu sasniegšanu);

2. saprast citus (būt iejūtīgam pret dažādiem cilvēkiem, izturēties ar cieņu pret atšķirīgo, izprast otra perspektīvu, saprast uzvedības, sociālās un ētikas normas);

3. veidot attiecības ar citiem (veidot un uzturēt veselīgas, gandarījumu nesošas un pozitīvas attiecības, skaidri izteikt savas vajadzības, sadarboties ar citiem un pretoties sociālam spiedienam, konstruktīvi risināt konfliktus, meklēt un piedāvāt palīdzību, kad tas ir nepieciešams);

4. pieņemt atbildīgus lēmumus (apzināties savu izdarīto izvēļu motivāciju, apsvērt savas rīcības sekas, ievērojot savu un citu cilvēku drošību un labklājību)” (Martinsone, Niedre, & Bērziņa, 2021).

Tādējādi sociāli emocionālā kompetence iekļauj sevī izpratni par to, kā profesionālim (raksta kontekstā – policijas darbiniekam) mijiedarboties ar citām personām, lai visas konkrētajā lietā iesaistītās puses justos sadzirdētas un cienītas, vienlaikus atzīstot atšķirības vērtībās, rīcības modeļos, dzīves pieredzē un kultūrā. Būtībā tas ir zināšanu un prasmju kopums, kas ir attīstāms, lai iegūtu pilnīgāku izpratni par to, kas virza personu rīcību un emocijas. Līdz ar to sociāli emocionālā kompetence prasa apzināties un pārvaldīt gan sevi, gan citus, spēt efektīvi komunicēt un risināt konfliktus gan ar kolēģiem, gan ar klientiem.

Latvijas zinātnieces Inese Elsiņa un Viktorija Perepjolkina, atsaucoties uz ārvalstu pētījumiem (Ferreira, Simoesa, Matosa, Ramiroa, & Diniza, 2012;

Halle & Darling-Churchill, 2016), raksta, ka sociāli emocionālās kompetenci veido komunikācijas un sadarbības prasmes, empātija (jeb līdzjūtība), problēmu risināšanas prasme, pašefektivitāte, sevis apzināšanās prasme, savu un citu emociju atpazīšana, sociālo situāciju izpratnes prasme, savu vajadzību un mērķu sabalansēšana ar citu vajadzībām un mērķiem u.c. (Elsiņa & Perepjolkina, 2017). Viņas piedāvā sociāli emocionālo kompetenci iedalīt divos blokos: sociālā kompetencē un emocionālā kompetencē. Pirmajā blokā “Sociālā kompetence”, I. Elsiņa un V. Perepjolkina iekļauj četras prasmes: sadarbības, empātijas, sociālo situāciju izpratnes un sociālās tolerances prasmi. Attiecībā uz sadarbības prasmi, viņas atzīmē, ka to veido papildus divu šaurāku prasmju kopums: komunikatīvā prasme un konfliktu risināšanas prasme. Empātijas prasmi veido divas prasmes: empātijas apzināšana un empātijas rīcība. Savukārt otro bloku “Emocionālā kompetence”, I. Elsiņa un V. Perepjolkina sadala divās to veidojošās prasmēs: pašrefleksijas prasmē un pašregulācijas prasmē. Katru no minētām prasmēm, viņu ieskatā, veido papildus vairāku šaurākas nozīmes prasmju kopums. Tā, pašrefleksijas prasmi veido emociju apzināšanās prasme (prasme atpazīt un nosaukt savas emocijas, raksturot dažāda veida emocionālo pieredzi, nošķirt savas emocijas no citu emocijām, saskatīt un izprast emociju, domu, vārdu, uzvedības savstarpējo saistību) un pašnovērtējuma prasme (savu stipro un vājo pušu apzināšanās, savu spēju apzināšanās, prasme adekvāti novērtēt savu sniegumu, uzvedību, savu vajadzību, mērķu, motīvu, vēlmju, vērtību, attieksmju apzināšanās prasme). Pašregulācijas prasmi veido četras sastāvdaļas: emociju un uzvedības pašregulācijas prasme, adaptivitāte, autonomija un pašpalāvēība.

Ievērojot minēto, I. Elsiņa un V. Perepjolkina secina, ka Emocionālā kompetence ir saistāma ar pašvadību (angl. *Self Management*), bet Sociālā kompetence – ar starppersonu attiecību veidošanu un uzturēšanu (angl. *Relationship Management*).

Jāatzīmē, ka minētais skaidrojums ir viens no iespējamiem skatījumiem uz sociāli emocionālās kompetences saturu, un zinātnieku vidū viedokli par sociāli emocionālās kompetences jēdzienu un saturu atšķirās. Šī raksta ietvaros I. Elsiņas un V. Perepjolkinas piedāvātais skaidrojums, tiks izmantots, analizējot normas, kas nosaka Valsts policijas nodarbināto – amatpersonu ar speciālajām dienesta pakāpēm (turpmāk – Valsts policijas darbinieki), brīvliguma darbinieku un valsts civildienesta ierēdņu ētikas vērtības un pamatprincipus, kā arī vispārējās uzvedības noteikumus (Valsts policijas ētikas kodekss, 2020).

Amerikāņu pētnieks, doktors D. Bleks norāda, ka sociāli emocionālā kompetence “ir galvenā prasme, kas saistīta ar uz sabiedrības vērstās policijas attīstību. Lai to paveiktu efektīvi un procesā attīstītu savas prasmes, ir jāciena sevi, jābūt godīgam savās darbībās un jāatzīst, iespējams uzlabot savas prasmes un kļūt stiprākiem”, kā arī ir jābūt empātiskiem pret citiem. Turklāt spēja novērot un just līdzīgi, un pielietot šīs prasmes katrā profesionālajā mijiedarbībā, var efektīvi deeskalēt situāciju, samazinot negatīvas mijiedarbības iespējamību (Black, 2022).

Īpaši svarīgi, ka policijas darbiniekam ir jāspēj sadarboties ar ikvienu personu, arī t.s. “neērto klientu”, bieži vien izvēloties risinājumu stresa situācijā, kad īsā laikā ir jāvērtē dažādas intereses un rīcības modeļus.

Minētais tieši sasaucas ar likumā “Par policiju” 5.panta noteikto: “Policijas darbība tiek organizēta, ievērojot likumību, humānismu, cilvēka tiesības, sociālo taisnīgumu, atklātumu, vienvadību un balstoties uz iedzīvotāju palīdzību.

Policija aizsargā personu tiesības un likumīgās intereses neatkarīgi no šo personu izcelsmes, dzimuma, vecuma, sociālā un mantiskā stāvokļa, nodarbošanās, pilsonības, rases un nacionālās piederības, attieksmes pret reliģiju, politiskās un citas pārliecības, kā arī izglītības un valodas, dzīvesvietas un citiem apstākļiem” (Likums “Par policiju”). Līdz ar to ir konstatējams, ka tie policijas darbinieki, kuriem ir attīstītāka sociāli emocionālā kompetence, ir daudz noturīgāki, spēj labāk komunicēt un sadarboties ar dažādiem sabiedrības vai kopienas pārstāvjiem.

**Valsts policijas ētikas kodekss kā sociāli emocionālās kompetences
normatīvais atspoguļojums**
*The Code of Ethics of the State Police as a normative reflection of socio
emotional competence*

Policijas darbinieku sociāli emocionālā kompetence joprojām nav plaši analizēta zinātnieku vidū. Ukrainas zinātnieks Vitālijs Kiikovs ir viens no tiem nedaudziem zinātniekiem, kas pētīja policijas kadetu sociālo kompetenci (Kiikov, 2013). Viņš norāda, ka policijas kadetu kompetences līmenis tiešā veidā ietekmē viņiem uzlikto uzdevumu kvalitāti un izpildei nepieciešamās savstarpējās sadarbības efektivitāti. Savā pētījumā V. Kiikovs secina, ka policijas darbinieku sociālā kompetence galvenokārt ir saistīta ar policijas darbības īpašībām, iekļaujot sevī: normas un noteikumus, kas nosaka policijas darbinieku profesionālo uzvedību un pamato lēmumu pieņemšanu; policijas darbinieku tiesības un pienākumus, kas tiek īstenoti atbilstoši dienesta kompetencei; procesuālo neatkarību un personīgo atbildību par pieņemtajiem lēmumiem; emocionālās spējas strādāt ekstremālos, saspringtos apstākļos, pildīt liela apjoma un saturiski dažādus uzdevumus, apstākļos, kas saistīti ar laika un informācijas trūkumu; aktīvo pretdarbību tiesību pārkāpējiem; darba apstākļu izmaiņas, kas ietekmē policijas darbinieku psiholoģisko stāvokli. Jāpiekrīt arī secinājumam, ka policijas izglītības iestādei, salīdzinājumā ar citām augstskolām, ir specifiskās iezīmes, kas ietver sevī gan stingru normatīvo reglamentāciju, gan kadetu kontroli no virsnieku un pasniedzēju puses, gan citas tikai militarizētai iestādei raksturīgās īpašības.

Pirmskara Ukrainā situācija policijas darbinieku izglītības jomā būtiski neatšķīrās no situācijas citu valstu policijas izglītības iestādēs. Arī Latvijā policijas darbinieku mācības un turpmākā dienesta gaita ir stingri normatīvi reglamentēta. Normatīvam regulējumam ir raksturīga attīstība. Arī normatīvajos

aktos, kas nosaka policijas darbu, pastāvīgi tiek veikti uzlabojumi. Normatīvais regulējums, kas nosaka Valsts policijas darbinieka profesionālās ētikas normas Latvijā, šajā ziņā arī nav izņēmums, tas pastāvīgi attīstās (Treļs, 2020).

Valsts policijas ētikas kodekss nosaka septiņus ētikas pamatprincipus: profesionalitāte, godprātība, objektivitāte, darbs sabiedrības labā, konfidencialitāte, atbildība un lojalitāte (Valsts policijas ētikas kodekss, 2020). Papildus ētikas pamatprincipiem tas iekļauj sevī arī piecas Valsts policijas vērtības: piederība, sadarbība, attīstība, cieņa un komunikācija. Šajā normatīvajā aktā tiek skaidroti arī vispārējās uzvedības noteikumi. Analizējot šīs normas, var secināt, ka Valsts policijas ētikas kodeksā ir iekļautas gan sociālās kompetences, gan emocionālās kompetences, kas nepieciešamas policijas darbiniekiem, lai pilnvērtīgi pildīt dienesta pienākumus.

Sociālās kompetences nepieciešamība atspoguļojas gandrīz visās Valsts policijas ētikas kodeksā ietvertās normās. Piemēram, sadarbība ir ietverta Valsts policijas ētikas kodeksā kā atsevišķā Valsts policijas vērtība, un tiek skaidrota kā “godīga, atklāta, cieņpilna, uz risinājumu vērsta komunikācija un informācijas apmaiņa ar citiem nodarbinātajiem un iestādēm, sniedzot vai saņemot nepieciešamo palīdzību pienākumu izpildē, iesaistīšanās jautājumu risināšanā, kas skar vairākas Valsts policijas struktūrvienības, vairākas iestādes vai nozares un atvērtība sadarbības iniciatīvām ar citu jomu speciālistiem, kā arī vienota mērķu izpratne un to sasniegšana” (Valsts policijas ētikas kodekss, 2020). Valsts policijas vērtības attīsta šo jautājumu, nosaucot to par “cieņu”: “attieksme, kam raksturīga citu personību spēju, zināšanu un vērtību atzīšana, kas izpaužas kā cieņpilna komunikācija ar citiem nodarbinātajiem, iestādēm, organizācijām, komersantiem un ikvienu sabiedrības locekli, prasme uzklaut citu viedokli, bet viedokļu nesakritības gadījumā sniegt objektīvus un korektus argumentus” (Valsts policijas ētikas kodekss, 2020). Arī likuma “Par policiju” 7. un 8.pantā ir noteikts, ka policija sadarbojas “ar iestādēm, privātpersonām un personu apvienībām” un “ar citu valstu policiju (miliciju), starptautiskajām organizācijām, savienībām vai kopienām” (Likums “Par policiju”).

Sociālo situāciju izpratne atspoguļota ētikas pamatprincipā “profesionalitāte”: policijas darbinieka “rīcība, lēmumi un viedokļi ir pamatoti un izsvērti, balstīti situācijas analīzē, objektīvos faktos un datos”, viņam jāprot “uzklaut citu viedokli un konflikta situācijas risināt objektīvi, izvērtējot pušu argumentus un mēģinot rast ātrāku konflikta risinājumu” (Valsts policijas ētikas kodekss, 2020). Konflikta risināšanas prasme I. Elsiņa un V. Perepjolkinas skaidrojumā ir saistīta ar sadarbības prasmī (Elsiņa & Perepjolkina, 2017). Otrā no viņu pieminētām sadarbības prasmēm – komunikatīvā prasme atrod savu atspoguļojumu Valsts policijas vērtībā – “komunikācijā”, kas ir “godīga, atklāta, laipna, uz risinājumu vērsta sazināšanās ar citiem nodarbinātajiem, iestādēm, organizācijām, komersantiem un ikvienu sabiedrības locekli” (Valsts policijas ētikas kodekss, 2020).

Ētikas pamatprincipi “objektivitāte” un “atbildība” turpina sociālo situāciju izpratnes normatīvo nostiprināšanu: policijas darbinieks “dienesta (amata, darba) pienākumus pilda objektīvi un taisnīgi, ar augstu tiesisko apziņu, ievērojot personu vienlīdzību, un neizrādot īpašu labvēlību vai radot nepamatotas privilēģijas kādai personai”, kā arī pilda tos “atbildīgi, rūpīgi un savlaicīgi” (Valsts policijas ētikas kodekss, 2020).

Personu vienlīdzības ievērošana ir saistīta arī ar tolerances prasmi. Papildus jāpiemin ētikas pamatprincips “darbs sabiedrības labā”, kas paredz, ka policijas darbinieks “ievēro visu sabiedrības locekļu līdztiesīgumu un taisnīguma principu, rodot taisnīgus un samērīgus risinājumus” Arī vispārējās uzvedības noteikumi nosaka, ka policijas darbinieks “ar savu rīcību un izteikumiem neapvaino un nediskriminē citus nodarbinātos un personas, ar kurām komunicē, pildot dienesta (amata, darba) pienākumus, neatkarīgi no personas rases, tautības, dzimuma, izglītības, amata, vecuma, invaliditātes, seksuālās orientācijas, reliģiskās, politiskās vai citas pārliecības, mantiskā vai ģimenes stāvokļa vai citiem apstākļiem” (Valsts policijas ētikas kodekss, 2020).

Emocionālās kompetences sastāvdaļa – pašnovērtējuma prasme ir saistīta ar vairākiem ētikas pamatprincipiem. Piemēram, pamatprincips “profesionalitāte” paredz, ka policijas darbinieks “savas kompetences, prasmes un zināšanas dienesta (amata, darba) pienākumu izpildē izmanto efektīvi un kvalitatīvi”, kas, pēc būtības nozīmē, ka policijas darbinieks apzinās nepieciešamību šādas kompetences, prasmes un zināšanas iegūt. Valsts policijas vērtībās atrodams šis nepieciešamības turpinājums “attīstības” veidā, nosakot “pastāvīga savu kompetenču, prasmju un zināšanu pilnveidošana, atvērtība pārmaiņām, iesaistīšanās jaunu pieeju un inovāciju izmantošanā un ieguldījums Valsts policijas attīstībā” (Valsts policijas ētikas kodekss, 2020).

Emociju apzināšanās prasme atspoguļojas pamatprincipos “atbildība” un “lojalitāte”. Pirmais paredz, ka policijas darbinieks ir “paškritisks, atzīst un labo savas kļūdas un atvainojas par neētisku rīcību” (Valsts policijas ētikas kodekss, 2020). Pienākums “atvainoties” kā vienīgais situācijas risinājums Latvijas Republikas Augstākās tiesas Senāta Administratīvo lietu departamenta skaidrojumā ir iespējams tikai tad, ja aizskārums nav smags (Latvijas Republikas Augstākās tiesas Senāta Administratīvo lietu departamenta spriedums lietā Nr. A42466905, SKA – 104/2010). Otrais no pieminētiem pamatprincipiem – “lojalitāte” paredz, ka policijas darbinieks “publiskos izteikumos ir lojāls pret valsti un Valsts policiju un ievēro Valsts policijas darbības mērķi un pamatvērtības” (Valsts policijas ētikas kodekss, 2020). Šeit būtu jāatzīmē, ka tiesu praksē ir nostiprinājies, ka divu personu starpā paustie uzskati nav uzskatāmi par publiskiem (Trešs, 2017).

Papildus jānorāda, ka prasība pēc lojalitātes kļuvusi īpaši aktuāla mūsdienās. Tā ir iekļauta arī ārējos normatīvajos aktos, kas nosaka profesionālos standartus un prasības pieņemšanai dienestā vai darbā. Piemēram, prasība izglītības iestādes

vadītājam vai pedagogam būt lojālam Latvijas Republikai un Latvijas Republikas Satversmei ir iekļauta Izglītības likuma 30.panta ceturtajā daļā un 48.panta piektajā daļā. Turklāt šī norma citu starpā nosaka, ka par izglītības iestādes vadītāju ir tiesīga strādāt persona, kurai ir nevainojama reputācija (Izglītības likums, 1998).

Prasība pēc nevainojamās reputācijas kā viena no prasībām pieņemšanai dienestā Valsts policijā ir iekļauta Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonu ar speciālajām dienesta pakāpēm dienesta gaitas likuma 7.panta pirmajā daļā. Šeit jāatzīmē, ka minētais normatīvais akts lojalitāti Latvijas Republikai un Latvijas Republikas Satversmei no pretendenta Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonu amatam nepieprasa (Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonu ar speciālajām dienesta pakāpēm dienesta gaitas likums, 2006). Turklāt valstī nav izstrādāta kārtība, kādā minētā informācija ir iegūstama, kā arī lojalitātes vai nevainojamas reputācijas vērtēšanas metodoloģija.

Valsts policijas vērtība “piederība” paredz “sevis apzināšanās kā daļu no Valsts policijas un lepošanās ar piederību Valsts policijai” (Valsts policijas ētikas kodekss, 2020). Latviešu literārās valodas vārdnīca skaidro, ka vārds “lepošanās” ir atvasinājums no vārda “lepoties”, kas vārdnīcas izpratnē nozīmē “justies pašapzinīgam, pārākam par citiem (ar ko) un paust to (izturēšanās veidā, rīcībā, runā)” (Latviešu literārās valodas vārdnīca, 1980). Ņemot vērā šo skaidrojumu, pašreizējo situāciju valstī un Valsts policijā kā iestādē, autoru ieskatā minētā norma var raisīt neizpratni no policijas darbinieku puses.

Savukārt, vērtējot situāciju kopumā, jākonstatē, ka normatīvais regulējums, kas nosaka Valsts policijas darbinieku ētikas vērtības un pamatprincipus, kā arī vispārējās uzvedības noteikumus, kopumā ir pietiekošs, un veicina policijas darbinieka sociāli emocionālās kompetences pilnveidi, lai tostarp veiksmīgi pildītu pienākumus multikulturālajā sabiedrībā.

Empātijas kā sociāli emocionālās kompetences vērtēšanas iespējas policijas darbā

Possibilities of evaluating empathy as a socio-emotional competence in police work

Paplašināti skatot atbildību kā vienu no policijas darbinieka ētikas pamatprincipiem, tā būtu saprotama ne vien kā spēja atbildēt par savu prettiesisko vai neētisko rīcību, bet arī kā spēja apzināties sava darba nozīmīgumu, saprast savu īsteno lomu sabiedriskās kārtības un drošības garantēšanā.

Viens no Eiropas Drošības un sadarbības organizācijas jeb EDSO (*Organization for Security and Co-operation in Europe, OSCE*) ieteiktajiem pamatprincipiem noteic, ka valstīm būtu politiskā līmenī skaidri jāatzīst policijas

nozīmi starpetniskajās attiecībās. Uz policiju attiecināmiem dokumentiem vajadzētu būt daļai no plašākas politikas un programmām, lai veicinātu minoritāšu integrāciju valsts un vietējā līmenī. Tie būtu arī jāaskaņo ar plašāku rīcību, lai veicinātu policijas darba profesionalitāti un orientēšanos uz pakalpojumiem, kā arī nodrošinātu, ka visa kārtības nodrošināšana tiek veikta saskaņā ar starptautiskajiem cilvēktiesību standartiem, tostarp minoritātēm piederošu personu tiesībām (OSCE, 2006).

Jau pirms 25 gadiem profesore Ā. Meikališa ir norādījusi uz policijas un sabiedrības mijiedarbības būtisko nozīmi. Tikai pareizi noregulējot šī mehānisma savstarpējās mijiedarbības sviras, tas spējīgs darboties atbilstoši sabiedrības vajadzībām, aizsargāt un pasargāt to no prettiesiskiem apdraudējumiem. No minētā izriet, ka policijas darba stūrakmens ir un paliek sabiedrības uzticība. Ņemot vērā, ka sabiedrība ir deleģējusi tās tiesību un likumisko interešu aizsardzību, tai jābūt pārliecinātai, ka policija to godprātīgi izpildīs. Starp policistu un otru cilvēku pastāv viedokļu mijiedarbība, un katrs notiekošo aplūko no sava viedokļa, tādējādi radot pamatu konfliktam (Meikališa, 1997). Policijas un iedzīvotāju savstarpējās attiecības ir jāveido abpusēji, virzot tās pozitīvā gultnē. Labvēlīga sabiedrības attieksme pret policiju rada pamatu tās kvalitatīvākam darbam, kā arī ceļ policijas darba prestižu. Policijai un sabiedrībai jāapvienojas, lai kopīgām pūlēm atrisinātu kopējas problēmas.

Minētais nav iespējams, ja policijas darbinieku rīcību ietekmē paša stereotipi vai stereotipi, kas valda dienesta vietā. Tas sākotnēji var veidot atturīgu attieksmi no kādas grupas (tautības, ticības utt.) pārstāvju puses, bet, situācijas neuzlabojoties, pāraugt pretdarbībā.

Tādējādi var konstatēt, ka ir būtiski uzsvērt spēju pieņemt atšķirīgo, jau sagatavojot policijas darbinieka aktīvajam dienestam. Tomēr policijas darbinieka pildāmie pienākumi un saskarsmes scenāriji ar iedzīvotājiem ir tik dažādi, ka praktiski nebūtu iespējams iemācīt policijas darbiniekam būt empātiskam un brīvam no stereotipiem un aizspriedumiem. Policijas darbiniekam ir jābūt tādām ne vien pildot dienesta pienākumus, bet arī ikdienas dzīvē ārpus dienesta.

Zviedrijas zinātnieka M. Inzuznas veiktie pētījumi liecina, ka attiecībā uz “labu” policijas darbinieku virknē dokumentu tiek norādīts uz policijas darbinieka spēju risināt starppersonu attiecības. Tiek uzsvērtā arī spēja ņemt vērā citas personas viedokli un objektīvi novērtēt situāciju, lai izvairītos no neatbilstoša līmeņa iesaistīšanās (Inzuzna, 2015).

Saistībā ar policijas darbu multikulturālā sabiedrībā tiek uzsvērti divi problēmjautājumi – nepietiekama policijas iesaistīšanās un pārmērīga policijas iesaistīšanās. Policijas darbs šādos apstākļos ir vērtējams kā pretrunīgs jautājums, ciktāl tas skar sabiedrību, kurā kultūras, reliģijas un konkurējošas nacionālās identitātes izaicina pastāvošo kārtību un kur policijai vēl ir jāattīsta spējas strādāt ar sabiedrības grupām, kurām ir atšķirīga attieksme pret lietām, vērtībām un arī normatīvajos aktos noteikto. Kā viens no izaicinājumiem ir nepieciešamība

pārvarēt savus aizspriedumus un stereotipus. Vienlaikus jāatzīmē, ka normatīvo aktu ievērošana ir saistoša gan valsts iedzīvotājiem, gan personām, kas atrodas tās teritorijā īslaicīgi.

Literatūra (Ben-Porat, 2008) un arī pieredze norāda uz iepriekš minētajām divām galvenajām problēmām. Tādējādi kāda sabiedrības grupa var ciest no policijas nevērības pret savu apkaimi, no agresīvas policijas pieejas vai dažkārt no abiem.

Kā piemēru var minēt situāciju, kurā kādas noteiktas tautības pārstāvji, jo īpaši ja viņi vairās no komunikācijas ar citām sabiedrības grupām, tiek uztverti kā potenciālie likumpārkāpēji, tikai un vienīgi balstoties vēsturiski izveidojušos aizspriedumos. Vienlaikus, saņemot informāciju no šīs pašas tautības pārstāvjiem par pret viņiem vērstu likumpārkāpumu, šāds ziņojums netiek atbilstoši izvērtēts, pieņemot, ka likumpārkāpumu ir izraisījusi paša cietušā uzvedība.

Policijas un minoritāšu attiecību iepriekš iezīmētās problēmas kopā un arī katra atsevišķi uzsver policijas leģitimitātes trūkumu minoritāšu grupu vidū. Pārmērīga policijas darbība nozīmē, ka policija slikti izturas pret minoritātēm, pārmērīgi izmantojot spēku pret minoritātēm vai diskriminējošu praksi pret minoritātēm, kas ietver pārmērīgu pārbaužu veikšanu un nesamērīgi biežu aizturēšanu. Pārmērīga kārtības nodrošināšana bieži ir iestrādāta “policijas kultūrā”, kas ietver morālo un politisko konservatīvismu, kas saistīts ar aizspriedumainu attieksmi pret minoritātēm un pretošanos pārmaiņām un reformām (Findlay, 2004). Negatīva attieksme pret minoritātēm var attīstīties līdz praksei, kad policija vēršas pret personām vai grupām, turot aizdomās par noziedzīgām darbībām, kuru pamatā galvenokārt ir personu rase, etniskā piederība vai citas identificējošas pazīmes.

Diskusija ***Discussion***

Saikni starp sociāliem nelabvēlīgiem apstākļiem un pārmērīgu policijas darbu pastiprina selektīva tiesībaizsardzība, ko stimulē diskriminējoši policijas stereotipi. Stereotipus un diskrimināciju, kas pastāv ikdienas policijas darbā, var papildināt patieso rasistu (lai arī tie varētu būt tikai atsevišķi darbinieki) ietekme policijā.

Rasisma un citu tīšas diskriminācijas izpausmju atklāšana nav iespējama, ja iestādes kultūra pieļauj stereotipu saglabāšanos policijas iekšienē un tādas prakses piekoptānu, kas balstās nevis objektīvos datos, bet gan aizspriedumos.

Apzinātās literatūras apjoms un izvēlēto pētījumu ģeogrāfija liecina, ka akcentētās problēmas nav skatāmas kā vietēja līmeņa problēma. Par šīm problēmām raksta pētnieki no dažādām pasaules daļām, kas liecina par problēmas globālo mērogu.

Jebkura izaicinājuma pārvarēšanas sākums ir paša izaicinājuma apzināšanās. Lai pārbaudītu, vai multikulturālas sabiedrības apstākļos esošie izaicinājumi tiek veiksmīgi pārvarēti, ir jāuzrauga policijas prakse, jāpārbauda sūdzību skaits un veids, kā tās tiek izskatītas, kā arī jānoskaidro sabiedrības apmierinātības līmenis. Sūdzību skaits ir tikai viens apmierinātības rādītājs. Sūdzību skaita samazināšanās var būt atbilstošs rādītājs vienai kopienai, bet ne citai, un tas var būt arī šīs kopienas neuzticēšanās policijai rezultāts. Attiecīgi svarīgs ir ne tikai sūdzību skaits, bet arī tas, no kurienes tās nāk un kā tās tiek pārbaudītas. Sūdzības, kas netiek izskatītas, un amatpersonas, kuras netiek sauktas pie atbildības, var veicināt sūdzību skaita samazināšanos. Papildus tam būtu veicamas sabiedrības aptaujas, kas ir svarīgs policijas darba un arī veikto reformu kvalitātes rādītājs. Šādas aptaujas būtu jāizstrādā tā, lai atspoguļotu ne tikai vispārējo apmierinātību, bet arī dažādu kopienu uztveri un to, ko iedzīvotāji sagaida no policijas.

Vērtējot iespējamās reformas, kuru mērķis būtu nodrošināt mazākumtautību interešu nodrošināšanu, norādāms, ka diemžēl pastāv reāla iespējamība, ka šādu reformu pieņemšana un ieviešana politiskā līmenī var nemainīt reālo situāciju kādā konkrētā policijas iecirknī. Tajā pat laikā jāņem vērā, ka jaunākās paaudzes policisti, kas ir vairāk izglītoti un pieraduši pie multikulturālām vidēm vai pat veido daļu no tās, ir atbalstošāki pret pārmaiņām nekā vecākā paaudze, kas reizēm tām pretojas. Tādejādi iespējamais risinājums ir nopietns darbs policijas darbinieku atlases un mācību procesā, vienlaikus sekojot, lai jaunie policijas darbinieki pārņem tieši mācību procesā iegūtās zināšanas, nevis praksē iedzīvīnātās iespējami diskriminējošās pieejas. Un tieši sociāli emocionālā kompetence ir viens no priekšnoteikumiem, lai pārvarēti izaicinājumus multikulturālā sabiedrībā.

Secinājumi un priekšlikumi *Conclusions and recommendations*

Policijas darbība ir pakļauta likumam un policijai jāaizsargā personu tiesības un likumīgās intereses neatkarīgi no šīs personas raksturojošām īpašībām, nepieļaujot nekāda veida diskrimināciju. Policijas darbinieki, kuriem ir attīstīta sociāli emocionālā kompetence, pirmsšķietāmi, ir daudz noturīgāki, spēj labāk komunicēt un sadarboties ar dažādiem sabiedrības vai kopienas pārstāvjiem.

Emocionālās kompetences sastāvdaļa – pašnovērtējuma prasme ir saistīta ar vairākiem profesionālās ētikas pamatprincipiem, kas ietverti policijas darbiniekiem saistošajos normatīvajos aktos. Normatīvais regulējums, kas nosaka Valsts policijas darbinieku ētikas vērtības un pamatprincipus, kā arī vispārējās uzvedības noteikumus, ir uzskatāms par pietiekošu, lai veicinātu policijas darbinieka sociāli emocionālās kompetences attīstību vai pilnveidi, un, lai tostarp veiksmīgi pildītu pienākumus multikulturālā sabiedrībā. Tomēr šī kompetence ir jāvērtē, nodrošinot policijas darbinieku profesionālo pilnveidi, kas attiecīgi būs

pamats efektīvākajai darbībai multikulturālajā sabiedrībā. Minētajam jāklūst par vienu no prioritātēm policijas personālvadības stratēģijās.

Tādējādi, kā pamatvirzieni iespējamai situācijas uzlabošanai, ir jāmin personāla atlase un mācības, vienlaikus sekojot, lai jaunie policijas darbinieki pārņem tieši mācību procesā iegūtās zināšanas, nevis praksē iedzīvinātās iespējami diskriminējošās pieejas.

Papildus tam būtu noskaidrojama sabiedrības attieksme, veicot atbilstošas aptaujas, tostarp noskaidrojot gan vispārējo apmierinātību ar policijas darbu konkrētā iecirkņa apkalpojamā teritorijā, gan arī no policijas patiesi sagaidāmo attieksmi un darba rezultātus, kas arī būs pamats policijas darba efektīvizēšanai multikulturālā sabiedrībā.

Ņemot vērā, ka šis pētījums ir veikts starpdisciplināri, autori izmanto šo iespēju, lai sniegtu priekšlikumus normatīvā regulējuma pilnveidei. Līdz ar to likumdevējam būtu jāgroza Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonu ar speciālajām dienesta pakāpēm dienesta gaitas likums, papildinot 7.panta "Prasības pieņemšanai dienestā" pirmo daļu ar 3.² punktu šādā redakcijā: "kuras ir lojālas Latvijas Republikai un tās Satversmei".

Summary

Police activity must be legal and the police must protect the rights and legitimate interests of individuals, regardless of the characterizing characteristics of this person, without allowing any kind of discrimination. Police officers who have more developed socio-emotional competence are more resilient, better able to communicate and cooperate with various members of society or community.

The component of emotional competence - the skill of self-assessment is related to several basic principles of ethics, which are included in the regulatory acts binding on police officers. The regulatory framework, which determines the ethical values and basic principles of the State Police employees, as well as the rules of general behavior, is considered sufficient to promote the improvement of the socio-emotional competence of the police officer, in order to successfully perform duties in a multicultural society.

The basic directions for a possible improvement of the situation should be related to personnel selection and training. A possible solution involves serious work in the process of selection and training of police officers, while ensuring that new police officers take over the knowledge gained directly from the training process, and not the potentially discriminatory approaches put into practice.

In addition to that, the attitude of the public should be ascertained by conducting appropriate surveys. Such surveys should be conducted in order to find out both the general satisfaction with the police work in a particular station, as well as the attitude and work results really expected from the police.

**Literatūra
References**

- Ben-Porat, G. (2008). Policing multicultural states: lessons from the Canadian model. *Policing and Society*, 18(4), 411-425.
- Bērziņa-Ruķere, I., Avota, I., Grūbis, N., Tošovskis, M. (2012). Uz sabiedrību vērsts policijas darbs Latvijā 2009.–2012. Pieredze un nākamie soļi. Retrieved from: <https://www.vp.gov.lv/lv/media/643/download?attachment>
- Beyer, J. (2022) Hiring Police Officers Using Emotional Intelligence Skill Evaluation. Retrieved from: <https://www.policechiefmagazine.org/hiring-police-officers-using-emotional-intelligence-skill-evaluation/>
- Black, D. (2022). The role of emotional intelligence in public safety. Retrieved from: <https://www.cordico.com/2022/05/04/role-of-emotional-intelligence-in-public-safety/>
- Elsiņa, I., & Perepjolkina, V. (2017). Sociāli emocionālās kompetences integratīvā modeļa izveides pamatojums. *SOCIETY. INTEGRATION. EDUCATION Proceedings of the International Scientific Conference*. Volume I, May 26th-27th, Rēzekne, 513-523.
- Ferreira, M., Simoesa, C., Matosa, M. G., Ramiroa, L., & Diniza, J. A. (2012). The role of social and emotional competence on risk behaviors in adolescence. *Emotional Education*, 4(1), 43-55.
- Findlay, M., (2004). *Introducing policing, challenges for police and Australian communities*. Oxford University Press.
- Halle, T. G., Darling-Churchill, K. E. (2016). Review of measures of social and emotional development. *Journal of Applied Developmental Psychology*, 45, 8-18.
- Iekšlietu ministrijas sistēmas iestāžu un Ieslodzījuma vietu pārvaldes amatpersonu ar speciālajām dienesta pakāpēm dienesta gaitas likums. (2006). Latvijas Republikas likums. Pieņemts: 15.06.2006. Stājas spēkā: 01.10.2006. Retrieved from: <https://likumi.lv/ta/id/138750-iekšlietu-ministrijas-sistemas-iestazu-un-ieslodzijuma-vietu-parvaldes-amatpersonu-ar-specialajam-dienesta-pakapem-dienesta-gai...>
- Izglītības likums. (1998). Latvijas Republikas likums. Pieņemts: 29.10.1998. Stājas spēkā: 01.06.1999. Retrieved from: <https://likumi.lv/ta/id/50759-izglitibas-likums>
- Inzuzna, M. (2015). Empathy from a police work perspective *Journal of Scandinavian Studies in Criminology and Crime Prevention*, 16, 1, 60-75, Retrieved from: <http://dx.doi.org/10.1080/14043858.2014.987518>
- Kiikov, V. (2013). The Social Competence of Police Cadets as Sociology Conception. *Studies of Changing Societies: Comparative and Interdisciplinary Focus*, 2(8), 64-76.
- Kobe, L. M., Reiter-Palmon, R., Rickers, J. D. (2001). Self-Reported Leadership Experiences in Relation to Inventoried Social and Emotional Intelligence. *Current Psychology* 20, 2, 154-163.
- Latviešu literārās valodas vārdnīca. (1980). 4. sējums. Rīga: Zinātne.
- Latvijas Republikas Augstākās tiesas Senāta Administratīvo lietu departamenta 16.02.2010. spriedums lietā Nr. A42466905, SKA-104/2010. Retrieved from: <https://www.at.gov.lv/downloadlawfile/4722>
- Likums "Par policiju". (1991). Latvijas Republikas likums. Pieņemts: 04.06.1991. Stājas spēkā: 04.06.1991. Retrieved from: <https://likumi.lv/ta/id/67957-par-policiju>
- Martinsone, B., Niedre, R., Bērziņa, S. (2021). Sociāli emocionālā mācīšanās. Nodarbību plāni 1.–12. Klasei. Retrieved from: <https://mape.skola2030.lv/resources/12532>
- Meikališa, Ā. (1997). Sabiedrība un policija. *Administratīvā un Kriminālā justīcija. LPA*, 1, 17-19.

Treļš et al., 2023. *Sociāli emocionālā kompetence un profesionālā ētika: policijas darbinieka profesionālie izaicinājumi multikulturālā sabiedrībā*

OSCE High Commissioner on National Minorities. (2006). Recommendations on Policing in Multi-Ethnic Societies. Retrieved from: <https://www.osce.org/hcnm/policing-recommendations>

Top 10 skills of 2025. (n.d.). Retrieved from: <https://www.weforum.org/reports/the-future-of-jobs-report-2020/in-full/infographics-e4e69e4de7>

Treļš, Ē. (2017). Kriminālatbildība par reliģiskā naida vai nesaticības izraisīšanu. *Rīgas Stradiņa universitātes Juridiskās fakultātes elektroniskais juridisko zinātnisko rakstu žurnāls Socrates*, 1(7), 9-19. DOI: <https://doi.org/10.25143/socr.07.2017.1.9-19>

Treļš, Ē. (2020). Valsts policijas darbinieka profesionālās ētikas pamatprincipi. *Rīgas Stradiņa universitātes Juridiskās fakultātes elektroniskais juridisko zinātnisko rakstu žurnāls Socrates*, 3(18), 97-113. DOI: <https://doi.org/10.25143/socr.18.2020.3.097-113>

Valsts policijas ētikas kodekss. (2020). Valsts policijas iekšējie noteikumi Nr.3. Pieņemti: 05.02.2020. Retrieved from: <https://www.vp.gov.lv/lv/media/715/download>

CONTACTLESS PAYMENTS FRAUD DETECTION METHODS AND IS SOCIETY PREPARED TO RESIST: A CASE STUDY

Jelena Mamčenko

Vilnius College of Technologies and Design, Lithuania

Brigita Šustickienė

Vilnius College of Technologies and Design, Lithuania

Jūratė Romeikienė

Vilnius College of Technologies and Design, Lithuania

Abstract. *The ability to use contactless payment technologies, non-cash payments and credit card payments is becoming almost an essential requirement for consumers and merchants in today's economic conditions. Different market sectors are rapidly adapting to these technologies and looking for the most convenient, secure, and fastest possible solutions that combine intelligent data processing, security, and business management functions. Millions of debit and credit card holders care about secure payments, the businesses that receive these payments are secure in terms of security, and the operators that process such incoming and outgoing payments are interested in innovative solutions that set them apart from the competition. Amid the COVID-19 pandemic, when e-commerce was growing exponentially, the global market for fraud detection and prevention, currently stands at USD 20.9 billion, and is expected to grow, until 2025 will rise to USD 38.2 billion by the end of the year; holds the market at 12.8 % annually. The US remains the dominant region in this market segment, but European countries are also increasingly investing in fraud prevention and detection solutions, which are growing in demand in Europe due to an increase in cybercrime as well as advanced bots and cyber-attack.*

Keywords: *credit cards, contactless payment, data mining, fraud, unsupervised learning.*

Introduction

The use of plastic cards has now become a part of our daily lives, most have appreciated the convenience of this banking service. You do not need to carry a large amount of money with you, while this money can be used at your discretion at any time, both for purchases and payment of services, as well as for transfers to loved ones and friends . Recently, however, more and more people have fallen victim to credit and debit card fraud.

According to the Nilson Report, which includes the card and mobile payments industries, the global card fraud losses amounted to \$31.6 billion in 2018 and increased to \$32.82 billion in 2019. In 2018, the European Central Bank reported that the value of fraudulent transactions accounted for about 0.04% of the total amount. This report and many others confirm the importance of early detection of fraudulent credit card transactions. However, current payment fraud detection algorithms mainly target merchants, fraud prevention algorithms that meet banking and FinTech security standards, and anti-fraud algorithms cheat. Intelligence-based fraud is few in number and functionally limited.

Other smart payment methods include contactless payment via phone or with phone stickers, smart watch contactless payment, payment ring, payment smart bracelet. Credit card purchase limit, biometric authenticated, phone contactless payments available for smartphones only.

Contactless payments continue to grow in popularity: according to the Lithuanian Bankers Association (LBA), in the first quarter of 2021, almost 70% of card payments in stores are made contactless, and approx. 10% is done by smart device.

In 2020, in Lithuania, the rate of contactless payments among customers with bank cards was 54% compared to other Baltic countries, while in Latvia, the rate of contactless payments were about 58% in total card payments. In Estonia, contactless payments were used once out of every four when paying by card, which is 27 cases in all payments.

The digital technology market has grown significantly during the COVID-19 pandemic and continues to grow. According to various studies, more than 60-70% of users are currently using one or more digital platforms, for example: transact online through your bank's mobile app, use digital wallet features, and more. These payment features allow the market to not be closed during the global quarantine. On the other hand, the need to ensure payment and prevent payment fraud cards is increasing. The ability of a payment processor to integrate advanced technology solutions (artificial intelligence, big data management, machine learning, deep learning, behavioral analytics algorithms, etc.). The accounting and tools used by the user bank are key factors in fraud detection. However, there is no proven and reliable single prevention tool yet.

One of the main tasks of the article is to find out how much people are familiar with possible cases of credit card fraud, whether they are ready to resist and not fall into the fraudsters' trap.

Literature Review

Credit card fraud is a form of identity theft that involves an unauthorized taking of another's credit card information for the purpose of charging purchases to the account or removing funds from it (An official website of the United States government, 2021; Cornell Law School, 2023).

This can happen by using one of your existing bank or online service accounts, via theft your physical bank card or your account numbers and PINs, or by opening new card accounts in your name without your permission.

The Bank (cardholder) is well aware of this and is constantly developing new measures to prevent unauthorized card usage. At the same time, however, clever fraudsters (including international organized crime syndicates) are always on the lookout for new security tools.

According to E. Starbuck Gerson (2023) there are three types of credit card fraud:

Card Theft: This is an old-fashioned way of stealing a physical credit card, either from a restaurant table or from an entire wallet or purse. Some criminals try to steal newly issued cards from mailboxes. If your card is lost or you receive notification that you were due to receive a card that never arrived, notify the issuer immediately. **Account Takeover:** An attacker contacts your card issuer and uses your personal information to change your login PINs, passwords, mailing addresses, etc. so they can take control of your account (and lock you out). Depending on how often you use your account, it may take some time for the issue to be noticed and resolved. Some credit card companies allow you to set a password to prevent this form of theft. **Cloned cards:** devices called "skimmers"; that match card readers in retail terminals can allow thieves to stealthily swipe a card number and then make a copy for illegal use. Cards with EMV chips (Europay + MasterCard + VISA) have made this process much more difficult. **Cardless Theft:** This is the fraudulent use of a credit card account without a physical card. Scammers can get your details through phishing or hacking, and some criminals sell card details online on the dark web. The thief does not need a physical card as online shopping only requires knowledge of your name, account number and security code (Starbuck Gerson, 2023).

Banking fraud is an area where fraud patterns are ever-changing, so the tools, techniques and other prevention measures that have been developed become obsolete and require new solutions to prevent fraud, reduce costs and fraud for the bank.

There are different types of credit card fraud, but there is no established or defined classification for these offenses to prioritize their detection.

Certain technologies are used to prevent fraud, such as the "AVS" address verification system, PIN codes, and credit check value (CVV) validation. However,

these advanced techniques are not effective enough to reduce fraud. Therefore, the development of fraud detection methods is essential (Roseline et al., 2022).

Identifying fraud is difficult because the actions and behaviors of scammers often appear legitimate. Another problem is that the number of legitimate transaction records is much higher than the number of fraudulent cases (Jha, Guillen, Westland, 2012). Such unbalanced datasets require additional data processing tools. Researchers are finding increasingly sophisticated ways to detect fraud through the development of machine learning algorithms (Cherif et al., 2023), but their practical implementation is still pending to discover.

Therefore, in order to accurately identify fraud cases, it is necessary to develop dynamic systems that can adapt to new fraud methods (Carneiro, Figueira, Costa, 2017), which means that fraud detection must develop faster than the schemes created by fraudsters.

According to Carneiro et al. (2017), the methods currently in use can be divided into two main categories: manual detection (e.g., personal identity verification) and automated detection (most commonly used data mining). When data quantities are huge, manual detection becomes less effective for a number of reasons, which is why the use of data mining technologies (or the integration of the two techniques) to detect fraud is essential. The approach proposed by these authors is the development of a risk assessment system based on machine learning techniques (Logistic Regression, Support Vector Machines and Random Forests algorithms) to evaluate fraud for each settlement on a scale of 0 to 1. Among all the authors' models, the best results were obtained with the random forest algorithm. Model validation was performed on test data.

Banking fraud is quite difficult to detect in the banking industry for one important reason: among all banking transactions, fraudulent transactions are only a small fraction of the total number of transactions, and in the overall of the numbers seem low, but an attack is enough to cost a card issuer, a fundraiser, or a merchant hundreds of thousands or even millions of dollars in losses. Therefore, they are classified as transaction anomalies. Graph-Based Anomaly Detection (GBAD) methods are used to detect these anomalies - one of the most common methods used to analyze suspicious behavior in communication services supply companies, which can also be equated with suspicious behavior when paying with bank cards. Pourhabibia, Ongb, Kama and Boo, (2020) in their article analyzed the application of different GBAD methods in detecting fraud published in scientific articles in the period 2007-2018. Furthermore, in their study, these authors sought to explore current trends and identify key challenges that require significant research. In recent years, GBAD methods have made a significant contribution to fraud detection, and

fraud detection experts have recognized them as suitable, reliable and promising methods for detecting anomalies (Velampalli & Eberle, 2017).

Mason and Bohm, (2017) in their article "Bank and Fraud" indicate that the methods used by fraudsters to take advantage of bank customers have improved significantly. Therefore, in September 2016, the British magazine *What?*, submitted a complaint to the Payment Regulator asking it to formally investigate bank transfer fraud and to assess the cost of preventing it to users, as well as to propose new ways and means to maximize the protection of bank customers from forced money transfers. The authors state that the methods used by fraudsters are still relevant today, and their recommendations can be summarized as follows: the government needs to change the regulations on how it handles reports of theft from bank accounts; the police departments must notify their officers of criminal activities in the digital space; banks must adopt more stricter methods to ensure the safety of customer accounts.

D. Olszewski (2014) to detect fraud suggests to use Kohonen neural networks, namely the Self-Organizing Map (SOM). The advantage of this method is that it is a general fraud detection method - it is not focused on a specific domain or application and can be easily adapted to any information system that collects data from sequential user actions, such as banking transactions. This proposed approach is distinguished by the use of an unsupervised fraud detection method, namely Unsupervised Learning, which avoids the problems of insufficient training of the data, which has an impact on the supervised data mining methods when the final results are obtained.

S. Jha et al. (2012) study the existence of insufficient academic literature on the detection of fraud in banking. To detect bank card fraud, they recommend transaction aggregation, which captures merchant's behavior before each transaction and uses these aggregations to model estimation to identify fraudulent transactions. Fraud detection is an ongoing activity as it is impossible to know whether fraud has been prevented and which transactions are fraudulent (Jha et al., 2012).

In their study, a logistic model that uses primary and derived attributes was estimated. Additional (derived) attributes were created based on the aggregation of transaction values in different time periods. Transaction aggregation was found to be a good strategy for fraud detection as the model developed with the derived attributes performed well in the classification approach. The study shows that the logistic model is appropriate, but the overall percentage of correctly classified cases is not a good indicator for classification, where the number of legitimate transactions is much higher than the number of fraud cases. For example, in a dataset with 500 fraud cases and 50 million legitimate transactions, the detection method correctly identified 495 fraud transactions, but 500 000 legitimate transactions were flagged as fraud. In other

words, the supposedly 99% accurate detection method incorrectly identified more than 1000 legitimate transactions as fraud for every correctly identified fraudulent transaction.

Linear discriminant analysis functions are less sophisticated classifiers compared to the others discussed above, which can also solve large scale problems and can be used for fraud detection credit cards, but this particular approach has not received much attention in the scientific literature. In their study, they were the first to apply Fisher's discriminant function to detect fraud (Mahmoudi & Duman, 2015). An implemented modification of the descriptive method individually estimates certain weights of transactions, to which the linear classifier tries to assign accurate labels to transactions with higher importance/priority. To summarize the results of these researchers, it can be said that the adapted method, not just based on classical performance indicators, gave good results in the detecting credit card fraud. Therefore, this method can correctly flag transactions with a high bank card limits, helping to avoid high banking costs in real systems.

A. Eshghi and M. Kargari (2019) in the paper "Introducing a new method for the fusion of fraud evidence in banking transactions with regards to uncertainty" propose an innovative method for fraud detection. They argue that there is a some cognitive uncertainty in the detection of credit card fraud, i.e. a lack of information about various aspects of customer behavior, leading to fraud detection outcomes and thus to an inefficient application of fraud detection in the real world. They propose to address this uncertainty by using a multi-criteria solution and Fuzzy Logic approach. The behavior of the transactions was modelled taking into account the different trends of the underlying and aggregated variables at different periods. In this way, the behavior of transactions was modelled in terms of the trends of the different underlying and aggregated variables over different time periods, and the extent to which a new transaction deviated from each of these trends was considered as evidence of behavior.

Big data real-time processing is a serious problem that not all fraud detection systems are capable of handling huge amounts of data. Therefore, in this work, F. Carcillo et al. (2018) presented the Scalable Real-Time Fraud Finder (SCARFF) system, which combines big data tools with the machine learning techniques. Such a framework addresses imbalances, non-stationary and feedback. Experimental studies carried out by researchers have confirmed that the developed system is scalable, efficient and sufficiently accurate in detecting fraud (Carcillo, Pozzolo, Le Borgne, Caelen, Mazzer, & Bontempi, 2018).

In 2014, N. S. Halvaiee and M. K. Akbari conducted scientific research in which he analyzed models and methods suitable for the prevention of bank card fraud cases. According to them, Artificial Immune Systems (AIS) could be used to address such

problems. However, financial organizations and banks need accuracy and fastness in fraud detection systems, which are not yet fully realized. To address this problem, researchers have used AIS and developed the AIS-based Fraud Detection Model (AFDM). They also used an AIRS-based algorithm whose parameters were improved, i.e. the accuracy of the result was increased to 25%, its cost was reduced to 85% and the response time of the system was reduced to 40% compared to the baseline (unmodified) algorithm (Halvaiee & Akbari, 2014).

According to Attigeri et al. (2018), the transition from a traditional to a cashless economy requires banks to have more anti-fraud systems. To understand and transform the needs of the banking system, it is necessary to understand the fraud landscape and build a fraud knowledge base. In this case, the knowledge could be automatically integrated into the system to combat fraud. The work of these researchers focuses on the analysis of existing fraud case documentation. LDA (Latent Dirichlet Allocation) topic modelling was used to calculate the TF-IDF (Term Frequency-Inverse Document Frequency) weighting in order to identify a group of words (topics) describing a particular type of fraud. Using these knowledge bases, an extracted ontology can be used to construct the fraud detection system (Carcillo et al., 2018).

Psychological portrait of the victim of fraud with bank cards

Of course, not every person will fall for the psychological trick of a fraudster, and many are able to withstand criminal attacks. Experts note that older people or women are more often caught in the network of scammers.

The main personality traits that increase the risk of becoming a victim of fraud with a bank card: a thirst for freebies, personal immaturity, a craving for the amazing or even miraculous.

The first and most important attitude of the victim to “freebies” is that the person is, as it were, ready to be deceived by the very attitude to gratuitousness, i.e. the desire for "freebies" - the desire for easy money, quick and easy benefits. This is a kind of "passive stealing" that makes the victim a potential accomplice in the scam. It manifests itself as begging, wandering, dwelling, begging, etc. The "begging behavior" is widespread in different animal species. This begging phenomenon is studied by sociologists, biologists and behavioral specialists.

Another feature of the victim's personality, which is fertile ground for fraud, is some personal immaturity, expressed in curiosity, gullibility, excessive gullibility, naivety, increased anxiety, lack of proper guidance of the mind and sober rationality.

Of course, this is primarily due to the impulsiveness of actions and insufficient rationality, i.e. guided by the principle of "first did - then thought."

Another personality trait that unites victims of fraud is the desire of a person for something unusual, amazing or even wonderful. Belief in a "miracle" is characteristic of all children, but adults often sin with excessive naivety, most likely this is another facet of personal immaturity.

Research methodology

Financial criminals use a variety of scams to extort money and, increasingly sophisticated, victims often hand over their money to fraudsters voluntarily - without any hacking or violence involved. The aim of the study was to find out the knowledge of the academic community about financial fraud methods and how to prevent them.

A quantitative survey was conducted in a 2022, and 308 questionnaires were completed. The study involved staff and students from higher education institutions. Respondents received a questionnaire consisting of 10 questions. The questions were both closed and open, allowing for more detailed answers and more reliable information.

The survey included 195 women and 113 men. Most of the respondents were students, so the 18-30 age group accounted for the highest percentage (83 %). The distribution of other respondents, who are academic staff, is as follows: age group 30-40 years old - 4%, age group 40-50 - 8%, and 50 years and older - 5%. Students and professors of social sciences and technology were interviewed.

Research Results

Those surveyed have not encountered fraud, but 83% have heard of such cases. Young respondents have heard about it from social networks, middle-aged respondents - from the media, social networks. 10% of the respondents looked for information on the Internet, or in bank departments.

The most common fraud methods have been mentioned: payment card data theft, advertising site scams, investment scams, phishing, smishing and even romantic cheating. Majority (74.5%) of the respondents said they had heard of all of these fraud/cheating methods, but a quarter (25.5%) had not heard of all of them.

By next block of questions, we wanted to find out the respondents' knowledge about fraud related to bank cards. Questions that were asked: Can fraudsters steal card data at a great distance, Can fraudsters steal data at close range, and can fraudsters steal card data from a distance - 11.8%. Respondents believe that data can

be stolen over a long distance. 21.2% - theft is possible when the fraudsters are very close, the rest either do not know or think that this method of theft is not possible.

After examining the distribution of responses by age group, it was found that older respondents were convinced that such methods of theft were possible.

After surveying the respondents, in which ways they carry out payments, 78% use contactless payment, 17% - smartphones.

70% of respondents believe that the contactless payment method is safe, 5% - it partially safe, 25% have no opinion about it.

The following block of questions was used to find out the knowledge and opinion of the respondents about "fraud on advertising websites". When respondents were asked how they think such a theft compares to other financial frauds, the respondents think they are big or very big. During and after the pandemic, with the increase in online commerce, this method of fraud is becoming one of the most popular. Several respondents have encountered this type of fraud, 21% has encountered indirectly but in a close environment (relatives, relatives, friends, acquaintances, etc.) 74% are trying to be very careful when shopping on the Internet, communicating with sellers of goods sold through advertisements.

Phishing and smishing have been heard by 30% of the respondents, most of them are 18-30 year old. To the question related to these terms "Have you received an SMS message and a link from the bank or a call that something is happening with your account and you need to log in urgently". About 8% have received such messages, 70% have heard from their close friends about such messages or calls from the bank. 95% of respondents believe that they would not trust such messages and would not fall into the traps of fraudsters. Respondents watch, read the stories of victims of fraudsters and think - "this will not happen to me".

The respondents who took part in the survey were aware of this type of "Romantic Cheating" and name it as "frauds of naive or single women... frauds of single people looking for love... frauds of older women... and others." Not a single survey participant has suffered financially as a result of such fraud, but 73% of respondents have received offers to meet, make friends, communicate on social networks from foreign men, mostly from: Asian countries, the United States of America, presenting themselves as officers, engineers, etc. 85% don't even respond to inquiries 15% respond to messages out of curiosity, but they are confident that they can identify fraudsters or fraudsters.

Conclusions

Summarizing the ideas of the scientists and the briefly described results of the research presented and survey conducted, it can be said that the problem of fraud

detection is still relevant, despite the information that is given through the media to people about fraud and how to avoid it, despite the systems that used, developed methods and modified algorithms, a topic that has not been fully analyzed; there are certain uncertainties that prevent a proper assessment of the effectiveness of the proposed methods or solutions: lack of publicly available data and lack of conducted scientific research, i.e. most of the literature on the topic of credit card fraud detection focuses only on classification models.

Despite the lack of fully reliable methods and tools to date, it is hoped that in the future advanced systems will become available to detect and prevent bank card fraud at an early stage and community be informed and prepared to such dangerous cases much better than now.

A brief overview of the human factors influencing behavior shows that scammers are clever at using social engineering techniques, whereas psychology being one of the main tools.

Fraud is always uncontrollable stress for the victim. Thus, the psychological basis of any fraud with plastic cards, where the victim is the object of the crime and takes active steps that lead to the loss of his money, is an uncontrollable stressful situation.

After conducting research (academic community) on the topic of financial fraud, it can be concluded that representatives of the academic community have knowledge of financial crimes and different forms, the most famous forms of crime are: theft of payment card data, fraud on advertising sites, romantic cheating. Less known or otherwise called: investment fraud, phishing and smishing. The most common form of financial fraud at the moment is called advertisement fraud, which is believed to be related to the rise of online commerce during the pandemic. Respondents receive the most information from the media and social networks and from the circle of relatives.

Representatives of the academic society relies on its knowledge of financial crimes and believes that it is difficult or impossible for fraudsters to defraud, but it is assumed that respondents look, read the stories of victims of fraud and think - "this will not happen to me", the reality is different, as more and more new victims appear and representatives of this community.

The rise of financial fraud is a global phenomenon and the Baltic countries are no exception. Therefore, elementary knowledge of the most common methods of enticing money at the moment will help you to be more alert and recognize fraudsters who are trying to steal money. It is proposed to introduce separate topics about fraud cases in educational institutions, in relevant lectures/lessons related to economic/financial education, to provide knowledge on how fraud works on the Internet/computer technologies through technology classes.

References

- An official website of the United States government. Retrieved from: <https://www.fbi.gov/scams-and-safety/common-scams-and-crimes/credit-card-fraud>
- Carcillo, F., Pozzolo, A. D., Le Borgne, Y.-A., Caelen, O., Mazzer, Y., & Bontempi, G. (2018). Scarff: A scalable framework for streaming credit card fraud detection with spark. *Information Fusion, 41*, 182-194.
- Carneiro, N., Figueira, G., & Costa, M. (2017). A data mining based system for credit-card fraud detection in e-tail. *Decision Support Systems, 95*. Retrieved from: <https://www.sciencedirect.com/science/article/abs/pii/S0167923617300027#ab0005>
- Cherif, A., Badhib, A., Ammar, H., Alshehri, S., Kalkatawi, M., & Imine, A. (2023). Credit card fraud detection in the era of disruptive technologies: A systematic review. *Journal of King Saud University – Computer and Information Sciences, 35*, 145-174.
- Eshghi, A., & Kargari, M. (2019). Introducing a new method for the fusion of fraud evidence in banking transactions with regards to uncertainty. *Expert Systems with Applications, 121*.
- Experian Information Solutions. (n.d). Retrieved from: <https://www.experian.com/>
- Halvaiee, N. S., & Akbari, M. K. (2014) A novel model for credit card fraud detection using Artificial Immune Systems. *Applied Soft Computing, 24*, 40–49.
- Jha, S., Guillen, M., & Westland, J. C. (2012). Employing transaction aggregation strategy to detect credit card fraud. *Expert systems with applications, 39*(16), 12650-12657.
- Mahmoudi, N., & Duman, E. (2015). Detecting credit card fraud by modified Fisher discriminant analysis. *Expert Systems with Applications, 42*(5), 2510-2516.
- Mason, S., & Bohm, N. (2017). Banking and fraud. *Computer Law & Securit review 33*(2), 237-241.
- Olszewski, D. (2014). Fraud detection using self-organizing map visualizing the user profiles. *Knowledge-Based Systems, 70*, 324–334.
- Pourhabibia, T., Ongb, K.-L., Kama, B. H., & Boo, Y. L. (2020). Fraud detection: A systematic literature review of graph-based anomaly detection approaches. *Decision Support Systems, 133*, 113303.
- Roseline, J. F., Naidu, G. B. S. R., Pandi, V. S., alias Rajasree, S. A., & Mageswari, N. (2022). Autonomous credit card fraud detection using machine learning approach. *Computers and Electrical Engineering, 102*, 108132.
- Starbuck Gerson, E. (2023). Steps to Take if You Are the Victim of Credit Card Fraud. Retrieved from: <https://www.experian.com/blogs/ask-experian/credit-education/preventing-fraud/credit-card-fraud-what-to-do-if-you-are-a-victim/>
- Velampalli, S., Eberle, W. (2017). Novel graph based anomaly detection using background knowledge. *Proceedings of flairs, AAAI Press*.

RESILIENCE AND ILLNESS DENIAL AS PREDICTING FACTORS FOR ADHERENT BEHAVIOUR

Gunita Skaldere-Darmudasa
Rīga Stradiņš University, Latvia

Velga Sudraba
Department of Health psychology and paedagogy,
Rīga Stradiņš University, Latvia

Abstract. *Lack of adherence in patients with chronic illnesses is significant burden for health care system all over the world. Therefore, it is important to find which factors do contribute to improve adherent behaviour. The aim of this study was to find out how resilience and illness denial predicts adherent behaviour in patients with chronic illnesses in primary health care. In this quantitative cross-sectional study participated 202 adults in Latvia with diagnosed chronic illness. Participants filled sociodemographic data questionnaire – gender, age, and diagnosis, Connor–Davidson Resilience Scale (CD–RISC–25, Connor & Davidson, 2003), Illness Denial Questionnaire-Short Form (IDQ-SF, Rossi Ferrario et al., 2019), and Adherent behaviour questionnaire (Skaldere-Darmudasa & Sudraba, 2023) – nine items measure assessing to what extent individual with chronic illness follows doctor’s or specialist’s recommendation to reduce symptoms of their chronic illness and improve health condition. Items are rated in 4 – point Likert scale. The result of this study shows a tendency that patients with chronic illness and higher resilience use less denial according to their chronic illness and use more adherent behaviour. Higher denial points to less adherent behaviour which means less following to the doctor’s and specialist’s recommendation about the intake of medication, physical activities, diet, and rest.*

Keywords: *adherence, adherent behaviour, chronic disease/illness, compliance, illness denial, resilience.*

Introduction

Adherence is the fundamental need in patients experiencing chronic illness to maintain their health. Empirical evidence shows that 50 % of patients are not adherent and less than 30 % of patients follow the doctor’s recommendations regarding the intake of their medication (Claxton, Cramer, & Pierce, 2001; Osterberg & Blaschke, 2005). According to World Health Organization (WHO), less adherent are patients with chronic illnesses, because mostly they stop the intake of medication after reducing acute symptoms (Claxton, Cramer, & Pierce, 2001; Osterberg & Blaschke, 2005). Low adherence raises the risk of repeated

hospitalization, worse illness outcome, complicated treatment and higher health costs (Iuga & McGuire, 2014; Sokol, McGuigan, Verbrugge, & Epstein, 2005). Such situation leads to multiple factors interaction which are affecting the adherence, and there is not enough explanation within existing theories which factors contribute more to adherent behaviour (Holmes, Hughes, & Morrison, 2014). Therefore, as psychological factors in patients with chronic illnesses might be illness denial (Ballantyne, 2007; Sabate, 2003) and low resilience (Goldanimoghadam, Asghari, & Manee, 2019). The aim of this study was to find out how resilience and illness denial predicts adherent behaviour in patients with chronic illness in primary health care.

Theoretical basis of the problem

Adherence and adherent behaviour

Adherence is the ability of the individual to follow the specialist's recommended treatment regime especially the intake of medication (APA, 2022). Low adherence depends on many individual factors such as individual cognitive abilities, unbearable, disturbing side effects of medication, several psychological aspects facing the illness, specific illness related factors, and social and financial factors (Delgado, 2016). Many authors have agreed that reasons for low adherence could be related to patients and it's families limited understanding about the illness and illness denial, low social support, financial and household related difficulties (Fischer et al., 2010; Peterson, Takiya, & Finley, 2003). Low adherence results with low efficiency of treatment, worse outcome of the illness, it raises the risk of comorbidities and death cases. It is a burden for the health care system because rising costs for health care (Anghel, Farcas, & Oprean, 2019; Cheen, Tan, Oh, Wee, & Thumboo, 2019).

There is not enough instruments and strategies how to raise and promote adherence in patients, therefore, it is necessary to study adherence to gain knowledge which could promote adherence (Lieber, Helcer, & Shemesh, 2015). Regarding the promotion of adherence – psychology plays a significant role using psychological techniques in practice to invent new interventions to promote adherent behaviour and the outcome of the illness in future (Bosworth, Blalock, Hoyle, Czajkowski & Voils, 2018). Adherent behaviour within this study is set of certain activities regarding patients' health management including following doctors recommendations – intake of medication, health monitoring, and healthy lifestyle according to patients abilities and limitations (Skaldere-Darmudasa & Sudraba, 2023).

Resilience in patients with chronic illnesses

In recent years, the resilience has become more popular in discussions regarding health in society. Research of resilience has focused on fundamental factors which makes individual strong to face difficult life challenges – to be able to use adaptive strategies in order to return to stable psychoemotional state of mind after adverse event. The research focuses on necessity to identify these factors and ways of how to promote resilience. Resilience is a multidimensional construct being affected by the individual's biopsychosocial factors. Resilience is related with quality of life (Liu, Xu, Xu, & Wang, 2017; Bottolfs et al., 2020), but more significant is this relationship for patients with chronic illness who are exposed to more difficulties in their everyday life. Chronic illness demands time, expenses and is not fully treatable.

In systematic review about resilience in patients with chronic illness it is stated that resilience is affecting the process and outcome of the illness (Cal, Sá, Glustak, & Santiago, 2015). In other systematic review authors agree that it is possible to promote and train the resilience regardless of the period of life time when experiencing the illness and illness severity. Resilience is related to adherence and well-being (Gheshlagh et al., 2016).

The authors (Cannon, Sriram, Liew & Sun, 2018) have identified individual and contextual factors of resilience which contributes to well-being in stressful situations for patients with chronic obstructive lung disease. Three main factors regarding resilience were highlighted: (1) patient's individual factors (self-esteem, self-efficiency, and coping strategies); (2) patient's contextual factors (accessible support system including support from family, friends and health care specialists); (3) environmental factors (including relationships, cultural identity, available facilities), (Cannon, Sriram, Liew & Sun, 2018). The same factors contributing resilience could be applied to other patients with chronic illness who are affected by individual, contextual and environmental factors.

In samples of patients who had myocardial infarction (N=234) higher resilience served as a condition for better mental health, reduced risk of repeated hospitalization, lower anxiety and depression symptoms, regardless of other clinical, sociodemographic and psychosocial factors (Toukhsati et al., 2020).

Illness denial

It is a difficult challenge in psychological, emotional and physical way facing chronic illness. Not always everyone is able to react adequately to such adverse event, what can result in choosing maladaptive coping strategies to overcome distress. One of the maladaptive response could be illness denial. Illness denial is an unaware defence mechanism which protects the mind from distress (Cramer,

2000). Illness denial includes denial of negative emotions and resistance to change (Rossi Ferrario et al., 2019).

Significant contribution to research of illness denial is done by American psychologist Hanoch Livneh (Livneh, 2009). He has described different views of earlier authors like Isabelle Kendig (1963) noting that belief of body and mind unity contributes to good health, Joel Dimsdale and Thomas Hackett (1982) postulated that illness denial can be aware or unaware denial of available knowledge about illness to reduce anxiety and emotional distress. Hanoch Livneh has studied definitions of illness denial which includes three perspectives: (1) psychodynamic (denial is defence mechanism or strategy to overcome distress); (2) cognitive (denial is distortion of reality); (3) organic (denial is neurological distortion – anosognosia). All definitions of the denial include elements of concept of denial such as protecting individual from anxiety and perceived threat, reducing pressure of reality, tendency to deny or destroy unwanted reality and its' impact, which is related to unwanted consequences related to chronic illness or gained disability (Livneh, 2009).

According to classic stress theory of American psychologist Richard Lazarus denial is used to reduce distress (Lazarus & DeLongis, 1983). Therefore, partial denial in early phase of chronic illness would serve as process of adaptation if used appropriately (White et al, 2016). White and colleagues (White et al., 2016) have described that in earlier studies authors (Lazarus & DeLongis, 1983; Lazarus & Folkman, 1986) define two types of denial: (1) illness denial – totally denying existence of illness and (2) denial of impact – denying that existing illness might affect or limit individual abilities in different life activities. Regardless the type of denial the individual might use, in short period of time it can protect the individual from distress, but in longer period of time cause harm to the individual's health (White et al, 2016).

Illness impact denial was negatively correlated with anxiety and depression in sample of patients (N=80) with congenital heart disease. This shows that denial of illness impact serves as psychological defence mechanism. In this study illness impact denial was related with higher individual perceived general health (White et al, 2016). In qualitative studies in patients with newly diagnosed rheumatoid arthritis, many patients showed high illness denial which led to difficulties to follow treatment regime and intake of medication. Illness denial was related to negative perception of intake “strong and harmful” medication and general disappointment that the body is losing some of its' abilities (Oshotse, Zullig, Bosworth, Tu, & Lin, 2018).

Illness denial plays a negative role in communication between oncological patients, their families, and specialists. Illness denial in patients and their families

is related with specialists perceived efficiency. The specialist feels less efficient and helpless to deliver good care for patients if patients and its' family are experiencing denial (Pene & Kissane, 2019).

Materials and Methods

In this quantitative cross-sectional study participated 202 respondents in Latvia with diagnosed chronic illness (duration of the illness is more than one year, National Centre for Chronic Disease Prevention and Health Promotion, 2022), of which 73 % were females (n=147). Participants were in age from 22 to 65 years old ($M=53.40$; $SD=11.08$). Including criteria were knowledge of Latvian language, diagnosed chronic illness, belonging to age group from 18 to 65 years old.

Measures

Sociodemographic data and illness related data – age, gender, diagnosis.

Connor-Davidson Resilience Scale (CD-RISC-25), (Connor & Davidson, 2003), ($\alpha = .89$). Adaptation in Latvian language is done by Skaldere-Darmudasa & Sudraba (2021). The 25 item self-assessment measure using Likert scale from 0 to 4, where 0 - not true at all, 1- rarely true, 2 – sometimes true, 3 – often true, 4 – true nearly all the time. The total result of resilience could vary from 0 to 100, higher scores reflecting higher resilience. Due to recommendations from authors of the scale, the result of resilience is total score of the scale.

Illness denial Questionnaire-Short Form (IDQ-SF, Rossi Ferrario et al., 2019). Adaptation in Latvian language was carried out by Skaldere-Darmudasa & Sudraba (2023) within masters' thesis. This eight item self-assessment measure ($\alpha = .76$) includes two factor structure: (1) denial of negative emotions, (2) resistance to change. The items are evaluated in dichotomus categories with answer *yes* scoring 1 point, *no* – scoring 0 points. Higher result reflects to higher denial towards one's illness.

Adherent Behaviour Questionnaire (Skaldere-Darmudasa & Sudraba, 2023), ($\alpha = .75$). This nine-item self-assessment measure was created within master's thesis and measure to what extent the individual follows the specialist's recommendations regarding the reduce symptoms of chronic illness and improved health condition. The measure includes three subscales: (1) intake of medication; (2) health monitoring; (3) healthy lifestyle. Items are rated by Likert's scale from 1 to 4 (1 – never, 2 – sometimes, 3 – often, 4 - always). Higher result reflects the higher adherent behaviour.

The data were collected in both – paper and electronical form using platform www.visidati.lv. Several general practice doctors, specialists and patient organization (“Dzīvības koks”- www.dzivibaskoks.lv, “Par sirdi” – www.parsirdi.lv) were involved in collecting the data. The specialists and patient organizations distributed survey to their patients. Part of the surveys were

collected in paper format. The paper format surveys were destroyed after entering them in computer.

Ethical aspects and personal data protection

Data collection and protection was performed according to rules of European Parliament regulation number (ES) 2016/679 about personal data protection and processing. Participants were introduced with Informed consent which included information about participation in study, research aim and process. Participation was voluntary without reward. Data are anonymous and was processed with confidentiality. Permission to carry out the study was given and confirmed by Research Ethical Committee of Riga’s Stradiņš University issuing permit no. 2-PĒK-4/108/2022.

Data analysis

Data processing was carried out using MS Office Excel, IBM SPSS 27.0 programs. Nonparametric method was chosen because data was not normally distributed. Correlations were assessed using Spearman’s correlation analysis. All results with statistical significance $p < .05$ are discussed. Predicting impact was analysed using multiple linear regression analysis.

Results

There is statistically significant negative correlation between illness denial and resilience ($r_s = -.41, p < .001$), and statistically significant low correlation between adherent behaviour and resilience ($r_s = .18, p = .009$). Adherent behaviour and illness denial showed statistically significant negative correlation ($r_s = -.17, p = .01$), (see Table 1).

Table 1 Resilience, illness denial and adherent behaviour correlations in patients with chronic illnesses (created by the authors)

	1.	2.	3.
1. Resilience	–	–	–
2. Illness denial	–.41**	–	–
3. Adherent behaviour	.18**	–.17*	–

Note. N=202, ** $p < .001$, * $p < .05$

To analyse how resilience and illness denial predict adherent behaviour the multifactor linear regression analysis was carried out. In the model where resilience and illness denial were independent variable and adherent behaviour as dependent variable results shows that only resilience statistically significant

($p=.02$) predicts adherent behaviour ($R^2 = .04$, $F(1,199) = 7.39$, $p = .007$) explaining 4 % of adherent behaviour variation (see Table 2).

Table 2 Multiple linear regression analysis with resilience and illness denial as independent variables (created by the authors)

Independent variable	<i>B</i>	R^2	<i>F</i>
Resilience	0,17**	0,04	3,80**
Illness denial	- 0,10	0,01	2,28

Note. N = 202, ** $p < .001$.

Discussion

The aim of this study was to find out how resilience and illness denial predicts adherent behaviour in patients with chronic illnesses in primary health care. Based on literature review within this study (Ballantyne, 2007; Sabate, 2003; Goldanimoghadam, Asghari, & Manee, 2019; White et al, 2016; Catalán et. al., 2021), also this study shows similar results demonstrating that resilience and illness denial is related to adherent behaviour. Results of this study showed statistically significant negative correlation between illness denial and resilience, which means if patient has more difficulties to manage his or her illness higher is the denial – lower is his or her resilience – ability to choose adaptive strategies to live with chronic illness. Low resilience in patients with chronic illness leads to higher illness denial. There was statistically significant negative correlation between illness denial and adherent behaviour. Which explains that patients with higher denial about their illness are not able to implement adherent behaviour to manage their health condition and improve their chronic illness outcome. But statistically significant correlation between resilience and adherent behaviour explains that patients with higher resilience can better implement adherent behaviour in their life which will contribute to better chronic illness outcome (Catalán, Crisóstomo, Santamaría, Sainz, Valverde, & Jaimes, 2022; Escobar Florez, Aquilera, De la Roca-Chiapas, Cervantes, & Garay-Sevilla, 2021; White et al., 2016).

Authors (Anghel, Farcas, & Oprean, 2019) have postulated that improving adherence is higher evaluated than invention of new methods of treatment. (Anghel, Farcas & Oprean, 2019). Therefore, the aim of the study was to find out how resilience and illness denial predicts adherent behaviour. The multiple linear regression analysis showed that only resilience predicts adherent behaviour explaining 4 % of adherent behaviour variation. Such a result proves the multidimensional nature of all three constructs. Also, it could be different combinations of correlations between these variables in different samples depending on diagnosis. Results in this study are applicable only to this sample.

Therefore, in future studies to gain more specific and objective results in research of resilience, illness denial and adherent behaviour – it would be necessary to assess these variables in larger samples of patients with chronic illness, also within one diagnosis and take in account other sociodemographic factors.

Conclusions

The results of this study show tendencies that patients with higher resilience use less denial about their chronic illness and implement more adherent behaviour. Higher illness denial, which includes denial of negative emotions and resistance to change leads to less adherent behaviour, which means not following the specialist's recommendation regarding the intake medication, health monitoring and healthy lifestyle – less care for themselves. Resilience predicts adherent behaviour explaining 4 % of its' variation.

Limitations

As the limitations are self-assessment measures which could lead to more socially desirable answers. Part of the data was collected at a medical institution which means that these respondents are already more adherent and do not represent situation in population of patients with chronic illness. The sample of the study was heterogenous – it included different diagnoses and wider range of age. There could be other important sociodemographic factors contributing to results which were not analysed within this study.

References

- American Psychological Association (APA). (2022). *Adherence*. Retrieved from: <https://dictionary.apa.org/adherence>
- Anghel, L. A., Farcas, A. M., & Oprean, R. N. (2019). An overview of the common methods used to measure treatment adherence. *Medicine and pharmacy reports*, 92(2), 117–122. DOI: <https://doi.org/10.15386/mpr-1201>
- Ballantyne J. C. (2007). Opioid analgesia: perspectives on right use and utility. *Pain physician*, 10(3), 479–491.
- Bosworth, H. B., Blalock, D. V., Hoyle, R. H., Czajkowski, S. M., & Voils, C. I. (2018). The role of psychological science in efforts to improve cardiovascular medication adherence. *The American psychologist*, 73(8), 968–980. DOI: <https://doi.org/10.1037/amp0000316>
- Bottolfs, M., Støa, E. M., Reinboth, M. S., Svendsen, M. V., Schmidt, S. K., Oellingrath, I. M., & Bratland-Sanda, S. (2020). Resilience and lifestyle-related factors as predictors for health-related quality of life among early adolescents: a cross-sectional study. *The Journal of international medical research*, 48(2), 300060520903656. DOI: <https://doi.org/10.1177/0300060520903656>

- Cannon, D. L., Sriram, K. B., Liew, A. W., & Sun, J. (2018). Resilience Factors Important in Health-Related Quality of Life of Subjects With COPD. *Respiratory care*, 63(10), 1281–1292. DOI: <https://doi.org/10.4187/respcare.05935>
- Cal, S. F., Sá, L. R. D., Glustak, M. E., & Santiago, M. B. (2015). Resilience in chronic diseases: A systematic review. *Cogent Psychology*, 2(1), 1024928.
- Catalán, G. M., Crisóstomo, Y. M., Santamaría, Y. R., Sainz, J. L. H., Valverde, J. M. G., & Jaimes, J. A. P. (2021). Stages of Grief and Therapeutic Adherence in People with Type 2 Diabetes Mellitus. *Atención Familiar*, 28(3), 162–166.
- Cheen, M. H. H., Tan, Y. Z., Oh, L. F., Wee, H. L., & Thumboo, J. (2019). Prevalence of and factors associated with primary medication non-adherence in chronic disease: A systematic review and meta-analysis. *International journal of clinical practice*, 73(6), e13350. DOI: <https://doi.org/10.1111/ijcp.13350>
- Claxton, A. J., Cramer, J., & Pierce, C. (2001). A systematic review of the associations between dose regimens and medication compliance. *Clinical therapeutics*, 23(8), 1296-1310.
- Cramer P. (2000). Defense mechanisms in psychology today. Further processes for adaptation. *The American psychologist*, 55(6), 637–646. DOI: <https://doi.org/10.1037//0003-066x.55.6.637>
- Davidson, J. M., (2003). Connor-Davidson Resilience Scale (CD-RISC) Manual. Unpublished. 06-01-2020. Retrieved from: www.cd-risc.com
- Delgado, S. V. (2016) Non-Adherence to Treatment: Different Rules for Different Patients. *Arch Fam Med GenPract*, 1(1),12–17.
- Escobar Florez, O. E., Aquilera, G., De la Roca-Chiapas, J. M., Macías Cervantes, M. H., & Garay-Sevilla, M. E. (2021). The Relationship Between Psychosocial Factors and Adherence to Treatment in Men, Premenopausal and Menopausal Women with Type 2 Diabetes Mellitus. *Psychology research and behavior management*, 14, 1993–2000. DOI: <https://doi.org/10.2147/PRBM.S342155>
- Fischer, M. A., Stedman, M. R., Lii, J., Vogeli, C., Shrank, W. H., Brookhart, M. A., & Weissman, J. S. (2010). Primary medication non-adherence: analysis of 195,930 electronic prescriptions. *Journal of general internal medicine*, 25(4), 284–290. DOI: <https://doi.org/10.1007/s11606-010-1253-9>
- Gheshlagh, R. G., Sayehmiri, K., Ebadi, A., Dalvandi, A., Dalvand, S., & Tabrizi, K. N. (2016). Resilience of patients with chronic physical diseases: A systematic review and meta-analysis. *Iranian Red Crescent Medical Journal*, 18(7), 9.
- Goldanimoghadam, Z., Asghari, B. A., & Manee, M. F. (2019). Relationship between resilience with illness behavior in dialysis patients. *Journal of Research and Health*, 9(3), 203–211.
- Holmes, E. A., Hughes, D. A., & Morrison, V. L. (2014). Predicting adherence to medications using health psychology theories: a systematic review of 20 years of empirical research. *Value in health : the journal of the International Society for Pharmacoeconomics and Outcomes Research*, 17(8), 863–876. DOI: <https://doi.org/10.1016/j.jval.2014.08.2671>
- Iuga, A. O., & McGuire, M. J. (2014). Adherence and health care costs. *Risk management and healthcare policy*, 7, 35.
- Lazarus, R. S., & DeLongis, A. (1983). Psychological stress and coping in aging. *American psychologist*, 38(3), 245.
- Lieber, S. R., Helcer, J., & Shemesh, E. (2015). Monitoring drug adherence. *Transplantation Reviews*, 29(2), 73–77.
- Liu, L., Xu, X., Xu, N., & Wang, L. (2017). Disease activity, resilience and health-related quality of life in Chinese patients with rheumatoid arthritis: a multi-center, cross-sectional

- study. *Health and quality of life outcomes*, 15(1), 149. DOI: <https://doi.org/10.1186/s12955-017-0725-6>
- Livneh, H. (2009). Denial of chronic illness and disability: Part I. Theoretical, functional, and dynamic perspectives. *Rehabilitation Counseling Bulletin*, 52(4), 225–236.
- National Center for Chronic Disease Prevention and Health Promotion (2022). About Chronic Diseases. <https://www.cdc.gov/chronicdisease/about/index.htm> [seen on 28.11.2022.].
- Oshotse, C., Zullig, L. L., Bosworth, H. B., Tu, P., & Lin, C. (2018). Self-Efficacy and Adherence Behaviors in Rheumatoid Arthritis Patients. *Preventing chronic disease*, 15, E127. DOI: <https://doi.org/10.5888/pcd15.180218>
- Osterberg, L., & Blaschke, T. (2005). Adherence to medication. *The New England journal of medicine*, 353(5), 487–497. DOI: <https://doi.org/10.1056/NEJMra050100>
- Pene, C. T. H., & Kissane, D. (2019). Communication in cancer: its impact on the experience of cancer care: communicating with the angry patient and the patient in denial. *Current opinion in supportive and palliative care*, 13(1), 46–52. DOI: <https://doi.org/10.1097/SPC.0000000000000410>
- Peterson, A. M., Takiya, L., & Finley, R. (2003). Meta-analysis of trials of interventions to improve medication adherence. *American journal of health-system pharmacy : AJHP : official journal of the American Society of Health-System Pharmacists*, 60(7), 657–665. DOI: <https://doi.org/10.1093/ajhp/60.7.657>
- Rossi Ferrario, S., Giorgi, I., Baiardi, P., Giuntoli, L., Balestroni, G., Cerutti, P., Manera, M., Gabanelli, P., Solara, V., Fornara, R., Luisetti, M., Omarini, P., Omarini, G., & Vidotto, G. (2017). Illness denial questionnaire for patients and caregivers. *Neuropsychiatric disease and treatment*, 13, 909–916. DOI: <https://doi.org/10.2147/NDT.S128622>
- Rossi Ferrario, S., Panzeri, A., Anselmi, P., & Vidotto, G. (2019). Development and psychometric properties of a short form of the Illness Denial Questionnaire. *Psychology research and behavior management*, 12, 727–739. DOI: <https://doi.org/10.2147/PRBM.S207622>
- Sabaté, E., & Sabaté, E. (2003). *Adherence to long-term therapies: evidence for action*. World Health Organization.
- Skaldere-Darmudasa, G., & Sudraba, V., (2023). Psiholoģiskā noturība un slimības noliegšana kā līdzestīgu uzvedību prognozējošie faktori hroniski slimiem pacientiem primārā aprūpē. Maģistra darbs, RSU.
- Sokol, M. C., McGuigan, K. A., Verbrugge, R. R., & Epstein, R. S. (2005). Impact of medication adherence on hospitalization risk and healthcare cost. *Medical care*, 43(6), 521–530. DOI: <https://doi.org/10.1097/01.mlr.0000163641.86870.af>
- Toukhsati, S., Xu, K., Nasarudin, A., Caruso, K., Smith, S., Halim, J., ... & Hare, D. (2020). Psychological Resilience Protects Against All-Cause Unplanned Hospital Readmissions Following Acute Myocardial Infarction. *Heart, Lung and Circulation*, 29, S326.
- White, K. S., Pardue, C., Ludbrook, P., Sodhi, S., Esmaeeli, A., & Cedars, A. (2016). Cardiac denial and psychological predictors of cardiac care adherence in adults with congenital heart disease. *Behavior modification*, 40(1-2), 29–50.

CONNOR-DAVIDSON RESILIENCE SCALE (CD-RISC-25) ADAPTATION IN LATVIAN SAMPLE

Gunita Skaldere-Darmudasa
Rīga Stradiņš University, Latvia

Velga Sudraba

Department of Health psychology and paedagogy, Rīga Stradiņš University, Latvia

Abstract. *The aim of the research was to adapt the full version of Connor-Davidson Resilience scale (CD-RISC-25) in Latvia to gain qualitative and valid psychological measure of assessing resilience. Studying the scientific literature has shown multidimensional nature of resilience construct as well as broaden the knowledge about resilience as complicated psychological construct which can be affected by different factors rising from one's individual experience and the environment where he comes from. Sample (N=186) in age range 18 to 69 years old (M=37.65; SD=12.07), 75.8% females. Participants filled demographic data questionnaires and Connor-Davidson Resilience Scale (Connor & Davidson, 2003). Scale of 25 items, each rated in 5-point Likert's scale (0-4), with higher scores reflecting greater resilience. Cronbach's Alpha for all items varies from .88 to .90 and for scale total $\alpha = .89$, which proves good internal consistency. Test-retest reliability demonstrated a high level of agreement, with an intraclass correlation coefficient of .93. The Connor-Davidson Resiliency Scale in Latvian sample showed high internal consistency $\alpha = .89$ and good psychometric properties, same as noted in other studies (Connor & Davidson, 2003). This proves CD-RISC-25 as qualitative and a valid measure for further studies of resilience in Latvian population.*

Keywords: *Latvian version, psychometric validation, resilience.*

Introduction

Over the past 20 years, there has been a significant increase in interest within science and societies in psychological concept of resilience, which is human capacity to overcome major life difficulties (Luthar, Crossman, & Small, 2015; Masten & Narayan, 2012; Infurna & Luthar, 2018). This interest could be based on lack of explanations of causes of illnesses and psychopathologies (Windle, 2011), as well as potential impact of resilience on health, well-being, quality of life and one's response to many challenges related to aging is being studied. Therefore, resilience might be the key factor to explain resistance to different threats in lifetime and capability to bounce back after different adverse events within lifetime (Windle, Bennett, & Noyes, 2011). Initially authors apply construct of resilience to dynamic process which includes positive adaptation skills facing major adverse events. This process includes two significant and

critical conditions: (1) exposure to strong threat or adverse event and (2) regardless of the threat, capacity for positive adaptation within the process of development (Luthar, Cicchetti, & Becker, 2000).

Theoretical basis of the problem

Resilience is studied within individual developmental processes and reflects one's capability to overcome significant adverse events (Luthar et al., 2015; Masten & Narayan, 2012; Infurna & Luthar, 2018).

There have been wide criticism and discussion due to main terminology and definition of resilience. The attention is pointing out many risk situations, which have experienced individuals and what skills they have developed regarding their resilience. Other questions rise about resilience phenomena resistance in time, and the meaning of the theoretical construct of resilience (Luthar et al., 2000).

There are concerns to define and measure construct of the resilience, which might not seem complicated in the beginning. The questions rise whether resilience is seen as a process, individual quality, dynamic process of development or all together. In some authors view, the best definition for resilience is as successful result of adaptation overcoming major adverse event (Reich, Zautra, & Hall, 2010). The research about maltreated children's resilience and their different capability skills of adaptation shows that regardless of their bad experience these children had, the resilience, between these children was different. The main factors related to children's resilience where individual characteristics (such as self-regulatory processes), family aspects (caring parents), and gained experience in social environment (e.g., close relationship with friends) (Haskett, Nears, Ward, & McPherson, 2006).

Creating Connor-Davidson resilience scale (CD-RISC-25) authors based their research on characteristics of resilient people which have been described in previous studies. Some authors, e.g., Kobasa (1979), apply construct of hardiness to resilient individual, which is described as control, commitment and seeing changes in their life as a challenge. Other authors to resilient individual apply meaningful action, clear goal or aim, strong self-esteem/ confidence, adaptability when coping with change, humour approach overcoming stressful events, close and emotionally stable relationship etc. (Connor & Davidson, 2003). The patience and capability to cope with stress in long term is also added to description of resilient individual (Connor & Davidson, 2003). Another aspect of resilience is spirituality, which is borrowed from British Arctic explorer Shackleton, who had described in stories of his experience the importance of believes and reliance on faith to survive in expeditions (Connor & Davidson, 2003).

The Connor-Davidson Resilience Scale is translated in more than 75 languages and adaptation of scale is done in different samples and cultures showing high internal consistency Cronbah's alpha. US general sample $n = 577$,

$\alpha = .89$ (Connor & Davidson, 2003), sample in China $\alpha = .89$ (Yu, Lau, Mak, Zhang, & Lui, 2011), later study in sample of Airforce soldiers in US $\alpha = .91$ (Bezdjian, Schneider, Burchett, Baker, & Garb, 2017). The scale is an appropriate measure to assess resilience in patients with chronic illnesses and conditions, e.g., patients with pulmonary hypertension in US (Hudler et al., 2020), cancer patients (Tan, Beatty, Kemp, & Koczwara, 2019; Ristevska-Dimitrovska, 2015), patients with cardiovascular diseases (Doustdar Tousi, 2014; Saban et al., 2018). Thus Connor-Davidson Resilience Scale has proved its validation in many different samples and cultures with good and high psychometric properties therefore the aim of this quantitative cross-sectional study was to adapt Connor-Davidson Resilience Scale (CD-RISC-25) in Latvia and to assess psychometric properties in Latvian sample.

Materials and Methods

Translation of the Connor-Davidson Resilience Scale (CD-RISC-25) was made by three independent translators with good knowledge of English and Latvian languages. At the first, two translations from English to Latvian were compared and edited. A second, edited scale was given to a third translator who translated it back from Latvian to English language. The translated items were compared to ones in original version and assessed as appropriate. The translation was sent to the author of the scale Jonathan Davidson for confirmation, who also is responsible for copyrights of the scale. After receiving positive confirmation, the translators' names were added to the copyright confirmation.

The sample of this study was 186 economically active citizens of Latvia in age from 18 to 69 years old, 76 % women, 24 % man ($M=37.65$; $SD=12.07$). For test-retest assessment there were 44 participants from the same sample ($N=186$) in age from 20 to 68 years old, 52 % women, 48 % man, ($M=37.73$; $SD=11.66$). There was no statistical significance between sample and test-retest sample in age or gender ($p > .05$).

The data was collected electronically using survey platform www.visidati.lv in a period from January 2021 to February 2021. Test-retest data was collected after one month from March 2021 to April 2021. The link to the questionnaire was shared and forwarded using snowball approach. Participants were introduced to informed consent; they were informed that data is collected for scientific research. Data was gained keeping participants anonymous and processed with high level of confidentiality.

There were used two measures in the research: 1) Demographic data questionnaire (age, gender, education). 2) Connor-Davidson Resilience Scale (CD-RISC-25) – 25 item self-assessment measure using Likert scale from 0 to 4, where 0 - not true at all, 1- rarely true, 2 – sometimes true, 3 – often true, 4 – true nearly all the time. The total result of resilience could vary from 0 to 100, higher

scores reflecting higher resilience. The results are assessed in quartiles (Q) describing four groups with the first quartile (Q) describing the score range for the lowest group (lowest 25 % of the population), i.e., the least resilient, the second (Q2) and third (Q3) the intermediate scores, and the fourth (Q4) describing the highest or most resilient, i.e., above 75 % of the population. The scale includes five factors: (1) personal competency, high standards, tenacity (eight items), (2) tolerance of negative affect, trust in one's instincts, strengthening effect of stress (seven items), (3) positive acceptance of change, and secure relationships (five items), (4) control (three items), (5) spiritual influences (two items). However, authors do not approve scoring within the subscales defined by factors – the result of resilience is the total result of the scale.

Data analysis

The data was analysed in IBM SPSS 27.0 and MS Office Excel programs. At the first, the internal consistency was evaluated by using Cronbach's alpha α . At second, the analysis of items of the scale was done in determining items difficulty and discrimination indexes. Test-retest reliability was evaluated using intraclass correlation coefficient (ICC). Results of resilience were assessed in quartiles showing mean (M) and standard deviation (SD) values.

Results

Internal consistency Cronbach's alpha for the scale total was $\alpha=.89$. In analysis of items, item difficulty index should be between .8 and 3.2 which shows mean value of item, and item discrimination index shows how well item differ respondents by measure (.2 – .8), (Kline, 2000). The first item exceeds item difficulty index margin being 3.37, what means that most of respondents in this sample chose high value (3 – often true, 4 – true nearly all the time) for this item. All other items fit in difficulty and discrimination index margins (see Table 1).

The test-retest reliability was assessed in sample of 44 respondents using data collected repeatedly after one month within the same sample. The interclass correlation coefficient (ICC) comparing first, and second measure showed high test-retest reliability .93 ($p = 0$). The mean result of resilience in first measure was $M=72.17$ ($SD=12.07$), and in second measure $M=71.68$ ($SD=9.45$).

Table 1 Connor-Davidson Resilience Scale
Item description (created by the authors)

<i>Item</i>	<i>Item difficulty index</i>	<i>Item discrimination index</i>	<i>Cronbach's Alpha if item deleted</i>
1	3.37	.41	.89
2	3.24	.37	.89
3	2.01	.20	.90
4	3.21	.57	.89
5	3.20	.61	.89
6	2.45	.44	.89
7	2.77	.48	.89
8	3.01	.44	.89
9	3.11	.30	.89
10	2.95	.47	.89
11	3.15	.64	.89
12	2.87	.64	.89
13	2.97	.50	.89
14	2.87	.53	.89
15	2.85	.45	.89
16	2.95	.60	.89
17	3.03	.66	.88
18	2.33	.53	.89
19	2.96	.58	.89
20	2.70	.28	.89
21	2.79	.54	.89
22	2.73	.48	.89
23	2.55	.37	.89
24	3.04	.49	.89
25	3.09	.45	.89

In the first time of measure the distribution of results of resilience in Latvian sample are as follows: first quartile (Q1) 0-65, second quartile (Q2) 66-72, third quartile (Q3) 73-79, and fourth quartile (Q4) 80-100. In second time of measure the distribution of results of resilience are - first quartile (Q1) 0-65, second quartile (Q2) 66-71, third quartile (Q3) 72-79, and fourth quartile (Q4) 80-100. The mean result of resilience in Latvian sample in both first (72,17) and second (71.68) time belong to second quartile (Q2), (see Table 2).

Table 2 Distribution of mean results of resilience in first (N=186) and second (n=44) time of measure (created by the authors)

Time 1	Q1	Q2	Q3	Q4
	0-65	66-73	74-79	80-100
	<i>M=72.17 (SD=12.07)</i>			
Time 2	Q1	Q2	Q3	Q4
	0-65	66-71	72-79	80-100
	<i>M=71.68 (SD=9.45)</i>			

Discussion

In fields of psychology and health research in Latvia in recent years have grown interest of individual capability to bounce back after traumatic events, everyday stressful experience, and challenges. This capability is described as resilience and for research and assessing resilience the qualitative measure is needed. Many previous studies in different general and clinical samples have proved Connor-Davidson Resilience Scale (CD-RISC-25) as valid and reliable assessing resilience. Therefore, the aim of this study was to adapt Connor-Davidson Resilience Scale in Latvia, to assess psychometric properties including internal consistency, item analysis (difficulty and discrimination index), and test-retest reliability.

The scale within this research showed high internal consistency Cronbach's alpha $\alpha=.89$, like scale development study as well as other studies in different samples. In item difficulty index analysis, only first item exceeded margin, which means that respondents in this sample gave high score assessing their ability to adapt to change.

The test-retest reliability in sample of 44 respondents from main sample showed high interclass correlation coefficient (ICC), what means the scale is resistant and reliable in time. There is less than one point difference between first ($M=72.17$) and second ($M=71.68$) measure in mean total scores of resilience.

The mean result of resilience in Latvian sample is 72.17 which belongs to second quartile Q2. To compare, in sample in US ($n = 577$) mean result of resilience was 82 (Q2), distributing quartile values accordingly Q1 = 0-73; Q2 = 74-82, Q3 = 83-90, Q4 = 91 – 100 (Conor & Davidson, 2003). The mean result of resilience in general population sample in Hong Kong ($n = 10\ 997$) was 62 (Q2), (Ni et al., 2016). More like Latvian sample results of mean resilience showed in study in Australia, where resilience scores varied from 71.5 to 73.5 in different age groups (Liu et al., 2015), and Portugal – $M=73.4$ (Anjos, Dos Santos, Ribeiro, & Moreira, 2019).

Regardless many studies, it is still a question which are the most effecting factors contributing to variation of resilience levels between different populations in general samples. Contradictory results are gained studying age differences –

there were weak negative correlation between age and resilience in adolescents and older adults (Jorgensen & Seedat, 2008; Lamond et al., 2008; Yu et al., 2011; Wu, Tan, & Liu, 2017). While large representative samples with wide age range do not show age correlation with resilience (Connor & Davidson, 2003; Gucciardi, Jackson, Coulter, & Mallett, 2011; Derakhshanrad, Piven, Rassafiani, Hosseini, & Mohammadi Shahboulaghi, 2014; Bozikas et al., 2016). Statistically significance to ethnicity showed only comparing South African and US samples (Jorgensen & Seedat, 2008; Marwitz et al., 2018), while ethnicity plays no significant role in other samples (Connor & Davidson, 2003; Campbell-Sills, Forde, & Stein, 2009). In general, as mentioned earlier, mean results in Asia, Australia, Portugal, and Latvia is notably lower than in US. Therefore, rising interest in research how resilience is related to individual culture, social economic stability and autonomy, and religion. Cultural environment includes moral values, social norms, and politics, what contributes to one's resilience, good health and well-being (Panter-Brick, 2015). However, in Lithuania, neighbouring country of Latvia, in research of resilience effect in different social economic groups of people, shows statistically significant differences depending on individual income and different social economic status, showing huge differences in capability of these groups facing and overcoming major adverse events (Diržytė, Rakauskienė, & Servetkienė, 2017). There is much evidence in literature and practice about relationship between religion and resilience, and its contribution to psychological and physical health (Lassi & Mugnaini, 2015). Further, study of resilience in Latvia should be in larger representative sample, researching relationship between resilience, social economic factors and religious believes.

Conclusions

CD-RISC-25 shows good psychometric properties of internal consistency $\alpha=.89$, and item analysis. Measures are reliable in time (ICC = .93) showing that scale is valid measure for further research of resilience in Latvia.

Limitations

As a limitation of this research could be small sample size, it is necessary to measure resilience in a larger general population sample and different clinical samples as well. In this study social economic factors and religious believes are not considered, which also could contribute to the results. Another limitation is self-assessment measure what could lead to more socially desirable answers.

References

- Anjos, J. F., Dos Santos, M. J. H., Ribeiro, M. T., & Moreira, S. (2019). Connor-Davidson Resilience Scale: validation study in a Portuguese sample. *BMJ open*, *9*(6), e026836. DOI: <https://doi.org/10.1136/bmjopen-2018-026836>
- Bezdjian, S., Schneider, K. G., Burchett, D., Baker, M. T., & Garb, H. N. (2017). Resilience in the United States Air Force: Psychometric properties of the Connor-Davidson Resilience Scale (CD-RISC). *Psychological assessment*, *29*(5), 479.
- Bozikas, V. P., Parlapani, E., Holeva, V., Skemperi, E., Bargiota, S. I., Kirla, D., Rera, E., & Garyfallos, G. (2016). Resilience in Patients With Recent Diagnosis of a Schizophrenia Spectrum Disorder. *The Journal of nervous and mental disease*, *204*(8), 578–584. DOI: <https://doi.org/10.1097/NMD.0000000000000541>
- Campbell-Sills, L., Forde, D. R., & Stein, M. B. (2009). Demographic and childhood environmental predictors of resilience in a community sample. *Journal of psychiatric research*, *43*(12), 1007–1012. DOI: <https://doi.org/10.1016/j.jpsychires.2009.01.013>
- Connor, K. M., & Davidson, J. R. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and anxiety*, *18*(2), 76-82.
- Davidson, J. R. (2003). Connor-Davidson Resilience Scale (CD-RISC) Manual. *Unpublished*. 06-03-2021. Retrieved from: www.cd-risc.com
- Derakhshanrad, S. A., Piven, E., Rassafiani, M., Hosseini, S. A., & Mohammadi Shahboulaghi, F. (2014). Standardization of connor-davidson resilience scale in iranian subjects with cerebrovascular accident. *Journal of Rehabilitation Sciences & Research*, *1*(4), 73-77.
- Diržytė, A., Rakauskienė, O. G., & Servetkienė, V. (2017). Evaluation of resilience impact on socio-economic inequality. *Entrepreneurship and sustainability issues*, *4*, 489-501.
- Doustdar Tousi, S. A., & Golshani, S. (2014). Effect of resilience in patients hospitalized with cardiovascular diseases. *Journal of Mazandaran University of Medical Sciences*, *24*(116), 102-109.
- Gucciardi, D. F., Jackson, B., Coulter, T. J., & Mallett, C. J. (2011). The Connor-Davidson Resilience Scale (CD-RISC): Dimensionality and age-related measurement invariance with Australian cricketers. *Psychology of sport and exercise*, *12*(4), 423-433.
- Haskett, M. E., Nears, K., Ward, C. S., & McPherson, A. V. (2006). Diversity in adjustment of maltreated children: factors associated with resilient functioning. *Clinical psychology review*, *26*(6), 796–812. DOI: <https://doi.org/10.1016/j.cpr.2006.03.005>
- Hudler, A., Sottile, P. D., Held, N., Abbott, C., King, M., & Bull, T. M. (2020). Evaluating Resilience and Coping Strategies in Patients with Pulmonary Arterial Hypertension: A Qualitative Study. In *B55. Pot pourri of the top clinical studies in pulmonary hypertension* (pp. A3800–A3800). American Thoracic Society.
- Infurna, F. J., & Luthar, S. S. (2018). Re-evaluating the notion that resilience is commonplace: A review and distillation of directions for future research, practice, and policy. *Clinical psychology review*, *65*, 43–56. DOI: <https://doi.org/10.1016/j.cpr.2018.07.003>
- Jorgensen, I. E., & Seedat, S. (2008). Factor structure of the Connor-Davidson resilience scale in South African adolescents. *International journal of adolescent medicine and health*, *20*(1), 23-32.
- Kline, R. B. (2000). Book Review: Measurement and evaluation in psychology and education. *Journal of Psychoeducational Assessment*, *18*(2), 160-166.
- Kobasa, S. C. (1979). Stressful life events, personality, and health: an inquiry into hardiness. *Journal of personality and social psychology*, *37*(1), 1.

- Lamond, A. J., Depp, C. A., Allison, M., Langer, R., Reichstadt, J., Moore, D. J., Golshan, Sh., Ganiats, T. G., & Jeste, D. V. (2008). Measurement and predictors of resilience among community-dwelling older women. *Journal of psychiatric research*, 43(2), 148-154.
- Lassi, S., & Mugnaini, D. (2015). Role of religion and spirituality on mental health and resilience: There is enough evidence. *International Journal of Emergency Mental Health and Human Resilience*, 17(3), 661-663.
- Liu, D. W., Fairweather-Schmidt, A. K., Burns, R. A., & Roberts, R. M. (2015). The Connor-Davidson Resilience Scale: Establishing invariance between gender across the lifespan in a large community based study. *Journal of Psychopathology and Behavioral Assessment*, 37(2), 340-348.
- Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development*, 71(3), 543-562. DOI: <https://doi.org/10.1111/1467-8624.00164>
- Luthar, S. S., Crossman, E. J., & Small, P. J. (2015). Resilience and adversity. *Handbook of child psychology and developmental science*, 1-40.
- Marwitz, J. H., Sima, A. P., Kreutzer, J. S., Dreer, L. E., Bergquist, T. F., Zafonte, R., ... & Felix, E. R. (2018). Longitudinal examination of resilience after traumatic brain injury: a traumatic brain injury model systems study. *Archives of physical medicine and rehabilitation*, 99(2), 264-271. DOI: <https://doi.org/10.1016/j.apmr.2017.06.013>
- Masten, A. S., & Narayan, A. J. (2012). Child development in the context of disaster, war, and terrorism: pathways of risk and resilience. *Annual review of psychology*, 63, 227-257. DOI: <https://doi.org/10.1146/annurev-psych-120710-100356>.
- Ni, M. Y., Li, T. K., Yu, N. X., Pang, H., Chan, B. H., Leung, G. M., & Stewart, S. M. (2016). Normative data and psychometric properties of the Connor-Davidson Resilience Scale (CD-RISC) and the abbreviated version (CD-RISC2) among the general population in Hong Kong. *Quality of Life Research*, 25(1), 111-116.
- Panter-Brick, C. (2015). Culture and resilience: Next steps for theory and practice. In *Youth resilience and culture* (pp. 233-244). Springer, Dordrecht.
- Reich, J. W., Zautra, A. J., & Hall, J. S. (Eds.). (2010). *Handbook of adult resilience*. Guilford Press.
- Ristevska-Dimitrovska, G., Filov, I., Rajchanovska, D., Stefanovski, P., & Dejanova, B. (2015). Resilience and Quality of Life in Breast Cancer Patients. *Open access Macedonian journal of medical sciences*, 3(4), 727-731. DOI: <https://doi.org/10.3889/oamjms.2015.128>
- Saban, K. L., Mathews, H. L., Bryant, F. B., Tell, D., Joyce, C., DeVon, H. A., & Witek Janusek, L. (2018). Perceived discrimination is associated with the inflammatory response to acute laboratory stress in women at risk for cardiovascular disease. *Brain, behavior, and immunity*, 73, 625-632. DOI: <https://doi.org/10.1016/j.bbi.2018.07.010> .
- Tan, W. S., Beatty, L., Kemp, E., & Koczwara, B. (2019). What contributes to resilience in cancer patients? A principal component analysis of the Connor-Davidson Resilience Scale. *Asia-Pacific journal of clinical oncology*, 15(5), e115-e119. DOI: <https://doi.org/10.1111/ajco.13128>
- Windle, G. (2011). What is resilience? A review and concept analysis. *Reviews in clinical gerontology*, 21(2), 152.
- Windle, G., Bennett, K. M., & Noyes, J. (2011). A methodological review of resilience measurement scales. *Health and quality of life outcomes*, 9(1), 8.
- Wu, L., Tan, Y., & Liu, Y. (2017). Factor structure and psychometric evaluation of the Connor-Davidson resilience scale in a new employee population of China. *BMC psychiatry*, 17(1), 1-7.

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Yu, X. N., Lau, J. T., Mak, W. W., Zhang, J., & Lui, W. W. (2011). Factor structure and psychometric properties of the Connor-Davidson Resilience Scale among Chinese adolescents. *Comprehensive psychiatry*, 52(2), 218-224.

SABIEDRĪBAS
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SHORT-TERM OUTCOMES OF VERY LOW BIRTH WEIGHT INFANTS IN RIGA MATERNITY HOSPITAL

Sabine Kovale

Riga Stradins University, Latvia

Beate Vasioleka

Riga Stradins University, Latvia

Anete Sperberga

Riga Stradins University, Latvia

Elizabete Marta Zaharane

Riga Stradins University, Latvia

Evija Laizane

Riga Stradins University, Latvia

Polina Galica

Riga Stradins University, Latvia

Kristine Rasnaca

Riga Stradins University, Riga Maternity Hospital, Latvia
Children's Clinical University Hospital, Latvia

Juris Sleiers

Riga Maternity Hospital, Latvia

Abstract. *As the preterm birth rate is increasing in most countries, the number of very low birth weight infants (VLBW - birth weight less than 1500 grams) is also growing. VLBW infants are at a high risk of morbidity and mortality, but the adverse outcomes have been decreasing over the last few years due to improvements in the quality of care. The main objective of this research is to determine the risk factors of early neonatal morbidity, rate of survival, frequency of disease and complications in VLBW infants as well as to compare the differences between the years. The data was collected from the Riga Maternity hospital's medical records over a five-year period from 2015 to 2019. A total of 209 VLBW were admitted to the Riga Maternity hospital's intensive care unit, of whom 192 (92.3%) survived to discharge. Over the five years the number of VLBW infants increased almost by half, while the mortality rate fluctuated between the years. Respiratory distress syndrome and sepsis were the two main complications for the infants. More than half (62.5%) of non-survivors died within the first 24 hours after birth with respiratory*

failure being the leading cause. Survival rate was strongly associated with gestational age and birth weight.

Keywords: *morbidity; short-term outcome; very low birth weight.*

Introduction

The main objective of this research is to determine the risk factors of early neonatal morbidity, rate of survival, frequency of disease and complications in VLBW infants as well as to compare the differences between the years.

Premature birth (gestational age <37 weeks) rate has been on the rise over the last few decades (Centers for Disease Control and Prevention, 2022). It is estimated that about 1% of newborns are very low birth weight (VLBW) – weighing less than 1500 g (National Center for Health Statistics, 2012). Babies that weigh less than 1000 g are considered extremely low birth weight (ELBW). The rise in prematurity rates is multifactorial. Some of the factors can be associated with the modern-day tendency of pregnancy later in life, chronic health conditions, such as hypertension or diabetes, insufficient nutrition and obesity, as well as the lack of access to adequate healthcare. Most of the time, the main reason why an infant is born so prematurely is unknown, but there are known risk factors that can affect this, of which the most common are: maternal infection during the pregnancy, substance abuse, young or advanced maternal age, previous preterm birth, multiple pregnancy, as well as being of African-American race and lower socioeconomic status (Pusdekar et al., 2020; Goldenberg, Culhane, Iams, & Romero, 2008; Zhang, Sun, & Zhang, 2021).

Although the number of premature infants has increased, the mortality rate is slowly, but steadily decreasing (WHO, 2022; National Institutes of Health, 2022). Many factors play a role in this; most importantly the quality of care has improved over the years. This includes postnatal surfactant (Coshal et al., 2021) as well as prenatal maternal corticosteroids (Stock, Thomson, & Papworth, 2022) for the premature infant's lung development and magnesium sulfate, which is providing neuroprotective effects to the infant's brain (Chollat & Marret, 2018). Nevertheless, newer medical technologies and equipment, as well as medical staff's appropriate education has had an impact on the survival of premature babies. The involvement of parents in the care of the newborn, especially skin-to-skin "kangaroo care" can also be mentioned as an important factor (Jefferies & Canadian Paediatric Society, Fetus and Newborn Committee, 2012). The choice of delivery also plays a part in the survival of premature infants.

Despite the improvement in the quality of care, VLBW infants are still considered high risk for many reasons. The following are some of the most common short-term problems: infection, respiratory distress syndrome (RDS), intraventricular hemorrhage (IVH), necrotizing enterocolitis (NEC), feeding and weight gain difficulties and many others. All the VLBW infants need specialised care in a neonatal intensive care unit (NICU) setting, most often for several

months. Despite the potential short-term complications, these babies are also at high risk for several long-term problems such as cerebral palsy, developmental delay and even blindness and deafness (Al Hazzani, Al-Alaiyan, Hassanein, & Khadawardi, 2011; Afjeh, Sabzehei, Fallahi, & Esmaili, 2013; Jia et al., 2022).

Literature review

Infections during pregnancy play a significant role in the pathogenesis of preterm birth due to intrauterine inflammatory response (Gao et al., 2021). Young maternal age (<18 years) proved to have a significant correlation with preterm labour and neonatal mortality, conversely, maternal age >35 years was a protective factor for survival (Vilanova et al., 2019) even though other studies consider advanced maternal age as a risk factor for preterm birth. Maternal obesity and smoking also negatively influences babies birth weight and outcome (Günther et al., 2021). The leading cause for preterm birth and neonatal morbidity and mortality is preeclampsia, which also causes 50000 - 60000 pregnancy-related deaths every year worldwide (Amaral, Wallace, Owens, & LaMarca, 2017). Some other studies show that pregnancies affected by maternal hypertension can affect the baby's developmental programming by creating an adverse environment for the fetus (Cunningham & LaMarca, 2018).

Low-dose dexamethasone (corticosteroid) is a common medication used prenatally to decrease RDS, facilitates extubation and improves survival in premature neonates (Suffolk, Agertoft, Johansen, & Zachariassen, 2019). According to the research, premature newborns exposed to complete prenatal steroid treatment were 1.95 times more likely to survive and 2.74 times more likely to survive without major complications (IVH, bronchopulmonary dysplasia, NEC, retinopathy etc.) (Chawla et al., 2022). Surfactant therapy is effective in the prevention of RDS postnatally (Dumpa & Bhandari, 2018). Caffeine therapy is effective in reducing the apnea of prematurity and has additional benefits, including a reduced need for intubation and respiratory support. (Dobson, Hunt, 2018). Neurologic defects associated with preterm labour often are prevented by magnesium sulfate (MgSO₄) (Bachnas, Akbar, Dachlan, & Dekker, 2021). The controlled trial of magnesium sulfate showed significantly lower rate of cerebral palsy in the study group (Rouse et al., 2008).

The survival rate of VLBW infants in the world differs. For example, in Germany the overall survival rate of VLBW was 89.1% (Jeschke et al., 2016). The best delivery mode for VLBW remains controversial, but cesarean section delivery is becoming more prevalent, especially in early gestational ages (Kardum, Grčić, Muller, & Dessardo, 2018). In the study VLBW infants delivered by cesarean section had a higher survival rate than the newborns delivered vaginally, mainly in infants with birth weight ≤800 g. (AlQurashi, 2020). Research shows that the mean gestational age, birth weight, and Apgar scores

were significantly higher in transferred babies compared with non-survivors among VLBW infants, and respiratory failure was the major factor of mortality among extremely low birth infants (Afjeh et al., 2013). At 22 weeks of gestation mortality was 100%, however the 50% limits of viability were at 25 weeks' gestation or at weight of > 600 g (Abolfotouh, Al Saif, Altwajjri, & Al Rowaily, 2018).

An Australian study proved that the most common cause of death among very preterm infants was major IVH, acute respiratory illnesses and sepsis, while in India the most common death cause was sepsis (Schindler et al., 2017; Jain et al., 2019).

Methodology

Ethics

Anonymity and confidentiality of the data obtained was ensured. The protocol was approved by the Riga Stradins University (RSU) Research Ethics Committee (reference code 6-2/10/85).

Participants and setting

This is a cross sectional study, where the population consisted of all live-born VLBW infants born in Riga Maternity hospital in the 5-year period from 2015 to 2019. The Data was collected from the Riga Maternity hospital's medical records. A total of 266 VLBW infants were born in this period, 57 of them were stillborn (1 was due to a feticide) and 209 were admitted to the hospital's NICU, and enrolled in our study. The data was organised in the following sections: mother's medical history, pregnancy and birth history, anamnesis of the newborn.

Statistics and data analysis

All statistical analyses were performed using IBM SPSS for Windows, Version 27.0. Continuous variables were expressed as the median (Q1-Q3), while categorical variables were expressed as frequency and percentage. Maternal demographic, pre- and perinatal data, and neonatal short-term outcomes up to the time of discharge from Riga Maternity hospital or death were compared between groups of transferred and non-survived infants, and over five years. Continuous variables, including gestational age, birth weight, were compared using the Mann-Whitney U test or the Kruskal-Wallis test. One-minute and five-minute Apgar scores were compared between groups using the Wilcoxon signed rank test. The remaining categorical variables were compared across the study groups using the Chi-square test. A P value < 0.05 was considered as statistically significant. A 95% confidence level was used.

Research results

Demographics

In total 209 VLBW infants were admitted to the Riga Maternity hospital's intensive care unit. Of those 209, 105 (50.5%) were males, 103 (49.5%) females, and the gender of one infant remained unknown.

The most common VLBW infant's mother's characteristics were age of 30 or more (70.7%), higher education (50.2%), married (63.6%), non-smokers (86.6%), and multiparous (66.5%).

During pregnancy, 24.4% of the women were diagnosed with anemia, 30.4% had gestational hypertension, 14.9% had preeclampsia, and 19.2 % had cervical insufficiency. Urinary tract and sexually transmitted infections were encountered in 12.9% of women during pregnancy. Gestational diabetes (GD) occurred in 22.2 % of pregnant women.

Almost a third, 27.0% were diagnosed with oligohydramnios or anhydramnios. Based on the available data, 16.3% (n=34) of the infants were conceived with the help of assisted reproductive technologies. Babies from twin pregnancies accounted for 27.8% of cases.

Cesarean sections dominated the choice of delivery method with 60.4%. Chorioamniotic membrane culture came back positive for 32.1% of women.

The median gestational age of the study population was 29.0 (27.0-30.0) weeks, and the median birth weight was 1120.00 (885.00-1320.00) grams. ELBW neonates made up 37.8% of the study population. The one-minute Apgar score in the median was 6.00 (5.00-7.00), but the five-minute score was 7.00 (6.00-7.00). The maternal and newborn characteristics of the VLBW infants in this study were presented in Table 1.

Table 1 Perinatal characteristics (created by the authors)

Perinatal characteristic		N (%)
Maternal age (years)	≤19	3 (1.4)
	20-24	8 (3.8)
	25-29	50 (24.0)
	30-34	72 (34.6)
	35-39	53 (25.5)
	40-44	18 (8.7)
	≥45	4 (1.9)
Maternal education level*	Higher	103 (50.2)
	Secondary	86 (42.0)
	Basic	16 (7.8)
Marital status	Married	133 (63.6)
	Unmarried	76 (36.4)
Use of nicotine	Smokers	28 (13.4)
	Non- smokers	181 (86.6)
Previous abortion*	Yes	94 (45.2)
	No	114 (54.8)
Assisted reproductive technology*	Yes	34 (16.3)
	No	174 (83.7)

Prenatal genetic screening test results*	Low risk	136 (69.7)
	Medium risk	9 (4.6)
	High risk	15 (7.7)
	Unknown results	35 (17.9)
Parity	Primiparous	70 (33.5)
	Multiparous	139 (66.5)
Plurality	Singleton	151 (72.2)
	Twin	58 (27.8)
Type of delivery*	Cesarean	125 (60.4)
	Vaginal	82 (39.6)
Gender*	Male	105 (50.5)
	Female	103 (49.5)
Gestational age (weeks)	<28	66 (31.6)
	28-32	114 (54.5)
	>32	29 (13.9)
Birth weight (grams)	1000-1499	130 (62.2)
	<1000	79 (37.8)
Apgar score at five-minute	<6	38 (18.2)
	≥6	171 (81.8)

*Missing values

Morbidity and complications

The two main complications encountered by the infants were RDS and infection. RDS developed in 133 (63.9%) of infants. Of these infants, 87.8% had received antenatal corticosteroids and 91.7% received surfactant replacement therapy. Respiratory support was used for all the infants with RDS. For 54.1%, non-invasive ventilation was used, while 36.1% received conventional mechanical ventilation (CMV), and 9.8% high-frequency oscillation ventilation (HFOV). Of 133 RDS cases, 10.5% led to death.

In total, 22.6% (n=47) of cases, infection was constituted, with pneumonia being the most common manifestation, forming 46.8% of all infection cases. Among other infection manifestations were sepsis (44.7%), conjunctivitis (19.1%), and meningitis (10.6%).

Other complications in the study group included: 15.5% anemia, 14.9% hemorrhage (including pulmonary, gastrointestinal, *disseminated intravascular coagulation (DIC)*), and 6.3% pneumothorax.

Development of anemia was associated with lower gestational age ($p<0.001$), lower birth weight ($p=0.006$), and five-minute Apgar score ($p<0.001$). From all the anemia cases, 15.6% led to death.

Statistically, hemorrhage was strongly associated with death ($p<0.001$); 25.8% of VLBW infants with hemorrhage did not survive.

Pneumothorax was statistically significantly associated with RDS ($p=0.005$) and the need for respiratory support with CMV ($p<0.001$). From 13 pneumothorax cases, 11 (84.6%) survived till discharge.

Complication rates differ depending on the birth weight (Fig.1). Lower birth weight was significantly associated with anemia ($p=0.006$), infection ($p=0.040$,

especially sepsis $p=0.008$), and RDS ($p<0.001$). In the birth weight group 1000-1249 g there was a significant association with pneumothorax ($p=0.005$). Hemorrhage was equally common across the different birth weight groups.

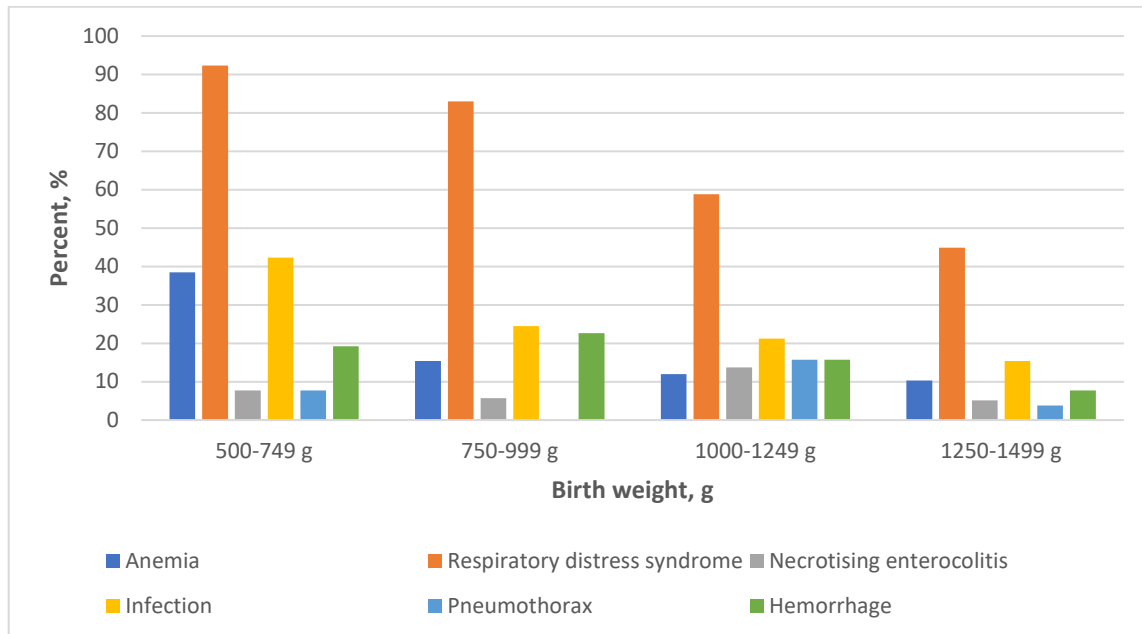


Figure 1 Complications by birth weight (created by the authors)

Risk factors associated with mortality

The study revealed statistically significant maternal, perinatal and neonatal factors associated with mortality (Table 2). One of the neonates was excluded from the analysis of risk factors associated with mortality, as his outcome of survival remained unknown.

Maternal risk factors for mortality in VLBW infants were maternal age of 19 or less ($p=0.011$).

Statistically significant delivery risk factors were positive culture of chorioamniotic membranes ($p=0.028$) and gestational age less than 28 weeks ($p=0.015$). The median gestational age in the transferred group was 29.0 (27.0-30.0) weeks, but in the non-surviving 26.5 (24-28). Statistically, the method of delivery was not significantly associated with neonatal death ($p=0.053$), but vaginal delivery tended to higher mortality.

Neonatal factors associated with a higher mortality were male gender ($p=0.039$), extremely low birth weight ($p=0.035$), and a five-minute Apgar score less than 6 ($p<0.001$). The median birth weight for transferred versus non-survivors was 1148.00 (900.00-1437.00) and 865.00 (642.50- 1112.50) grams respectively. The five-minute Apgar score median was higher 7.00 (6.00-7.00) in the transferred group compared to 4.50 (2.25-7.00) in the non-surviving group.

From the treatment group, risk factors associated with increased mortality were the need for intubation and adrenaline, fluid bolus administration at birth ($p=0.001$), and respiratory support with CMV ($p<0.001$). A significant

observation is that, statistically, non-surviving infants more often did not receive breast milk, antibacterial therapy and caffeine, but were more prone to receiving blood transfusions and surfactant applications than transferred infants. ($p < 0.001$ and $p = 0.002$, respectively). From the transferred infants, 41.7% did not need surfactant applications at all, meanwhile in the non-surviving group, 100% of infants had received at least one surfactant application.

Morbidities and complications associated with mortality were anemia ($p = 0.047$), RDS ($p = 0.041$), hemorrhage ($p < 0.001$), and infections ($p = 0.002$), especially pneumonia ($p < 0.001$). Hemorrhage had the highest mortality rate (25.8%) among complications.

Table 2 Maternal, newborn and perinatal factors between transferred and non-survived individuals (created by the authors)

	Transferred (n=192) N (%)	Non-survived (n=16) N (%)	Total	P value
<i>Maternal</i>				
Maternal age				0.011
– ≤19	1 (0.5)	2 (12.5)	3 (1.4)	
– 20-24	8 (4.2)	0 (0.0)	8 (3.8)	
– 25-29	48 (25.0)	2 (12.5)	50 (24.0)	
– 30-34	63 (32.8)	9 (56.3)	72 (34.6)	
– 35-39	51 (26.6)	2 (12.5)	53 (25.5)	
– 40-44	18 (9.4)	0 (0.0)	18 (8.7)	
– ≥45	3 (1.6)	1 (6.3)	4 (1.9)	
<i>Newborn</i>				
Gender*				0.039
– Female	99 (51.8)	4 (25.0)	103 (49.8)	
– Male	92 (48.2)	12 (75.0)	104 (50.2)	
<i>Pregnancy</i>				
Gestational age (weeks)				0.015
– <28	56 (29.2)	10 (62.5)	66 (31.7)	
– 28-32	108 (56.3)	6 (37.5)	114 (54.8)	
– >32	28 (14.6)	0 (0.0)	28 (13.5)	
Birth weight				0.035
– 1000-1499 (VLBW)	123 (64.1)	6 (37.5)	129 (62.0)	
– <1000 (ELBW)	69 (35.9)	10 (62.5)	79 (38.0)	
<i>Delivery</i>				
Delivery mode*				0.053
– Cesarean	118 (62.1)	6 (37.5)	124 (60.2)	
– Vaginal	72 (37.9)	10 (62.5)	82 (39.8)	

Resuscitation at birth				
– Yes, basic	169 (88.0)	8 (50.0)	177(85.1)	<0.001
– Yes, advanced	23 (12.0)	8 (50.0)	31 (14.9)	
Apgar score at five-minute (mean)				
– <6	29 (15.1)	9 (56.3)	38 (18.3)	<0.001
– ≥6	163 (84.9)	7 (43.8)	171 (81.7)	
Positive chorioamniotic membrane culture*	44 (29.7)	8 (61.5)	52 (32.3)	0.028
<i>Treatment</i>				
Antibacterial therapy*	190 (99.5)	13 (81.3)	203 (98.1)	0.001
Caffeine	148 (77.1)	4 (25.0)	152 (73.1)	<0.001
Surfactant therapy*	114 (59.4)	15 (100.0)	129 (62.3)	0.002
Breast milk feeding*	172 (94.0)	3 (60.0)	175 (93.1)	0.039
Respiratory support				
– None	6 (3.1)	0 (0.0)	6 (2.9)	<0.001
– Non-invasive ventilation	132 (68.8)	0 (0.0)	132 (63.5)	
– Mechanical ventilation	46 (24.0)	9 (56.3)	55 (26.4)	
– HFOV	8 (4.2)	7 (43.8)	15 (7.2)	
Transfusions*	51 (26.7)	12 (80.0)	63 (30.6)	<0.001
<i>Complications</i>				
Anemia*	27 (14.1)	5 (35.7)	32 (15.5)	0.047
RDS	119 (62.0)	14 (87.5)	133 (63.9)	0.041
Hemorrhage	23 (12.0)	8 (50.0)	31 (14.9)	<0.001
Infection	38 (19.8)	9 (56.3)	47 (22.6)	0.002

*Missing values

Mortality and survival rate

The overall survival rate till discharge from the neonatal intensive care unit was 92.3% (n=192), for ELBW it was statistically significantly lower (87.3%). A total of 16 neonates passed away. All 192 surviving patients were later transferred to the Children's Clinical University Hospital. More than half (62.5%) of non-survivors died within the first 24 hours after birth, and another 37.5% (n=6) passed away in the first seven days of life.

The mortality rate decreased with increased gestational age (p=0.015) (Fig.2), birth weight (p<0.001) (Fig.3), and Apgar score (p<0.001). The leading cause of death was intrauterine pneumonia 43.8% (7 out of 16) and tear of the

cerebellar tentorium 25.0% (4 out of 16). Other important death causes included sepsis, hypoxic-ischemic encephalopathy, pulmonary hypoplasia and hemorrhage, as well as congenital anomalies incompatible with life. For two infants the parents refused pathological examination, thereby the cause of death remains unknown.

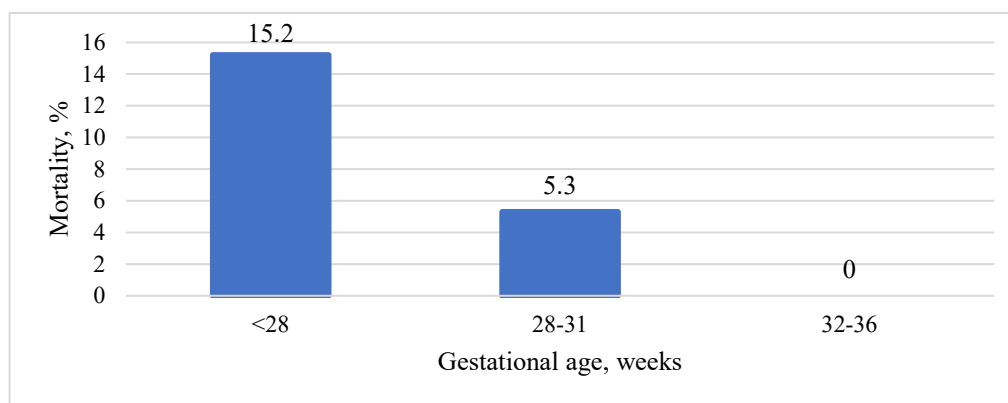


Figure 2 Mortality rate by gestational age group (created by the authors)

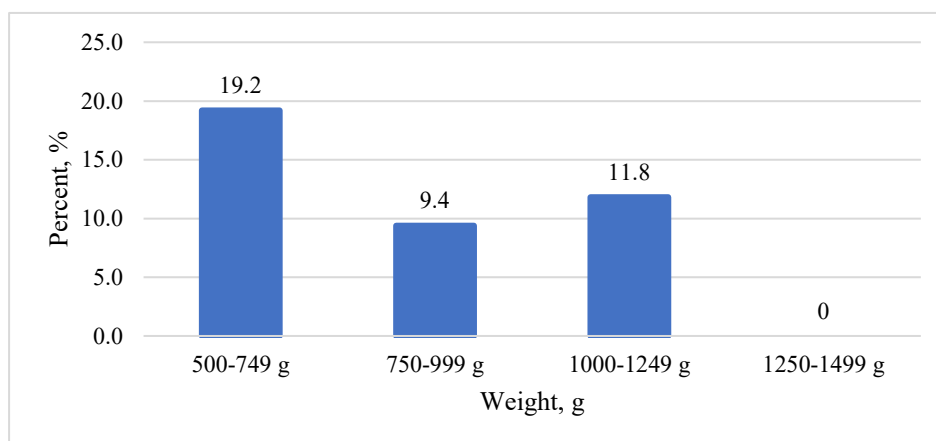


Figure 3 Mortality rate by weight group (created by the authors)

Differences between years

VLBW infant numbers in the year 2015, 2016, 2017, 2018 and 2019 were 31, 43, 44, 37, and 54, respectively. Annually there were on average 42 ± 9 neonates born weighing less than 1500 g, overall, the number of VLBW infants increased over the five years almost by half (from 31 infants in 2015 to 54 in 2019).

Analysing maternal factors and complications during the pregnancy (Fig.4), a tendency of growing numbers of GD during the years was found. In 2015 5.3% of women were diagnosed with GD, while in 2019 this number has risen to 42.9%. Other maternal factors and common complications during the pregnancy did not have statistically significant differences.

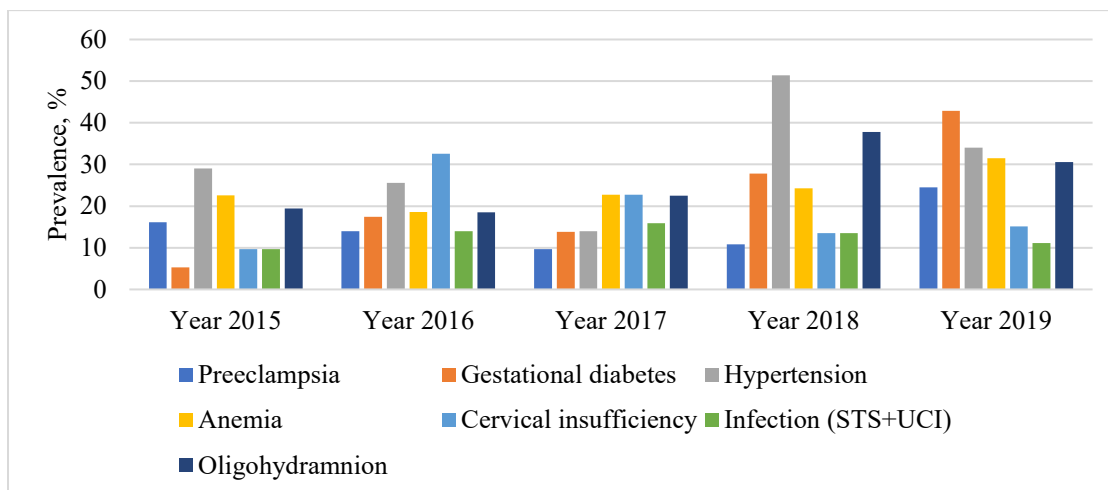


Figure 4 Prevalence of pregnancy complications across five years (created by the authors)

In total, antenatal steroids were administered for 88.8% infants, of which 83.5 % got a complete course. There was not a statistically significant difference between the years. In addition, neuroprotection with magnesium sulfate was administered to 53.1% of neonates. Neuroprotection significantly increased from 2015 to 2019 (respectively from 12.9% to 83.0%, $p < 0.001$). The increase started in 2017.

Starting from 2015, the number of vaginal deliveries decreased each year (from 48.4% in 2015 to 28.8% in 2019) and cesarean section became the more frequently chosen of delivery methods. There is also a statistically significant difference in delivery type by gestational age throughout the years, where vaginal delivery was preferred for premature pregnancies less than 28 gestational weeks ($p < 0.001$). Therefore, vaginal deliveries accounted for the majority of deliveries (64.6%) among gestational weeks less than 28, while for gestational age > 32 weeks cesarean section was the primary choice. In the gestational age group 28-32 weeks, there was a significant tendency to deliver vaginally in 2018, compared to other years ($p = 0.010$). Proportion of cesarean section by gestational age in weeks and year can be viewed in Figure 5.

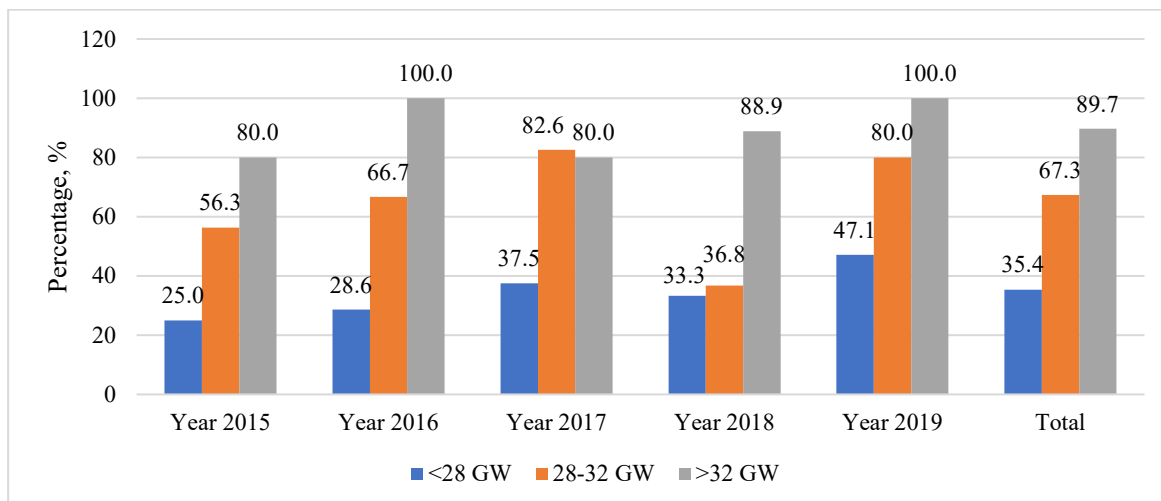


Figure 5 *Proportion of Cesarean section by gestational age in weeks and year* (created by the authors)

Neonatal factors (gender, birth weight, gestational age and Apgar scores) were similarly distributed over the years. The mortality rate fluctuated between the years, but it did not statistically significantly change (Fig.6). The highest mortality rate was seen in 2018 13.5%, and the lowest was 2.3% in 2016 ($p=0.277$). One-third (31.3%) of all neonatal deaths of the study population (5 out of 16) occurred in the year 2018, when intrauterine pneumonia, hemorrhage and tear of the cerebellar tentorium were the leading causes of death. All infants in 2018 died in the first 24 hours of their life.

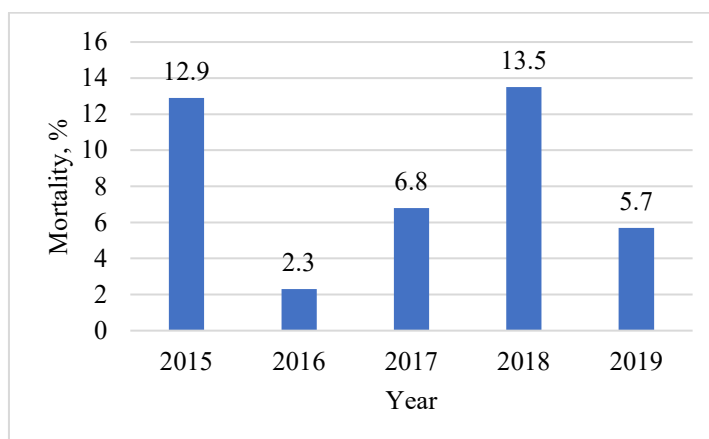


Figure 6 *Mortality rate by the year* (created by the authors)

Caffeine treatment differs over the years. Statistically, more infants in 2016 were given caffeine than in 2018 ($p=0.032$). Lower vitamin K usage was seen in 2015. The respiratory support rate increased significantly from 2015 to 2019 ($p=0.018$). In 2015, 29.0% of neonates did not get any kind of respiratory support, but in 2019 this number steadily decreased to 9.3%.

Table 3 Treatment and complication differences between years (created by the authors)

	2015 n=31 (%)	2016 n=43 (%)	2017 n=44 (%)	2018 n=37 (%)	2019 n=54 (%)	Total (N=) (%)	P value
Resuscitation at birth							
– Yes, basic	24 (77.4)	41 (95.3)	34 (77.3)	32 (86.5)	47 (87.0)	178 (85.2)	0.117
– Yes, advanced	7 (22.6)	2 (4.7)	10 (22.7)	5 (13.5)	7 (13.0)	31 (14.8)	
Antibacterial therapy*	30 (96.8)	43 (100.0)	43 (97.7)	36 (97.3)	52 (98.1)	204 (98.1)	0.910
Vitamin K	29 (93.5)	43 (100.0)	44 (100.0)	35 (94.6)	54 (100.0)	205 (98.1)	0.022
Caffeine	19 (61.3)	37 (86.0)	32 (72.7)	22 (59.5)	43 (79.6)	153 (73.2)	0.032
Surfactant therapy*	18 (60.0)	28 (65.1)	27 (61.4)	20 (54.1)	36 (66.7)	129 (62.0)	0.786
Breast milk*	24 (82.8)	38 (90.5)	36 (97.3)	31 (100.0)	47 (94.0)	176 (93.1)	0.076
Respiratory support*							
– None	0 (0.0)	1 (2.3)	0 (0.0)	4 (10.8)	1 (1.9)	6 (2.9)	0.289
– Non-invasive ventilation	20 (64.5)	31 (72.1)	27 (61.4)	23 (62.2)	31 (58.5)	132 (63.5)	
– Mechanical ventilation	7 (22.6)	10 (23.3)	15 (34.1)	6 (16.2)	17 (32.1)	55 (26.4)	
– HFOV	4 (12.9)	1 (2.3)	2 (4.5)	4 (10.8)	4 (7.5)	15 (7.2)	
Transfusions* (m=3)	9 (30.0)	9 (21.4)	16 (36.4)	8 (21.6)	21 (39.6)	63 (30.6)	0.215
Complications							
– RDS*	20 (64.5)	28 (65.1)	29 (65.9)	21 (56.8)	35 (66.0)	133 (63.9)	0.905
– Anemia*	5 (17.2)	8 (18.6)	9 (20.5)	1 (2.7)	9 (17.0)	32 (15.5)	0.206
– Pneumothorax	3 (9.7)	3 (7.0)	1 (2.3)	1 (2.7)	5 (9.4)	13 (6.3)	0.461
– Hemorrhage	4 (12.9)	7 (16.3)	8 (18.2)	4 (10.8)	8 (15.1)	31 (14.9)	0.906
Infection	8 (25.8)	7 (16.3)	10 (22.7)	9 (24.3)	13 (24.1)	47 (22.5)	0.862
– Meningitis	2 (6.5)	1 (2.3)	0 (0.0)	0 (0.0)	2 (3.7)	5 (2.4)	0.322
– Pneumonia	3 (9.7)	3 (7.0)	5 (11.4)	6 (16.2)	5 (9.3)	22 (10.5)	0.751
– Sepsis	6 (19.4)	3 (7.0)	5 (11.4)	2 (5.4)	5 (9.3)	21 (10.0)	0.400
– Conjunctivitis	1 (3.2)	2 (4.7)	2 (4.5)	1 (2.7)	3 (5.6)	9 (4.3)	0.986
Overall survival rate until transferred*	27 (87.1)	42 (97.7)	41 (93.2)	32 (86.5)	50 (94.3)	192 (92.3)	0.277

*Missing values

Median length of hospital stay over the five-year period was 6 days (Q1-Q3; 6-7). However, the distribution of hospital stay days was not the same across the years ($p < 0.001$). Earlier discharges were seen in 2019, compared to 2016 and 2017 when infants used to stay longer in the NICU.

Discussion

This study provides a new insight on neonatal care in Latvia's largest maternity hospital during a 5-year period. As the birth weight and gestational age increased, the mortality rate decreased, which is consistent with other studies of VLBW infants (Abolfotouh, Al Saif, Altwaijri, & Al Rowaily, 2018; Afjeh, Sabzehei, Fallahi, & Esmaili, 2013). Of the risk factors for increased mortality, the study proved that a young maternal age (<19 years) and positive chorioamniotic membrane culture proved to be significant. From the infant's data, being of male gender, having a 5-minute Apgar score <6 and extremely premature gestational age were significant factors, which is also proven by other studies (Jain et al., 2019; Jeschke et al., 2016). The most important factors from the treatment were the need for advanced resuscitation at birth, respiratory support with CMV, blood transfusions and surfactant applications, which may also indicate that these

newborns were in a more severe state. Non-survivors received significantly less breastmilk, therapy with antibiotics and caffeine, which could be explained by their serious condition and the need to focus on life-saving therapy options.

Complications and morbidities that lead to death were infection, anemia, RDS and hemorrhage, which are also proven by other studies as one of the most frequent ones (Jeschke et.al., 2016; Kardum, Grčić, Muller, & Dessardo, 2018).

We found that during the years 2014-2019, 7.7% of the total 209 VLBW infants did not survive till discharge. While the mortality rate decreased from 2015 to 2019, there was a rapid increase in the year 2018. While the underlying cause is unknown, there are some possible factors that could affect it. In the year 2018 various characteristics differed from other years such as the choice in delivery method - vaginal delivery was chosen more often. Although opinions differ, some studies show that vaginal delivery, particularly for extremely premature infants, has a higher percentage of adverse outcomes (AlQurashi, 2020; Kardum, Grčić, Muller, & Dessardo, 2018). Of all the years, 2018 had the highest number of cerebellar tentorium tears, which could be caused by the delivery process. Compared to 2016, 2018 1-minute Apgar scores were significantly lower as well as all non-survived infants died within the first 24 hours in 2018, which could indicate that the newborns had a more severe condition already at birth. Another factor that could have an impact on the mortality rate is caffeine usage - it was significantly lower than in other years. Furthermore, the use of caffeine is associated with reduced neonatal morbidity (Abdel-Hady, Nasef, Shabaan, & Nour, 2015). Looking from the mother's medical history during the years, there was a rapid increase in GD incidence and gestational hypertension, and both diseases have a higher risk for various complications for the newborn. On the treatment side we found an increase in the usage of ventilation support and antenatal neuroprotection with magnesium sulfate throughout the years, which are important factors in the reduction of the mortality rate (Rouse et al., 2008).

Our study results show that the VLBW infants survival rate has improved due to several developments in the quality of care in Latvia, which corresponds to the total worldwide tendencies, but that early and adequate prenatal care in preterm labour and choice of delivery plays a very important part for the survival of these infants (WHO, 2022; National Institutes of Health, 2022).

References

- Abolfotouh, M. A., Al Saif, S., Altwaijri, W. A., & Al Rowaily, M. A. (2018). Prospective study of early and late outcomes of extremely low birthweight in Central Saudi Arabia. *BMC pediatrics*, 18(1), 280. DOI: <https://doi.org/10.1186/s12887-018-1248-y>
- Abdel-Hady, H., Nasef, N., Shabaan, A. E., & Nour, I. (2015). Caffeine therapy in preterm infants. *World journal of clinical pediatrics*, 4(4), 81–93. DOI: <https://doi.org/10.5409/wjcp.v4.i4.81>

- Afjeh, S. A., Sabzehei, M. K., Fallahi, M., & Esmaili, F. (2013). Outcome of very low birth weight infants over 3 years report from an Iranian center. *Iranian journal of pediatrics*, 23(5), 579–587.
- Al Hazzani, F., Al-Alaiyan, S., Hassanein, J., & Khadawardi, E. (2011). Short-term outcome of very low-birth-weight infants in a tertiary care hospital in Saudi Arabia. *Annals of Saudi medicine*, 31(6), 581–585. DOI: <https://doi.org/10.4103/0256-4947.87093>
- AlQurashi, M. A. (2020). Impact of Mode of Delivery on the Survival Rate of Very Low Birth Weight Infants: A Single-Center Experience. *Cureus*, 12(12), e11918. DOI: <https://doi.org/10.7759/cureus.11918>
- Amaral, L. M., Wallace, K., Owens, M., & LaMarca, B. (2017). Pathophysiology and Current Clinical Management of Preeclampsia. *Current hypertension reports*, 19(8), 61. DOI: <https://doi.org/10.1007/s11906-017-0757-7>
- Bachnas, M. A., Akbar, M. I. A., Dachlan, E. G., & Dekker, G. (2021). The role of magnesium sulfate (MgSO₄) in fetal neuroprotection. *The journal of maternal-fetal & neonatal medicine : the official journal of the European Association of Perinatal Medicine, the Federation of Asia and Oceania Perinatal Societies, the International Society of Perinatal Obstetricians*, 34(6), 966–978. DOI: <https://doi.org/10.1080/14767058.2019.1619688>
- Centers for Disease Control and Prevention. (2022) Preterm birth. Retrieved from: <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/pretermbirth.htm#:~:text=Preterm%20birth%20is%20when%20a,2020%20to%2010.5%25%20in%202021>
- Chawla, S., Wyckoff, M. H., Rysavy, M. A., Patel, R. M., Chowdhury, D., Natarajan, G., Laptook, A. R., Lakshminrusimha, S., Bell, E. F., Shankaran, S., Van Meurs, K. P., Ambalavanan, N., Greenberg, R. G., Younge, N., Werner, E. F., Das, A., Carlo, W. A., & Eunice Kennedy Shriver National Institute of Child Health and Human Development Neonatal Research Network (2022). Association of Antenatal Steroid Exposure at 21 to 22 Weeks of Gestation with Neonatal Survival and Survival Without Morbidities. *JAMA network open*, 5(9), e2233331. DOI: <https://doi.org/10.1001/jamanetworkopen.2022.33331>
- Chollat, C., & Marret, S. (2018). Magnesium sulfate and fetal neuroprotection: overview of clinical evidence. *Neural regeneration research*, 13(12), 2044–2049. DOI: <https://doi.org/10.4103/1673-5374.241441>
- Coshal, H., Mukerji, A., Lemyre, B., Ng, E. H., Alvaro, R., Ethier, G., Yoon, E. W., Beltempo, M., & Shah, P. S. (2021). Characteristics and outcomes of preterm neonates according to number of doses of surfactant received. *Journal of perinatology: official journal of the California Perinatal Association*, 41(1), 39–46. DOI: <https://doi.org/10.1038/s41372-020-00779-9>
- Cunningham, M. W., Jr, & LaMarca, B. (2018). Risk of cardiovascular disease, end-stage renal disease, and stroke in postpartum women and their fetuses after a hypertensive pregnancy. *American journal of physiology. Regulatory, integrative and comparative physiology*, 315(3), R521–R528. DOI: <https://doi.org/10.1152/ajpregu.00218.2017>
- Dobson, N. R., & Hunt, C. E. (2018). Caffeine: an evidence-based success story in VLBW pharmacotherapy. *Pediatric research*, 84(3), 333–340. DOI: <https://doi.org/10.1038/s41390-018-0089-6>
- Dumpa, V., & Bhandari, V. (2018). Surfactant, steroids and non-invasive ventilation in the prevention of BPD. *Seminars in perinatology*, 42(7), 444–452. DOI: <https://doi.org/10.1053/j.semperi.2018.09.006>
- Gao, R., Liu, B., Yang, W., Wu, Y., Wang, B., Santillan, M. K., Ryckman, K., Santillan, D. A., & Bao, W. (2021). Association of Maternal Sexually Transmitted Infections with Risk of

- Preterm Birth in the United States. *JAMA network open*, 4(11), e2133413. DOI: <https://doi.org/10.1001/jamanetworkopen.2021.33413>
- Goldenberg, R. L., Culhane, J. F., Iams, J. D., & Romero, R. (2008). Epidemiology and causes of preterm birth. *Lancet (London, England)*, 371(9606), 75–84. DOI: [https://doi.org/10.1016/S0140-6736\(08\)60074-4](https://doi.org/10.1016/S0140-6736(08)60074-4)
- Günther, V., Alkatout, I., Vollmer, C., Maass, N., Strauss, A., & Voigt, M. (2021). Impact of nicotine and maternal BMI on fetal birth weight. *BMC pregnancy and childbirth*, 21(1), 127. DOI: <https://doi.org/10.1186/s12884-021-03593-z>
- Jain, K., Sankar, M. J., Nangia, S., Ballambattu, V. B., Sundaram, V., Ramji, S., Plakkal, N., Kumar, P., Jain, A., Sivanandan, S., Vishnubhatla, S., Chellani, H., Deorari, A., Paul, V. K., & Agarwal, R. (2019). Causes of death in preterm neonates (<33 weeks) born in tertiary care hospitals in India: analysis of three large prospective multicentric cohorts. *Journal of perinatology: official journal of the California Perinatal Association*, 39(Suppl 1), 13–19. DOI: <https://doi.org/10.1038/s41372-019-0471-1>
- Jefferies, A. L., & Canadian Paediatric Society, Fetus and Newborn Committee (2012). Kangaroo care for the preterm infant and family. *Paediatrics & child health*, 17(3), 141–146. DOI: <https://doi.org/10.1093/pch/17.3.141>
- Jeschke, E., Biermann, A., Günster, C., Böhler, T., Heller, G., Hummler, H. D., Bühner, C., & Routine Data-Based Quality Improvement Panel (2016). Mortality and Major Morbidity of Very-Low-Birth-Weight Infants in Germany 2008-2012: A Report Based on Administrative Data. *Frontiers in pediatrics*, 4, 23. DOI: <https://doi.org/10.3389/fped.2016.00023>
- Jia, C. H., Feng, Z. S., Lin, X. J., Cui, Q. L., Han, S. S., Jin, Y., Liu, G. S., Yang, C. Z., Ye, X. T., Dai, Y. H., Liang, W. Y., Ye, X. Z., Mo, J., Ding, L., Wu, B. Q., Chen, H. X., Li, C. W., Zhang, Z., Rong, X., Huang, W. M., ... Wu, F. (2022). Short term outcomes of extremely low birth weight infants from a multicenter cohort study in Guangdong of China. *Scientific reports*, 12(1), 11119. DOI: <https://doi.org/10.1038/s41598-022-14432-2>
- Kardum, D., Grčić, B.F., Muller, A., & Dessardo, S. (2018). Outcomes of very low birth weight infants born by vaginal delivery versus cesarean section. *Signa Vitae*, 14(2); 46-50.
- National Center for Health Statistics. (2012). Health, United States, 2011: With Special Feature on Socioeconomic Status and Health. Retrieved from: [https://www.cdc.gov/nchs/data/11.pdf](https://www.cdc.gov/nchs/data/hus/11.pdf)
- National Institutes of Health. (2022). Survival rate increases for extremely preterm infants in NIH-funded research network. Retrieved from: <https://www.nih.gov/news-events/news-releases/survival-rate-increases-extremely-preterm-infants-nih-funded-research-network>
- Pusdekar, Y., Patel, A., Kurhe, K., Bhargav, S., Thorsten, V., Garces, A., Goldenberg, R., Goudar, S., Saleem, S., Esamai, F., Chomba, E., Bauserman, M., Bose, C., Liechty, E., Krebs, N., Derman, R., Carlo, W., Koso-Thomas, M., Nolen, T., McClure, E., & Hibberd P. (2020). Rates and risk factors for preterm birth and low birthweight in the global network sites in six low- and low middle-income countries. *Reproductive Health*, 17 (3), 187. DOI: <https://doi.org/10.1186/s12978-020-01029-z>
- Rouse, D. J., Hirtz, D. G., Thom, E., Varner, M. W., Spong, C. Y., Mercer, B. M., Iams, J. D., Wapner, R. J., Sorokin, Y., Alexander, J. M., Harper, M., Thorp, J. M., Jr, Ramin, S. M., Malone, F. D., Carpenter, M., Miodovnik, M., Moawad, A., O'Sullivan, M. J., Peaceman, A. M., Hankins, G. D., ... Eunice Kennedy Shriver NICHD Maternal-Fetal Medicine Units Network (2008). A randomized, controlled trial of magnesium sulfate for the prevention of cerebral palsy. *The New England journal of medicine*, 359(9), 895–905. DOI: <https://doi.org/10.1056/NEJMoa0801187>

- Schindler, T., Koller-Smith, L., Lui, K., Bajuk, B., Bolisetty, S., & New South Wales and Australian Capital Territory Neonatal Intensive Care Units' Data Collection (2017). Causes of death in very preterm infants cared for in neonatal intensive care units: a population-based retrospective cohort study. *BMC pediatrics*, 17(1), 59. DOI: <https://doi.org/10.1186/s12887-017-0810-3>
- Stock, S. J., Thomson, A. J., & Papworth, S. (2022). Antenatal corticosteroids to reduce neonatal morbidity and mortality. *BJOG*, 129(8), e35-e60. DOI: <https://doi.org/10.1111/1471-0528.17027>
- Suffolk, R., Agertoft, L., Johansen, M., & Zachariassen, G. (2019). Late-onset group B streptococcus infections and severe bronchopulmonary dysplasia in an extremely preterm born infant. *BMJ case reports*, 12(7), e229255. DOI: <https://doi.org/10.1136/bcr-2019-229255>
- Vilanova, C. S., Hirakata, V. N., de Souza Buriol, V. C., Nunes, M., Goldani, M. Z., & da Silva, C. H. (2019). The relationship between the different low birth weight strata of newborns with infant mortality and the influence of the main health determinants in the extreme south of Brazil. *Population health metrics*, 17(1), 15. DOI: <https://doi.org/10.1186/s12963-019-0195-7>
- World Health Organization [WHO website]. (2020). Newborns: improving survival and well-being. Retrieved from: <https://www.who.int/news-room/fact-sheets/detail/newborns-reducing-mortality>
- World Health Organization [WHO website]. (2022). Newborn mortality. Retrieved from: [https://www.who.int/news-room/fact-sheets/detail/levels-and-trends-in-child-mortality-report-2021#:~:text=There%20are%20approximately%206700%20newborn,to%202.4%20million%20in%202020.\)\(%20https://www.nih.gov/news-events/news-releases/survival-rate-increases-extremely-preterm-infants-nih-funded-research-network](https://www.who.int/news-room/fact-sheets/detail/levels-and-trends-in-child-mortality-report-2021#:~:text=There%20are%20approximately%206700%20newborn,to%202.4%20million%20in%202020.)(%20https://www.nih.gov/news-events/news-releases/survival-rate-increases-extremely-preterm-infants-nih-funded-research-network)
- Zhang, J., Sun, K., & Zhang, Y. (2021). The rising preterm birth rate in China: a cause for concern. *The Lancet. Global health*, 9(9), e1179–e1180. DOI: [https://doi.org/10.1016/S2214-109X\(21\)00337-5](https://doi.org/10.1016/S2214-109X(21)00337-5)

VIZUĀLĀS KOMUNIKĀCIJAS UZSKATES LĪDZEKĻU SATURS SPECIĀLĀ ARTISTISKUMA STILU VEIDOŠANĀ JAUNAJĀM MĀKSLAS VINGROTĀJĀM

*Visual communication graphic guidance's content of special artistry
style creation for young rhythmic gymnasts*

Katrīna Krafte

Latvijas Sporta pedagoģijas akadēmija, Latvija

Viesturs Lāriņš

Latvijas Sporta pedagoģijas akadēmija, Latvija

Andra Fernāte

Latvijas Sporta pedagoģijas akadēmija, Latvija

Abstract. *The artistic evaluation of the competitive composition has a significant effect on the final result in rhythmic gymnastics. An important criterion of artistry is the ability of gymnasts to prove the idea and image of music-accompanied composition dynamically and emotionally. Thus, special artistry like imagery and its style is one of the determining tools for making an aesthetic impression, which accordingly affects the subjective evaluation of the composition. Considering the early specialization in rhythmic gymnastics, it is necessary to develop imagery of gymnasts already at the initial preparatory stage by using visual communication metaphoric graphic guidance. The aim of the research is to create a content of visual communication graphic guidance to develop the perception of special artistry styles for young rhythmic gymnasts (ages 4-6). To achieve the research goal scientific and specialized literature analysis and modelling methods were used. The graphic guidance was developed according to each style of special artistry, based on the visual communication design principles, illustrating the styles in the form of age-appropriate metaphors symbolized by animals, flowers, the environment, and other elements. In total, the content of 32 visual communication graphic guidance was developed.*

Keywords: *content of visual communication, creation of special artistry styles, rhythmic gymnastics.*

Ievads

Introduction

Pieaugot tehniskajai sarežģītībai mākslas vingrošanā, artistiskuma jeb mākslinieciskā izteiksmīguma vērtējums ir cieši saistīts ar kompozīcijas tehnisko saturu un tās izpildījumu. Termins “speciālais artistiskums mākslas vingrošanā”

ir specializēts jēdziens, kas tiek lietots, lai izteiktu māksliniecisko izteiksmīgumu, kas raksturīgs tieši mākslas vingrošanai. Speciālais artistiskums jeb mākslinieciskais izteiksmīgums mākslas vingrošanā ietver tēlainību un stilu, kas ir viens no noteicošajiem līdzekļiem estētiskā iespaida radīšanai, ietekmējot subjektīvo kompozīcijas vērtējumu (Viner, 2012; Terekhina, Kryuchek, Medvedeva, & Zenovka, 2014). Stils jeb izteiksmes veids ir noturīgu izteiksmes līdzekļu paņēmieni kopums, lai veicinātu tēlainību, savienojot vienotā veselumā formu un saturu, izteiksmi, laikmetu un personību (Spalva, 2013). Neskatoties uz to, ka kolektīvās bezapziņas vēstījumi simbolu, arhetipisko tēlu un sižetu veidā ir pazīstami un saprotami visiem, to uztveres subjektivitāti rada katra indivīda domāšanas, uztveres mehānisms un specifika (Jungs, 2005; Jung, 2021). K.G. Jungs empīriski noteica un sistematizēja izpratni par cilvēka psihi un tās struktūrā noteica trīs dihotomiju pārus: intraversija / ekstraversija, sensorika / intuīcija, loģika / ētika. Dihotomiju galējības nepastāv, bet tomēr kāda no tām dominē, tās var mainīties gan ārēju, gan iekšēju psihi ietekmējošu procesu rezultātā (Jung, 2021). Mākslas vingrošanā ar tajā prevalējošo tēlainību tiek akcentēta sakarība starp vingrotāju uztveres īpatnībām un simbolisko un abstrakto domāšanu, uzsverot intuīcijas dominanci pār sensoriku (Podgornaya, 2017). Tādejādi var izvirzīt pieņēmumu, ka ir mākslas vingrotājas, kurām dabiski piemīt tēlaina uztvere, bet citām tā nav tik raksturīga.

Jaunajām vingrotājām no 4 līdz 6 gadu vecumam ir noteikta cieša korelācija starp tēlainību un emocionālo izteiksmīgumu, savukārt ar kustību izteiksmīgumu, zemās tehniskās sagatavotības dēļ, korelācija ir vājāka. Savukārt no 8 līdz 10 gadus vecām vingrotājām, paaugstinoties tehniskās sagatavotības līmenim, nereti pazeminās emocionālais izteiksmīgums (Viner, 2012). Šī sakarība ir izskaidrojama ar to, ka bērniem līdz 7 - 9 gadu vecumam prevalē labās smadzeņu puslodes darbība un viņiem ir raksturīga uzvedības nepiespiestība, zems apzinātības līmenis, augsta emocionalitāte un viņu izziņas darbība raksturojas ar tēlainību, bet bērnam pieaugot, dažādu iekšēju un ārēju apstākļu rezultātā kognitīvajos procesos sāk prevalēt kreisā smadzeņu puslode ar tās loģiskumu (Yemelyanova, 2021). Mākslas vingrotājām tēlainību būtu nepieciešams attīstīt no 4 līdz 6 gadu vecumam abstraktu simbolu veidā, kamēr vēl piemīt tēlainā uztvere un domāšana.

Pētījuma mērķis ir izstrādāt vizuālās komunikācijas uzskates līdzekļu saturu speciālā artistiskuma stilu veidošanai mākslas vingrotājām no 4 līdz 6 gadu vecumam sākuma sagatavošanas posmā.

Pētījumā tika pielietotas zinātniskās un speciālās literatūras analīze, kā arī modelēšanas metode.

Speciālā artistiskuma stilu vizuālās komunikācijas līdzekļu saturs *Content of visual communication graphic for special artistry style*

Sacensību kompozīcijas izveidošanas process mākslas vingrošanā ir virzīts uz augstu sportisko rezultātu sasniegšanu un spilgta, emocionāla, empātiska iespaida radīšanu mērķauditorijai. Sacensību kompozīcija mākslas vingrošanā tiek veidota ievērojot vispārpieņemtos dramaturģijas likumus ar tēlu, sižetu un tiem piemītošo atribūtiku (Terekhina et al., 2014).

Horeogrāfam kā priekšnesuma radītājam ir sarežģīti izveidot tehniski augstvērtīgu, skaistu, tēlainu mākslas vingrošanas kompozīciju, kuru vingrotāja spēj veiksmīgi prezentēt. Mākslas vingrošanā trenerim un horeogrāfam ir izaicinājums vingrotājas kompozīcijai piemeklēt tēlu, ko viņa varētu veiksmīgi prezentēt sacensībās. Tātad ir precīzi jāzina prezentētāja, prezentējamā priekšnesuma un mērķauditorijas raksturīpašības. Iepriekšējie – vienkāršotie – priekšstati par cilvēku uzvedības motīviem vairs nav aktuāli, jo cilvēka uzvedības motīvi ir daudz komplicētāki (Eriomin & Kiseleva, 2007), cilvēka uzvedību nosaka kaut kas dziļāks par viņa apziņu. Pastāv identiskas, visiem cilvēkiem kopīgas psihes struktūras kognitīvās kategorijas – arhetipi, kuri tiek pārmantoti un izriet no kolektīvās bezapziņas, tie nosaka to kā cilvēks domā, uzvedas, uztver pasauli (Jungs, 1996; Jung, 2021) un vizuālās komunikācijas vēstījumus (Lupton, 2022). Arhetipi neizpaužas kā vienu un to pašu simbolisko tēlu kopums dažādiem cilvēkiem, bet drīzāk tie raksturo iedzimtu struktūru cilvēka psihē, nevis simbolisku attēlojuma formu. Konkrētas arhetipu attēlojumu formas atšķiras gan dažādu kultūru pārstāvjiem, gan katram cilvēkam individuāli. Šo arhetipisko lomu modeļu veidotie tēli, simboli un pirmtēli izpaužas pasakās, dažādu tautu mītos, tautasdziesmās, mākslā un pat sapņos (Mark & Pearson, 2005; Krans, 2018; Jung, 2020; Zinkevich-Evstegneeva, 2021). Spilgta simboliskā nozīme piemīt dzīvniekiem. Jau senie cilvēki dažādās pasaules malās attēloja dzīvniekus alu zīmējumos piešķirot tiem konkrētas īpašības un raksturīgo uzvedību (Yemelyanova, 2021; Estes, 2022). Pamazām mutvārdu daiļradē no paaudzes paaudzē tika nodotas pasakas, nostāsti, mīti, leģendas par dažādiem notikumiem. Ļoti bieži tajos cilvēku uzvedība tika pielīdzināta dzīvniekiem un otrādi, apkārtējā pasaule, vide ar cilvēkiem mijiedarbojas (Zinkevich-Evstegneeva, 2021). Sekojoši, jau paaudzēm ilgi veidojās diezgan konkrētas asociācijas, kuras pēc būtības var pielīdzināt arhetipiem (Jungs, 1996; Jung, 2020; Zinkevich-Evstegneeva 2021; Jung, 2021). Balstoties uz šīm asociācijām cilvēces vēsturiskajā attīstībā dažādu dzīvnieku personifikācijas tika iekļautas arī reliģiskajos konceptos.

Simboliski dzīvnieki sevī iemieso ne tikai dažādas īpašības, bet arī dabas stihijas. Gaisa stihiju asociatīvi iemieso kode, sikspārnis, jāņtārpiņš, bite, kolibri, grifs, krauklis, pūce, spāre, lakstīgala, pāvs, vanags, ērglis; uguns stihiju – ugunsskudra, hiēna, skorpions, ķirzaka, pantera, tarantuls, kamielis, gazele,

leopards, tīģeris, kobra, zebra, lauva, zilonis; ūdens stihiju – krokodils, dzelkšņraja, zivs, jūras zvaigzne, astonkājis, bebrs, austere, bruņurupucis, varde, ūdrs, haizivs, gulbis, delfins, valis; zemes stihiju – lācis, slieka, pele, trusis, jenots, lapsa, čūska, bizons, jērs, briedis, stirna, vilks, zirneklis, zirgs, kā arī dažādi mītiskie radījumi, kuri simbolizē kosmosa, ētera stihiju – jūras čūska, pūķis, vienradzis (Krans, 2018).

Tādejādi var apgalvot, ka dažādās kultūrās ir izveidojusies noturīga, vispārpieņemta un viegli saprotama uztvere par to, kādas īpašības piemīt dažādiem dzīvniekiem un kā tās korelē ar cilvēku uzvedību (Estes, 2022).

Arī augiem un ziediem tiek piešķirta dziļa simboliskā jēga, tie tiek personificēti dažādās kultūrās gluži tāpat kā dzīvnieki. Dvēseles nevainību un šķīstību simbolizē baltā lilija, zieda narcises vārdā ir nosaukts psiholoģiskais sindroms – narcisisms. Ziedu un augu simbolika var būt kā vispārpieņemta, tā arī var tikt personificēta katrai dzimtai vai cilvēkam atsevišķi. Šo personifikāciju spilgti parāda Anna Sakse, savos literārajos darbos pamatā ietekmējoties no sengrieķu leģendām, dažādu tautu pasakām (ķīniešu, japāņu, indiešu, dažādu Eiropas tautu) un, protams, latviešu tautas pasakām. Klasiskajā pasaku izdevumā katrai pasakai ir pievienota arī mākslinieka Kārļa Sūniņa ilustrācija. Ir būtiski minēt, ka arī krāsa ir svarīga, jo asociējas ar dažādām dabas parādībām un cilvēciskajām īpatnībām. Agresivitāte asociējas ar sarkano krāsu, uguns – ar siltumu un dzelteno krāsu, auglība – ar zaļo. Cilvēci jau sen ir interesējusi kolektīvās bezapziņas simbolu un sapņu tulkošana (Jung, 2020), kas parādās arī dažādās iztēles spēlēs (Dixit, Imaginarium, u.c.). Tajās simboliski un metaforiski ir attēloti arhetipiskie tēli un sižeti – dievišķā/religiozā tematika, sendienu varoņi, senās leģendas, pazīstami mākslas darbi, pasaku tematika, mitoloģiskas būtnes, vēsturiskās personības, dzīvnieki tiem raksturīgajā vidē un ar raksturīgajām īpatnībām, vide ar dabas ainavām un būvēm (Roubira & Coudray, 2019).

Secināms, ka vizuālās komunikācijas uzskates līdzekļu saturam speciālā artistiskuma stilu veidošanai mākslas vingrotājām no 4 līdz 6 gadu vecumam jāatspoguļo mākslinieciskās formas jēgu vienotā veselumā, attēlojot arhetipus vecumposmam atbilstošu metaforu veidā, raksturojot stila estētisko ideālu.

Metodoloģija *Methodology*

Pētījumā pielietota zinātniskās un speciālās literatūras analīze, kā arī modelēšanas metode, lai izstrādātu vizuālās komunikācijas uzskates līdzekļu saturu speciālā artistiskuma stilu veidošanai mākslas vingrotājām no 4 līdz 6 gadu vecumam sākuma sagatavošanas posmā.

Vizuālās komunikācijas uzskates līdzekļu saturs speciālā artistiskuma stilu veidošanai mākslas vingrotājām no 4 līdz 6 gadu vecumam tika veidots pamatojoties uz arhetipu teorijām un vizuālās komunikācijas principiem, stilus

attēlojot vecumposmam atbilstošu metaforu veidā, ko simbolizē dzīvnieki, ziedi, vide un citi elementi. Teorētiskajā pamatojumā tika izmantota K.G. Junga arhetipu un simbolisma teorija (Jungs, 1996; Jung, 2019; Jung, 2020; Jung, 2021), uz to balstītā sengrieķu mitoloģijas 7 arhetipu teorija (Shinoda-Bolen, 2020), 12 arhetipu teorija (Mark & Pearson, 2005), ņemot vērā, ka veiksmīgi veidots dizains, izmantojot arhetipiskos tēlus, sižetus, un ievērojot dramaturģijas principus, ne tikai informē, bet arī vēsta par vērtībām, rada atbilstošu emocionālo fonu un rosina darbību (Mark & Pearson, 2005). Pamatojoties uz pasaku terapijas teoriju, bērni līdz 5 gadu vecumam sevi identificē ar dzīvniekiem, cenšas tiem līdzināties, bet 6-7 gadu veciem bērniem caur tēlainiem stāstījumiem, pasakām veidojas pasaules uztvere (Zinkevich-Evstegneeva, 2021). Dramaturģijas un stāsta, pasakas veidošanas teorija (Zinkevich-Evstegneeva, 2021; Lupton, 2022) izmantota, lai vizuāli treniņu procesā veidotu izpratni par speciālā artistiskuma stiliem mākslas vingrotājām no 4 līdz 6 gadu vecumam.

Ar dzīvniekiem vizualizēto arhetipu analīzē iekļauts Kimas Kransas (Krans, 2018) “Mežonīgais nezināmais. Dzīvnieku gars” izdevums. Izdevumā esošās atklātnes ir veidotas balstoties uz dažādu tautu ticējumiem, leģendām, pasakām, kā arī uz intuitīvo uztveri, tam ar ko cilvēks asociē attiecīgo dzīvnieku. Komplektā ir iekļauti 63 zīmējumi, kuri simbolizē dažādu rakstura īpašību un uzvedības kopumu. No tiem pētījumam tika izvēlēti 32 zīmējumi, kas tika izmantoti vizuālās komunikācijas uzskates līdzekļu satura izstrādē speciālā artistiskuma stilu veidošanai mākslas vingrotājām.

Ar ziediem/augiem vizualizēto arhetipu analīzē tika izvēlētas 33 pasakas (Sakse, 2018), kurās tiek izmantotas metaforas un personifikācijas cilvēcisku īpašību aprakstīšanai, izmantojot vienkāršus ziedus/augus, taču bērniem šajā vecumposmā daži no tiem var būt arī nepazīstami. Pasakās viss tiek paskaidrots un tēlaini ilustrēts, kā arī katram ziedam/augam piešķirts noteikts īpašību kopums, kas palīdz attīstīt iztēli. Izmantotie ziedi/augi ir – sniegpulkstenīte, forsteriāna, pienene, ķirsis, cūkausis, narcise, hiacinte, jasmīns, ceriņi, vijolīte, magone, lapsaste, kurpītes, kamēlija, saulgrieze (saulespuķe), lotoss, naktsvijole, mežroze, lauztā sirds, gladiola, puķu zirnītis, tītenis, sausziedis, dzegužasara, ūdensroze, lilija, orhideja, balzamīne, granātkoks, peonija, magnolija (Sakse, 2018). Pasaku apkopojumā ir 33 pasakas, bet vizuālās komunikācijas uzskates līdzekļu satura izstrādē speciālā artistiskuma stilu veidošanai mākslas vingrotājām tika izmantotas 32 pasakas. Pasaka “Zaķkāposti” netika izmantota.

Modelēšana šajā pētījumā ietver simbolizāciju – uzskatāmības piešķiršanu speciālā artistiskuma stiliem mākslas vingrošanā. Speciālā artistiskuma stilu vizuālajai modelēšanai kā analogija tika izmantota iztēli attīstošās galda spēles “Dixit” laidiena “Revelations” vizualizācija, jo tajā veiksmīgi savienoti dažādi elementi un radīts simboliski metaforisks attēlojums vizuālajā attēlā (Roubira & Coudray, 2019).

Pētījuma rezultāti Results

Mūsu iepriekšējā pētījumā (Krafte et al., 2021) speciālā artistiskuma stilu teorētiskā klasifikācijas un sistematizācijas veidošana mākslas vingrošanā tika balstīta uz arhetipu teoriju (Jungs, 1996, Shinoda-Bolen, 2020).

1. tabula. *Arhetipi speciālā artistiskuma stilos mākslas vingrošanas kompozīcijās pēc arhetipu teorijām* (Mark & Pearson, 2005, Shinoda-Bolen, 2020)

Table 1 *Archetypes in styles of special artistry in rhythmic gymnastics compositions by the archetypes theories* (Mark & Pearson, 2005, Shinoda-Bolen, 2020)

Arhetipi (Shinoda-Bolen, 2008)	Persefone	Atēna	Afrodīte	Hēra un Dēmetra	Artemīda un Hestija
Stili	gaišais ēnas	gaišais ēnas		gaišais ēnas	gaišais ēnas
	gaišais ēnas	gaišais ēnas		gaišais ēnas	gaišais ēnas
	gaišais ēnas	gaišais ēnas		gaišais ēnas	gaišais ēnas
	gaišais ēnas	gaišais ēnas		gaišais ēnas	gaišais ēnas
Arhetipi (Mark & Pearson, 2021)	Vientiesis	Jokdaris		Burvis	Varonis / Kareivis
	Jaukais puisis	Dumpinieks		Aizgādnis	Valdnieks
	Pētnieks			Gudrais	
	Radītājs			Mīlnieks / Estēts	

Šajā pētījumā minētā klasifikācija un sistematizācija tika papildināta ar 12 arhetipu teoriju (Mark & Pearson, 2005) (1.tab.). Tabulā (1.tab.) izmantota uz 7 sengrieķu dievietēm balstītā teorija (Shinoda-Bolen, 2005) Persefones, Atēnas, Afrodītes, Hēras, Dēmetras, Artemīdas, Hestijas veidolos un Mark & Pearson 12 arhetipu teorijas ar naiva, brīnumiem ticoša Vientieša, kolektīvā iekļauties griboša, labsirdīga Jaukā puisa; jaunu apvāršņu un teritoriju atklājēja Pētnieka; skatuves mākslinieka, esošās morāles izaicinātāja, citu izjokotāja Jokdara; gatava iet pretim novecojušiem uzskatiem, romantiķa Dumpinieka; spilgtas jaunrades un drāmas pārņemta Radītāja; mīlestības un skaistuma alkstoša manipulatora Mīlnieka/ Estēta; burvestībām un sapņu realizāciju aizņemtā Burvja; empātiska un pašuzpurējoša Aizgādņa; vieduma un apgarota Gudrā; kvēla aizstāvja, mērķtiecīga, uzstājīga Varoņa/Kareivja; atbildīga, esošo sistēmu strukturējoša Valdnieka tēliem (Mark & Pearson, 2005). Minētajās teorijās ir uzsvērtā to hronoloģiska un secīga atbilstība personības attīstības līmeņiem un vecumposmiem, un vērojams “varoņa ceļš” (Mark & Pearson, 2005; Jung, 2019; Jung, 2020; Jung, 2021, Zinkevich-Evstegneeva, 2021; Estes, 2022; Lupton, 2022), kura laikā iziet transformāciju un sasniedz savus mērķus. Taču pētījumā, strukturējot tēlainību mākslas vingrošanā, šī koncepcija netika ņemta vērā, jo speciālā artistiskuma stili ir atspoguļoti vienā laika dimensijā un ir vienlīdz un vienlaikus apgūstami visām vingrotājām, neatkarīgi no viņu vecuma.

Mūsu pētījuma (Krafte et al., 2021) ietvaros tika izveidoti 32 speciālā artistiskuma stili mākslas vingrošanā. Stihiju sadalījums un speciālā artistiskuma stilu formas un arhetipi/motīvi ir izstrādāti jau iepriekš (Krafte et al., 2021), taču pašreizējā koncepcijā ir veikti daži precizējumi, kā arī katrs stils līdzīgi arhetipam ir attēlots savā gaišajā un ēnas izpausmēs (2.tab.) vadoties pēc K. G. Junga arhetipu un simbolisma teorijas (Jungs, 1996; Jung, 2020; Jung, 2021).

2. tabula. *Speciālā artistiskuma stilu shematisks attēlojums pēc to darbības motīviem un formas mākslas vingrošanā*

Table 2 *Schematic of special artistry styles by action motives and forms in Rhythmic gymnastics*

		Gaišā izpausme				Ēnas izpausme				Forma
		Stihija								
Stihija	Forma	Gaiss	Uguns	Ūdens	Zeme	Gaiss	Uguns	Ūdens	Zeme	Forma
		Motīvs								
		Sapņotāja	Medniece	Aprūpētāja	Varone	Spītniece	Iekarotāja	Pamāte	Karaliene	
Gaiss	Bezrūpīgā	1.1	2.1	3.1	4.1	5.1	6.1	7.1	8.1	Dum-pīgā
Uguns	Kareivīgā	1.2	2.2	3.2	4.2	5.2	6.2	7.2	8.2	Uzbrū-košā
Ūdens	Jutekliskā	1.3	2.3	3.3	4.3	5.3	6.3	7.3	8.3	Nomā-cošā
Zeme	Varonīgā	1.4	2.4	3.4	4.4	5.4	6.4	7.4	8.4	Cietsir-dīgā
		Draiskais	Drama-tiskais	Roman-tiskais	Dabis-kais	Draiskais	Drama-tiskais	Roman-tiskais	Dabis-kais	
Ārējā izskata tips										

Katrs attiecīgais tēls tika atspoguļots balstoties uz arhetipu raksturojumiem (Jungs, 2005; Mark & Pearson, 2005; Shinoda-Bolen, 2020), uz stihiju un tiem atbilstošo darbības formu raksturojumiem secībā gaiss-uguns-ūdens-zeme (Bozhko, 2017) un uz ārējā izskata tipiem, vizuāli nosakāmiem pēc formas, līnijām, kontrastiem, mēroga – draiskais, dramatiskais, romantiskais, dabiskais (Kibbe, 1987; Larson, 2012) atbilstoši stihijām un arhetipiem.

Kopumā tika izveidots 32 vizuālās komunikācijas uzskates līdzekļu saturs speciālā artistiskuma stilu veidošanai mākslas vingrotājām no 4 līdz 6 gadu vecumam sākuma sagatavošanas posmā. Vizuālās komunikācijas uzskates līdzekļu saturs tika veidots atbilstoši katram speciālā artistiskuma stilam: 16 līdzekļi gaišajā un 16 līdzekļi ēnas izpausmē (2.tab.).

Kā speciālā artistiskuma stila raksturojuma piemēri mākslas vingrošanā pētījumā turpmāk tiek analizēti iepriekš (2.tab.) norādītie stili – 2.3 “Maigais reibums” un – ēnas izpausmē – 6.3. “Saldā inde” (3.tab.).

Speciālā artistiskuma stila “Maigais Reibums” simboliskajam attēlojumam tika izvēlēts R. Zemekisa filmas “Kas iegāza trusi Rodžeru?” tēls Džesika Rebita – apburoša, valdzinoša skaistule, kabarē dziedātāja un dejojāja. Viņas veidols atbilst Jokdara, Dumpnieka, Radītāja, Mīlnieka/Estēta un Burvja arhetipiem, par ko liecina valdzinošais ārējais izskats, sarkanā, violetā krāsa un to kontrastainais savienojums; kā dzīvnieks tika izvēlēta lapsa, pateicoties tās ārējam izskatam, krāsu gammai un kustībām, kas ir līdzīgas stila tēlam. Lapsa ir gudrības,

viltības, uzņēmīguma un radošuma iemiesojums, viņa vienmēr aizstāv savus mīļotos (Krans, 2018) līdzīgi Džesikai Rebitai, kura aizstāv savu vīru Trusi Rodžeru un vienmēr palīdz tam. Kā lapsai piemērotākā vide tika izvēlēta rudenīgais mežs dēļ tai raksturīgā dzīvošanas areāla un krāsu gammas. Stilam piešķirtais nosaukums “Maigais Reibums” un Džesikas Rebitas tēls noteica zieda izvēli – Sarkanā Magone, kura simbolizē miega un sapņu dieva Morfeja burvestības un parādās pavadinātājas veidolā (Sakse, 2018). Lai arī Džesikas Rebitas tēls šķiet valdzinošs un grēcīgs, tomēr viņa ir uzticīga sava vīra sieva, tāpēc viņas sauklis ir “Es neesmu slikta, esmu tā uzzīmēta!”. Stila ēnas pusei “Saldā inde” kā tēls tika izvēlēts noslēpumainā iekarotāja Šamahanas valdniece no A. Puškina pasakas “Par zelta gaili” un no S. Glezina animācijas filmas “Trīs spēkavīri un Šamahanas valdniece”. Tēla veidols atbilst Džesikas Rebitas arhetipiem, taču ēnas izpausmes ietekmē vairāk akcentē Burvi, par ko liecina viņas burvestības un Šamahanas valdnieces sievišķīgais austrumnieciskais tērps tumši violetā un melnā krāsā, viņas mati un seja ir tradicionāli aizklāti. Kā dzīvnieks tika izvēlēta kobra, kas dzīvo Vidusāzijas stepē, jo tā ir bīstama un indīga, kā arī ir ārējā līdzība un līdzīgas kustības. Kobra simbolizē slepenās zināšanas un cilvēka transformāciju tā ceļā (Krans, 2018), kas ir spilgti attēlots animācijas filmā un pasakā Šamahanas valdnieces tēlā. Kā zieds tika izvēlēts tumši violets ceriņš (šķirne “Radžs Kapurs”) – atbilstošās krāsu gammas un stiprā, apreibinošā aromāta dēļ, zem ceriņu krūma var paslēpties, bet izglābties – nē (Sakse, 2018). Tāpēc šī stila sauklis ir “Nē, tu nekur no manis neaizmuksi!”.

3. tabula. *Speciālā artistiskuma stili “Maigais Reibums” un “Saldā inde”*
Table 3. *Special artistry styles “Tender Dizziness” and “Sweet Poison”*

	Gaišā izpausme	Ēnas izpausme
Arhetipi (Mark & Pearson)	Jokdaris, Dumpinieks, Radītājs, Mīlnieks/Estēts, Burvis	
Arhetipi (Shinoda-Bolen)	Afrodīte, Artemīda, Hēra	
Nosaukums	Maigais reibums	Saldā inde
Personāžs	Džesika Rebita (no R. Zemekisa filmas “Kas iegāza trusi Rodžeru?”)	Šamahanas valdniece (no A. Puškina pasakas “Par Zelta gaili”, no S. Glezina animācijas filmas “Trīs spēkavīri un Šamahanas valdniece”)
Stils	Jutekliskā Medniece (2.tab. – 2.3)	Nomācošā Iekarotāja (2.tab. – 6.3)
Tips (Larsen)	Romantiskais dramatisks “Rezonējošais”	
Devīze	Es neesmu slikta, esmu tā uzzīmēta!	Nē, tu nekur no manis neaizmuksi!
Dzīvnieks, totēms	lapsa	kobra
Zieds, totēms	sarkanā magone	ceriņi “Radžs Kapurs”
Krāsa	sarkans, violets, oranžs, kontrastainas krāsu kombinācijas	melns, violets
Vide	rudenīgais mežs	Vidusāzijas stepe
Vizuālās komunikācijas dizains	Stila tēlam piemītošās atribūtikas simbolisks un metaforisks attēlojums	

Izvēlētie simboli spilgti ilustrē speciālā artistiskuma stilus mākslas vingrošanā, kas jaunajām vingrotājām ļauj veidot izpratni par tiem. Tos var paspilgtināt ar atbilstošiem skaņdarbiem. Vizuālās komunikācijas uzskates līdzekļu saturs speciālā artistiskuma stilu veidošanai mākslas vingrotājām no 4 līdz 6 gadu vecumam sākuma sagatavošanas posmā ļaus izvēlēties katras vingrotājas individuālajam tēlainības stilam atbilstošus sacensību kompozīciju tēlus. Tas optimizēs kompozicionālās sagatavošanas procesu, ļaus vingrotājām izteiksmīgi izpildīt kompozīcijas ar pastāvīgi pieaugošu tehnisko sarežģītību un tādejādi uzlabos viņu rezultātus sacensībās.

Secinājumi **Conclusions**

Izstrādātais vizuālās komunikācijas uzskates līdzekļu saturs speciālā artistiskuma stilu veidošanai mākslas vingrotājām no 4 līdz 6 gadu vecumam sākuma sagatavošanas posmā veido 32 vizuālās komunikācijas uzskates līdzekļus. Tie ir atbilstoši katram speciālā artistiskuma stilam: 16 līdzekļi gaišajā – mūsu personības vēlamajā izpausmē un 16 līdzekļi ēnas – mūsu personības negatīvās, nevēlamās puses izpausmē.

Vizuālās komunikācijas uzskates līdzekļu saturā ir iekļauti arhetipiskie tēli un sižeti, kuri attēloti simboliskā veidā, apvienojot dzīvniekus, augus un vidi, veidojot mentālu un kustību izpratni par tēliem mākslas vingrošanā.

Izstrādāto vizuālās komunikācijas uzskates līdzekļu satura pielietošana speciālā artistiskuma stilu veidošanā mākslas vingrotājām no 4 līdz 6 gadu vecumam sākuma sagatavošanas posma treniņu procesā var sekmēt kompozicionālās sagatavošanas procesa optimizāciju, jo tiks sekmēts vingrotāju kompozīcijas izpildes izteiksmīgums pastāvīgi pieaugošā tehniskā sarežģītībā, tādejādi rodot iespēju uzlabot viņu rezultātus sacensībās. Kā arī tiek radīta iespēja treneriem izvēlēties atbilstošu sacensību kompozīciju tēlu, ņemot vērā katras vingrotājas individuālo tēlainību.

Summary

The developed visual communication graphic guidance's content of special artistry styles for young rhythmic gymnasts aged 4 to 6 in the initial preparatory stage consists of 32 visual communication guidance. They are appropriate to each style of special artistry: 16 items in the light – the desired manifest of our personality and 16 items in the manifest of the shadows – the negative, undesirable side of our disposition.

Content of the visual communication graphic guidance includes archetypic images and depicted storylines combining animals, plants, and the environment, creating a mental and movement awareness of the images in rhythmic gymnastics.

The application of the content of the developed visual communication guidance in the creation of special artistry styles for rhythmic gymnasts aged 4 to 6 in the training process' initial preparatory stage may optimize the compositional preparation process since the expressiveness of the composition performance of gymnasts will advance in the increasing technical complexity, thus finding an opportunity to improve their competition results. It also creates an opportunity for coaches to choose the appropriate image of competition compositions, considering the sole imagery of each gymnast.

Literatūra References

- Bozhko, A. (2017). *Socionika. Edinstvo v razlichijah*. Retrieved from: <https://www.andrewbozhko.com/broshura>
- Eriomin, V.V., & Kiseleva E.S. (2007). *Primenenie socioniki v marketinge dlya sozdaniya uspeshnyh brendov*. The scientific theory journal «Vestnik TGPU», № 9 (72), 16-20.
- Estes, K. P. (2022). *Begusshaya s volkami. Zhenskii arhetip v mifah i skazaniyah*. Moskva: Sofija
- Yemelyanova, E. N. (2021). *Mir levshat. Uchimsya bez problem*. Moskva: Airis-Press
- Jung, C. G. (2019). *Eon. Issledovaniya o simvolike samosti*. Moskva: AST
- Jung, C. G. (2020). *Alkhimiya snov. Chetyre arkhetipa (3-e izdanie)*. Moskva: Medkov S.B.
- Jung, C. G. (2021). *Arkhetipy i kollektivnoe bessoznatelnoe*. Moskva: AST
- Jungs, K. G. (1996). *Psihologiskie tipi*, Rīga: Zvaigzne ABC
- Kibbe, D. (1987). *Metamorphosis: Discover Your Image Identity and Dazzle As Only You Can*. New York: Atheneum
- Krafte, K., Lāriņš, V., & Fernāte, A. (2021). *Speciālā artistiskuma stili mākslas vingrošanā. Rēzekne: Sabiedrība. Izglītība. Integrācija (ISSN 1691-5887), 379-391. DOI: 10.17770/sie2021vol4.6303*
- Krans, K. (2018). *The Wild Unknown Animal Spirit Deck and Guidebook*. Harper One
- Larson, D. (2012). *20 Types of Beauty*. Electronic book.
- Lupton, E. (2022). *Dramaturgiya dizayna. Kak, ispol'zuya priemy storitellinga, udivlyat' grafikoy, produktami, uslugami*. Moskva: Eksmo
- Mark, M., & Pearson, S.K. (2005). *Geroi i buntar'*. Moskva: Piter
- Podgornaya, Y.N. (2017), *Individualizaciya psihologicheskoy podgotovki v hudozhestvennoy gimnastike na osnove ucheta socionicheskikh tipov lichnosti sportmenok*, The scientific theory journal «Ucheniye zapiski», № 12 (154), 348-355. Retrieved from: <https://tatyana-mamenko.ru/stilevye-tipazhi/perevod-knigi-d.larson-ot-akademii-svoe-lico/>
- Roubira, J. L. & Coudray, M. (2019). *Dixit. Revelations, Libellud*
- Sakse, A. (2018), *Pasakas par ziediem*, Rīga: Zvaigzne
- Shinoda-Bolen, J. (2020). *Bogini v kazhdoy zhenshhine*, Moskva: Amrita-Rus
- Spalva, R. (2013). *Klasiskā deja un balets Eiropas kultūrā*. Rīga: Zinātne
- Terekhina, R. N., Kryuchek, Y. S., Medvedeva, Y. N., & Zenovka, I. B. (2014). *Sovremennyy podhod k procesu postanovki sorevnovatel'nyh kompozitsiy v hudozhestvennoy gimnastike*. The scientific theory journal «Ucheniye zapiski», № 8 (114), 180-185. DOI: 10.5930/issn.1994-4683.2014.08.114.p180-185
- Viner, I. A. (2012). *Level of artistry of gymnasts at the stage of primary and specialized training*. The scientific theory journal «Ucheniye zapiski», № 3 (85), 49-53.
- Zinkevich-Evstegneeva, T. D. (2021). *Praktikum po skazkoterapii*. St.Peterburg: Rech

THE EFFECTS OF MYOFASCIAL SELF-RELEASE METHOD AND TOOL APPLICATION ON ATHLETE STRENGTH INDICATORS IN TIBIA EXTENSOR MUSCLES IN FITNESS

Leonīds Čupriks

Latvian Academy of Sport Education, Latvia

Aleksandra Keizāne

Latvian Academy of Sport Education, Latvia

Valts Freibergs

Latvian Academy of Sport Education, Latvia

Abstract. *The aim of the present study was to analyse the effectiveness of myofascial self-release methods and the use of the tool in the development of strength indicators in the tibia extensor muscles. Instrumental assessment of muscle function was performed on a REV 9000, Technogym^R, Italy. The subjects of our study were twenty healthy fitness athletes aged between 20 and 23 years. A set of strength exercises was developed, consisting of 10 exercises focused on increasing the muscle strength of tibia extensor muscles. For the experimental group self-massage with a roller was applied. When applying strength-development exercises with a set of self-release, the dynamics of maximum strength results are as follows: the force balance of the dominant and the non-dominant leg in the control group before ($p=0.001$) and after ($p=0.02$) the experiment, and in the experimental group before ($p=0.01$) and after ($p=0.02$) the experiment remained unchanged – no significant changes were observed in the results between the groups; - positive dynamics in strength changes were observed for the dominant leg between the control group ($p=0.08$) and the experimental group ($p=0.37$) before and after the experiment. The positive increase in the results is in favour of the experimental group, although there are no significant statistical differences in the results of the control group. On the other hand, no differences in the strength dynamics of the non-dominant leg were found.*

Keywords: *dynamometry, fitness, maximum strength, myofascial self-release, tibia extensor muscles*

Introduction

It is believed that self-massage is very useful for athletes who regularly must overcome heavy loads during training and competition. Its purpose is to prepare the body for performing physical exercises, as well as to prevent injuries and fight against fatigue (Zeidlers, 2009).

Massaging with a massage roller has been observed to stimulate nerve impulses in humans, thus potentially increasing strength and performance

(Macgregor, Fairweather, Bennett, & Hunter, 2018). In a study on the effects of massage rollers on the performance and recovery, the authors concluded that in the short term, rolling before an exercise or a task will improve muscle elasticity without affecting muscle performance (Wiewelhove, Döweling, Schneider, Hottenrott, Meyer, Kellmann, & Ferrauti, 2019).

Using self-massage with rolling has been shown to accelerate the recovery process to restore strength properties. Moreover, rolling with self-massage rollers after the active part of the class showed a positive effect on strength indicators (Zorko, Škarabot, García-Ramos, & Štirn, 2016; Fleckenstein, Wilke, Vogt, Banzer, 2017). Using it as a recovery tool, participants in one study experienced a reduction in muscle soreness and an increase in strength properties (Larson, 2014). If used successfully to treat muscle injuries and pain, myofascial self-massage may also improve muscle mechanical properties, range of motion, and strength indicators, reducing muscle stiffness and fatigue (Wiewelhove et al., 2019; Macgregor et al., 2018; Poppendieck, Wegmann, Ferrauti, Kellmann, Pfeiffer, & Meyer, 2016; Aboodarda, Spence, & Button, 2015; Pearcey, Bradbury-Squires, Kawamoto, Drinkwater, Behm, & Button, 2015; Hill, Howatson, van Someren, Leeder, & Pedlar, 2014; Sullivan, Silvey, Button, & Behm, 2013; Hunter, Watt, Watt, & Galloway, 2006). The self-massage roller is claimed to be used to help increase blood flow and circulation to specific areas of the muscles, helping to increase muscle elasticity, flexibility and joint range of motion (Graven-Nielsen, Lund, Arendt-Nielsen, & Danneskiold-Samsøe, 2002).

Studies (Sullivan et al., 2013; Halperin, Aboodarda, Button, Andersen, & Behm, 2014; Zorko et al., 2016) found that rolling with self-massage rollers slightly but significantly increased strength indicators in the tibia extensor muscles in men. However, such a factor was not observed in women. It was concluded that this could possibly be related to the differences in muscle mass between women and men.

Therefore the aim of our research was to determine the effectiveness of myofascial self-massage method and tool application in developing strength indicators in the tibia extensor muscles for healthy fitness athletes.

Methodology

A dynamometric device “REV 9000” (*Technogym^R, Italy*) was used as part of dynamometric testing. It obtained the maximum strength indicators (Nm) of the participants in the isometric mode before and after the experimental part - performing the exercises. Maximum strength indicators were determined for the right and left leg of the research participant. At the beginning of dynamometry, a lever was installed.

The participant sat in the seat of the REV 9000 and a loop was placed over the ankle part, and the lever itself was mounted parallel to tibia. After preparatory work, continuous passive movements (CPM) at 100°/sec with set amplitude

parameters from 14° to 93° (ROM) degrees were performed to warm up the leg for maximum force load in dynamometry. After the participants prepared to perform maximum force expression in the isometric mode with the knee joint flexed at an angle of 90° and performed 3 sets to obtain the indicators. A 20-second break was observed between the attempts. As a result, the maximum strength indicators (Nm) were obtained. After obtaining the maximum strength indicators, continuous passive movements (CPM) were performed for the purpose of cooling down. During the practical part of the study, to determine the use of the myofascial self-massage method for increasing exercise performance, a control group (CG) and an experimental group (EG) was formed.

The research contingent were men. There were 20 fitness representatives who engaged in physical activities regularly, at least 3 times a week, aged between 23 and 25 years. Both study groups were instructed to perform 3 of the 10 selected exercises for developing the leg muscles each time during the physical exercise tests. The number of times to perform each exercise varied from 8 to 20 repetitions and 2-3 sets. At the beginning of the stage, the number of times was smaller and with each time, over a period, it was increased, increasing the volume and intensity of the load, depending on the adaptation abilities and performance of the athletes.

The following exercises were selected for the strength-building: lower leg extension in the exercise machine with resistance; squats from a sitting position on a bench and standing up, holding a weight in front; squats with a big exercise ball behind the back and against the wall; squats in the Smith machine, bringing the feet forward in the starting position; lunge with one leg, with the rear leg on an elevation; stepping forward into a lunge with narrow legs and hands holding dumbbells downwards; climbing on an elevation with one leg (on a box); squats on tiptoes, bending the upper body backwards; squat with a barbell on one's back, feet hip-width apart; squat with a barbell in front.

Separately, the experimental group underwent self-massage with a roller after performing strength exercises. These exercises included rolling with a roller and shin flexion (bending), pressing on the most sensitive area of the quadriceps in the thigh.

The "R-Studio" computer programme was used to perform the statistical analysis.

Results of the research

The results obtained during the data processing stage were divided into groups of dominant and non-dominant leg. The collected average maximum strength indicators in the control group ($n = 20$) before the application of strength exercises for the dominant leg is 333.71 ± 44.75 Nm ($p=0.59$), and for the non-dominant leg 307.42 ± 38.96 Nm ($p=0.02$). See Figure 1 for the graphical

distribution of the maximum strength indicators in the control group for the dominant and non-dominant leg.

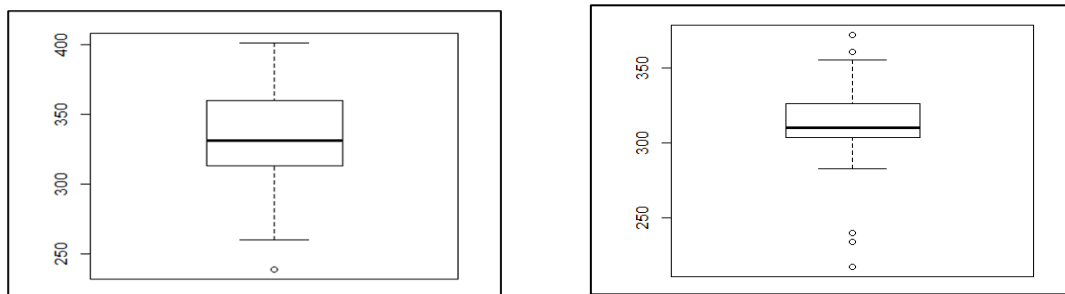


Figure 1 Graphical distribution of the control group data on maximum strength indicators (Nm) for the dominant (left graph) and non-dominant (right graph) leg prior to the experiment (created by the authors)

The summarized average strength indicators ($n = 20$) in the experimental group before applying strength and self-massage for the dominant leg is 330.65 ± 46.44 Nm ($p = 0.44$), and for the non-dominant leg: 313.34 ± 47.71 Nm ($p = 0.03$). For the graphical distribution of the maximum strength indicators in the experimental group for the dominant and non-dominant leg, see Figure 2.

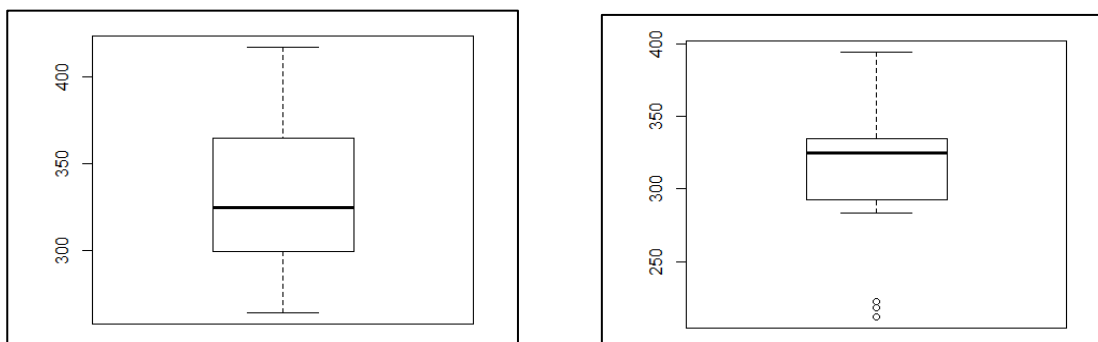


Figure 2 Graphical distribution of the experimental group data on maximum strength indicators (Nm) for the dominant (left graph) and non-dominant (right graph) leg prior to experiment (created by the authors)

Comparing the obtained results ($n = 20$) for the dominant leg before the experiment in the control group (333.71 ± 44.75 Nm) and the experimental group (330.65 ± 46.44 Nm), the initial indicators in the control group are 3.06 Nm higher than in the experimental group. In this case, no statistically significant differences in results were found ($p = 0.87$). The pre-experimental average maximum strength indicators of the dominant leg were not statistically different between the control group and the experimental group.

Comparing the obtained results ($n = 20$) for the non-dominant leg before the experiment in the control group (307.42 ± 38.96 Nm) and the experimental group (313.34 ± 47.71 Nm), the initial average indicators in the control group are 5.92 Nm lower than in the experimental group. No statistically significant differences were found between the average indicators of the groups ($p = 0.32$). The maximum strength indicators of the non-dominant leg before the experiment were not statistically different between the control group and the experimental group.

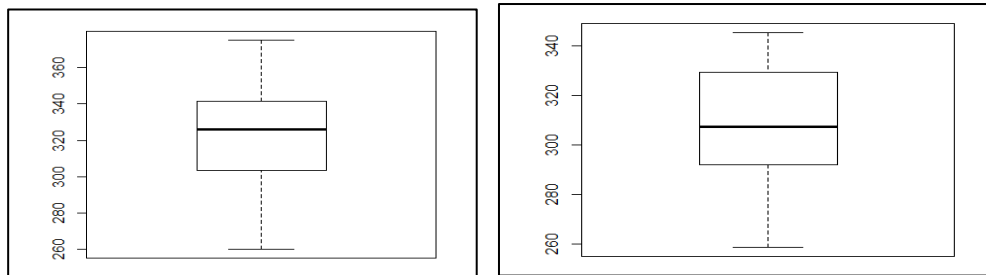


Figure 3 graphical distribution of the control group data on maximum strength indicators (Nm) for the dominant (left graph) and non-dominant (right graph) leg post-experiment (created by the authors)

The average indicators of maximum strength (Nm) in the control group after applying strength exercises for the dominant leg are 319.57 ± 33.9 Nm ($p = 0.14$), and 307.73 ± 27.76 Nm ($p = 0.12$) for the non-dominant leg. For the analysed data on the graphical dispersion of maximum strength indicators in the control group for the dominant and non-dominant leg (see Figure 3).

The average maximum strength indicators (Nm) in the experimental group after strength exercises and self-massage method application for the dominant leg is 324.38 ± 40.83 Nm ($p=0.03$) and 315 ± 41.44 Nm ($p=0.24$) for the non-dominant leg. For the analysed data on the graphical dispersion of the maximum strength indicators in the experimental group for the dominant and non-dominant leg (see Figure 4).

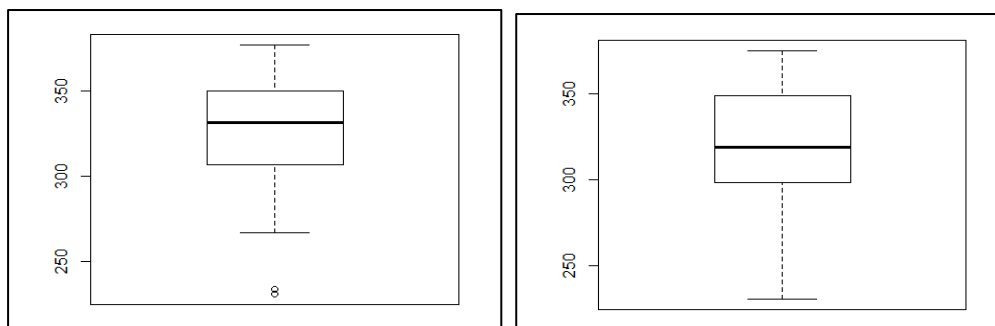


Figure 4 Graphical distribution of the experimental group data on maximum strength indicators (Nm) for the dominant (left graph) and non-dominant (right graph) leg post-experiment (created by the authors)

Comparing the obtained results ($n = 20$) for the dominant leg before the experiment in the control group (333.71 ± 44.75 Nm) and the experimental group (330.65 ± 46.44 Nm), the initial indicators in the control group are 3.06 Nm higher than in the experimental group. In this case, no statistically significant difference in results was found ($p = 0.87$). The pre-experimental average maximum strength indicators for the dominant leg were not statistically different between the control group and the experimental group. Comparing the obtained results ($n = 20$) for the non-dominant leg before the experiment in the control group (307.42 ± 38.96 Nm) and the experimental group (313.34 ± 47.71 Nm), the initial average indicators in the control group are 5.92 Nm lower than in the experimental group. No statistically significant differences were found between the group average indicators ($p = 0.32$). The maximum strength indicators of the non-dominant leg before the experiment were not statistically different between the control group and the experimental group. Comparing the obtained results ($n = 20$) for the dominant leg after the experiment in the control group (319.57 ± 33.9 Nm) and the experimental group (324.38 ± 40.83 Nm), the final indicators in the control group are 4.81 Nm lower than in the experimental group. Thus, it was found that there is no statistically significant difference in the average indicators between these groups ($p = 0.76$). The maximum strength indicators of the dominant leg after the experiment did not differ between the control group and the experimental group. Comparing the obtained results ($n = 20$) of the non-dominant leg after the experiment in the control group (307.73 ± 27.76 Nm) and the experimental group (315 ± 41.44 Nm), the final indicators in the control group are 7.27 Nm lower than in the experimental group. This means that there is no statistically significant difference between the groups ($p = 0.62$). Post-experimental indicators of the non-dominant leg did not differ between the control group and the experimental group. The overall results show that after the experiment, when analysing the average indicators of the control group and the experimental group for the dominant and non-dominant leg, the indicators between the groups are not statistically different from each other. Comparing the maximum strength indicators in the tibia extensor muscles before and after the experiment in the control group and the experimental group, the applied self-massage method, combined with strength-building exercises, did not affect the changes in the maximum strength results before and after the experiment. For a summary of all results and analysis in this aspect, see Figure 5.

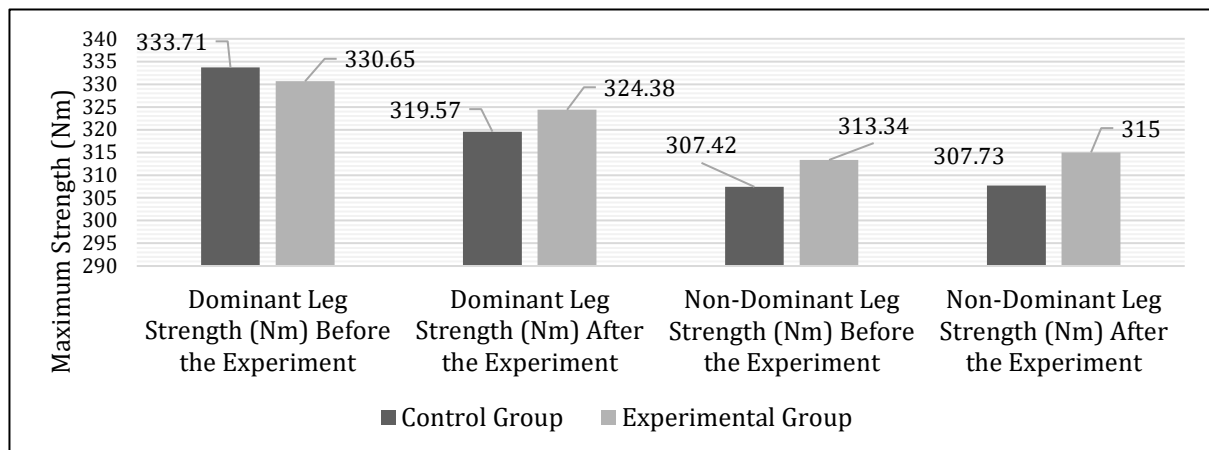


Figure 5 Dynamics of maximum strength indicators before and after the experiment for the dominant and non-dominant leg between the control group and the experimental group (created by the authors)

Comparing the results in the control group ($n = 20$) before the experiment for the dominant leg (333.71 ± 44.75 Nm) and the non-dominant leg (307.42 ± 38.96 Nm), the average maximum strength indicators of the dominant leg are 26.29 Nm higher than those of the non-dominant leg. Thus, statistically significant differences have been found between the average indicators of the groups ($p = 0.001$). This shows that the dominant leg is stronger than the non-dominant leg in the initial indicators of the study participants in the control group. Comparing the results of the control group ($n = 20$) after the experiment for the dominant leg (319.57 ± 33.9 Nm) and the non-dominant leg (307.73 ± 27.76 Nm), the maximum strength indicators of the dominant leg are 11.84 Nm higher than for the non-dominant leg. Therefore, statistically significant differences have been found between the average indicators of the groups ($p = 0.02$). This shows that the dominant leg remained as the strong leg and the non-dominant leg as the weakest leg in the indicators of the control group. In the indicators of the control group before and after the experiment, the balance of the maximum strength indicators of the dominant and non-dominant leg has remained unchanged (this means that the dominant leg has remained as the strongest leg and the non-dominant leg as the weakest leg). Comparing the results of the experimental group ($n = 20$) before the experiment for the dominant leg (330.65 ± 46.44 Nm) and the non-dominant leg (313.34 ± 47.71 Nm), the average maximum strength indicators of the dominant leg are 17.31 Nm higher than those of the non-dominant leg. Comparing these results, statistically significant differences were found between the average indicators of the groups ($p = 0.01$). This shows that the dominant leg was stronger than the non-dominant leg in the initial indicators of the study participants in the experimental group. Comparing the results of the experimental group ($n = 20$) after the experiment for the dominant leg (324.38 ± 40.83 Nm) and

the non-dominant leg (315 ± 41.44 Nm), the average maximum strength indicators of the dominant leg are 9.38 Nm higher than those of the non-dominant leg. Thus, statistically significant differences have been found between the group average indicators ($p = 0.02$). This shows that the method used during the experiment did not affect the maximum strength indicators. In the indicators of the experimental group before and after the experiment, comparing the dominant and non-dominant leg, differences in results have been found. This shows that the balance of the maximum strength indicators of the legs has remained unchanged (this means that the dominant leg before and after the experiment has remained as the strongest leg and the non-dominant leg as the weakest leg). Comparing the end results of the maximum strength in the control group and the experimental group, the applied self-massage method, combined with strength-building exercises, did not affect the balance of the maximum strength of the tibia extensor muscles between the dominant and non-dominant leg. For a summary of all results and analysis for this case (see Figure 6).

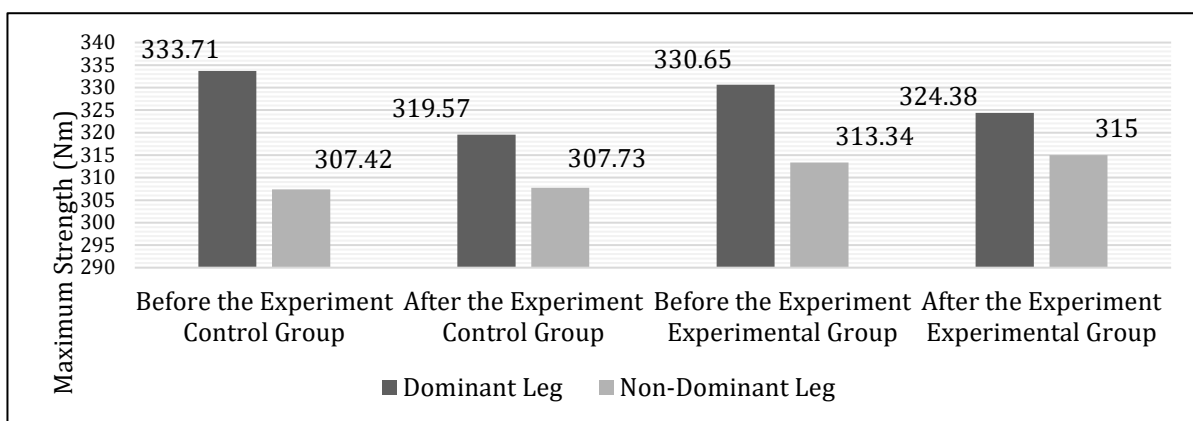


Figure 6 Comparison of the dominant and non-dominant leg in the control group and the experimental group before and after the experiment (created by the authors)

Comparing the obtained results for the dominant leg in the control group before (333.71 ± 44.75 Nm) and after the experiment (319.57 ± 33.9 Nm), the average indicators of maximum strength before the experiment are 14.14 Nm higher than after the experiment. It was found that there were no statistically significant differences between the average indicators of the groups ($p = 0.08$). In this case, it should be noted that the result ($p = 0.08$) is close to the limit of statistical reliability ($p < 0.05$). The maximum strength indicators of the dominant leg in the control group have decreased after the experiment. However, the maximum strength of the dominant leg in the control group before and after the experiment was not statistically different.

Comparing the obtained results for the dominant leg in the experimental group before (330.65 ± 46.44 Nm) and after the experiment (324.38 ± 40.83 Nm),

the average indicators of maximum strength before the experiment are 6.27 Nm higher than after the experiment. Thus, there are no statistically significant differences between the average indicators of the groups ($p = 0.37$).

The maximum strength indicators of the dominant leg in the experimental group before and after the experiment are not statistically different. In any case, the maximum strength indicators of the dominant leg have decreased, and only the control group has seen more pronounced changes in the results. The overall results show that there is no difference between the dominant leg indicators in the control group and the experimental group before and after the experiment. The author notes that in the case of the control group, the strength indicators of the dominant leg after the experiment (by 4.24%) have decreased more than the experimental group (by 1.9%) after the experiment. The results show positive dynamics of changes in average maximum strength indicators in favour of the results in the experimental group, although the results in the control group did not show statistically reliable differences.

Comparing the obtained results for the non-dominant leg in the control group before (307.42 ± 38.96 Nm) and after the experiment (307.73 ± 27.76 Nm), the average maximum strength indicators before the experiment are 0.31 Nm lower than after the experiment. There are no statistically significant differences between the average indicators of these groups ($p = 0.92$). The average maximum strength indicators of the non-dominant leg in the control group before and after the experiment are not statistically different.

Comparing the obtained results in the experimental group for the non-dominant leg before (313.34 ± 47.71 Nm) and after the experiment (315 ± 41.44 Nm), the average maximum strength indicators before the experiment are 1.66 Nm lower than after the experiment. Therefore, there are no statistically significant differences between the average indicators of the groups ($p = 1$). The average indicators of the maximum strength for the non-dominant leg in the experimental group before and after the experiment did not change statistically.

The overall results show that the indicators for the non-dominant leg in the control group and the experimental group before and after the experiment are not statistically different from each other. When comparing the maximum strength indicators in the tibia extensor muscles in the control group and the experimental group, the applied self-massage method, combined with strength-building exercises, did not affect the changes in the maximum strength results for the non-dominant leg, but positive changes in the strength of the dominant leg were noticed between the control group and the experimental group. The indicators in the control group have greater statistically reliable differences ($p = 0.08$) than the experimental group ($p = 0.37$).

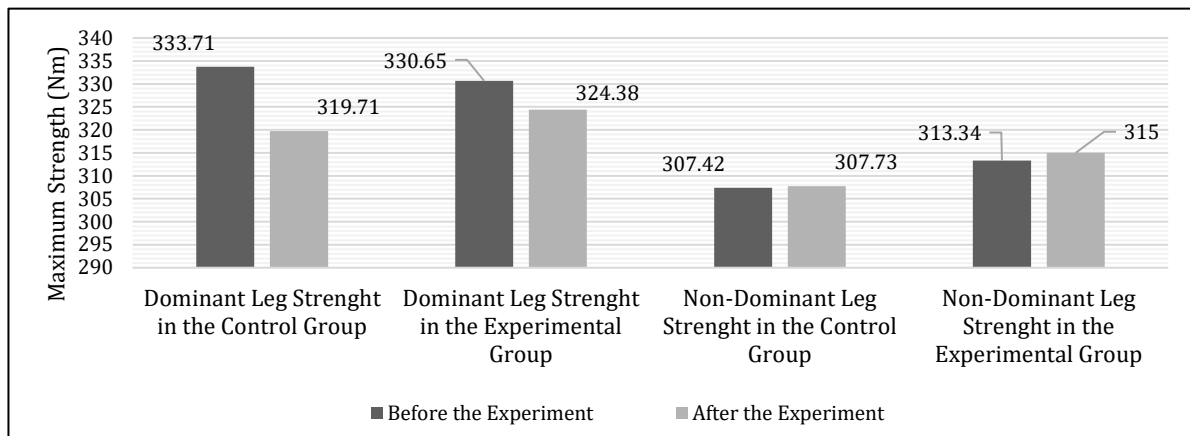


Figure 7 Dynamics of maximum strength indicators in the control and experimental groups for the dominant and non-dominant leg before and after the experiment

Although there is no statistical reliability between the average indicators, self-massage has contributed to more positive power dynamics for the dominant leg. For a summary of the maximum strength results and an analysis of this situation (see Figure 7).

Conclusions

The average maximum strength indicators for the dominant leg and for the non-dominant leg in both groups differs after the experiment, and the dominant leg remains as a strong leg. There is no statistically significant difference in the average maximum strength indicators of the dominant leg and non-dominant leg before and after the experiment in both groups.

No statistically significant differences were found between the control group and the experimental group in the average maximum strength indicators of the dominant leg and the non-dominant leg after the experiment.

The applied self-massage method combined with strength-building exercises did not affect changes in maximum strength results, did not affect the balance of the maximum strength of the tibia extensor muscles between the dominant and non-dominant leg, did not affect the change in maximal strength results for the non-dominant leg.

Positive strength changes in the strength of the dominant leg were noticed between the control group and the experimental group after the experiment. Self-massage contributed to more positive power dynamics for the dominant leg, although there were no statistically significant differences before and after the experiment.

References

- Aboodarda, S. J., Spence, A. J., & Button, D. C. (2015). Pain pressure threshold of a muscle tender spot increases following local and non-local rolling massage. *BMC musculoskeletal disorders*, *16*(1), 1-10. DOI: 10.1186/s12891-015-0729-5
- Fleckenstein, J., Wilke, J., Vogt, L., & Banzer, W. (2017). Preventive and regenerative foam rolling are equally effective in reducing fatigue-related impairments of muscle function following exercise. *Journal of sports science & medicine*, *16*(4), 474.
- Graven-Nielsen, T., Lund, H., Arendt-Nielsen, L., Danneskiold-Samsøe, B., & Bliddal, H. (2002). Inhibition of maximal voluntary contraction force by experimental muscle pain: a centrally mediated mechanism. *Muscle & Nerve: Official Journal of the American Association of Electrodiagnostic Medicine*, *26*(5), 708-712. DOI: <https://doi.org/10.1002/mus.10225>
- Halperin, I., Aboodarda, S. J., Button, D. C., Andersen, L. L., & Behm, D. G. (2014). Roller massager improves range of motion of plantar flexor muscles without subsequent decreases in force parameters. *International journal of sports physical therapy*, *9*(1), 92.
- Hill, J., Howatson, G., van Someren, K., Leeder, J., & Pedlar, C. (2014). Compression garments and recovery from exercise-induced muscle damage: a meta-analysis. *British journal of sports medicine*, *48*(18), 1340-1346. DOI: 10.1136/bjsports-2013-092456.
- Hunter, A., Watt, J., Watt, V., & Galloway, S. (2006) Effect of lower limb massage on electromyography and force production of the knee extensors. *British Journal of Sports Medicine*, *40*(2), 114-118. DOI: <http://dx.doi.org/10.1136/bjism.2005.019075>
- Larson, R. (2014) "Customizing the warm-up and cool-down," in High-Performance Training for Sports (99–112.), eds D. Joyce and D. Lewindon (Champaign, IL: Human Kinetics).
- Macgregor, L., Fairweather, M., Bennett, R., & Hunter, A. (2018) The effect of foam rolling for three consecutive days on muscular efficiency and range of motion. *Sports medicine-open*, *4*(1). 1-9. DOI: <https://doi.org/10.1186/s40798-018-0141-4>
- Pearcey, G., Bradbury-Squires, D., Kawamoto, J., Drinkwater, E., Behm, D. & Button, D. (2015) Foam rolling for delayed-onset muscle soreness and recovery of dynamic performance measures. *Journal of athletic training*, *50*(1). 5-13. DOI: <https://doi.org/10.4085/1062-6050-50.1.01>
- Poppendieck, W., Wegmann, M., Ferrauti, A., Kellmann, M., Pfeiffer, M., & Meyer, T. (2016) Massage and performance recovery: a meta-analytical review. *Sport. Med.* *46*, 183–204. DOI: 10.1007/s40279-015-0420-x
- Sullivan, K., Silvey, D., Button, D., & Behm, D. (2013) Roller-massager application to the hamstrings increases sit-and-reach range of motion within five to ten seconds without performance impairments. *International journal of sports physical therapy*, *8*(3), 228-236.
- Wiewelhove, T., Döweling, A., Schneider, C., Hottenrott, L., Meyer, T., Kellmann, M., ... & Ferrauti, A. (2019). A meta-analysis of the effects of foam rolling on performance and recovery. *Frontiers in physiology*, *10*, 376. DOI: <https://doi.org/10.3389/fphys.2019.00376>
- Zeidlers, I. (2009) Pašmasāža. Izdošanas vieta: "Avots".
- Zorko, N., Škarabot, J., García-Ramos, A., Štirn, I. (2016) The acute effect of self-massage on the short-term recovery of muscle contractile function. *J. Kinesiol. Slov.* *22*, 31–40. ISSN 1318-2269.

DEVELOPMENT OF AN INTERVENTION TO PROMOTE SELF-CARE: NEEDS ASSESSMENT

Aija Ozola

Rīga Stradiņš University, Latvia

Zane Roslova

Rīga Stradiņš University, Latvia

Jana Duhovska

Rīga Stradiņš University, Latvia

Kristīne Mārtinsone

Rīga Stradiņš University, Latvia

Abstract. *The global societal challenges reveal decreased ability of people to maintain health and well-being when faced with prolonged stress conditions. Increases in anxiety, depression, and burnout are reported worldwide. The recent research indicates self-care as a useful resource to promote health and well-being and strengthen psychological resilience. The importance and attainability of self-care strategies are the characteristics that may indicate the necessity for self-care behaviour changes by identifying an internal conflict between the two. However, little is known about the determinants of self-care practicing according one's needs. The study aimed to explore the experts' perspectives on self-care needs among clinically healthy adults. The risks caused by inadequate self-care practices and the determinants of self-care behaviour change were identified. The interviews with 12 experts in arts therapies and/or health psychology were conducted. The qualitative content analysis was used to process the data. Psychological, health-related, and social risks were the categories of risks identified. The determinants of self-care behaviour change were categorized as knowledge, self-efficacy, attitude, perceived cues to action, planning, awareness, social support, and motivation. The identified items will contribute to evidence-based development of the intervention to promote self-care.*

Keywords: *attainability, behaviour change, importance, intervention, needs assessment, self-care.*

Introduction

Since the outbreak of the Covid-19 pandemic, increases in anxiety, depression and burnout have been reported worldwide (Fountoulakis et al., 2022, Sampogna, Pompili, & Fiorillo, 2022). Global societal disasters and uncertainty challenge people's ability to maintain health and well-being, especially in the face of prolonged stressful conditions.

In Latvia, in line with research worldwide (e.g. Garcia et al., 2022; Sanchez-Hernandez, Barkavi-Shani, & Bermejo, 2022), self-care has been identified as one of the resources available to strengthen mental health and promote psychological resilience (Bundzena-Ervika et al., 2021; Rancāns et al., 2021). Generally, self-care is understood as engagement in behaviours that support one's health and well-being (Lee & Miller, 2013; Mārtinsone, Perepjolkina, & Ruža, 2022). The rapid increase in self-care research across the world since the onset of the Covid-19 pandemic demonstrates that self-care is of particular interest in periods of societal crisis.

The Latvian researchers have focused on self-care research since the second decade of the 21st century (e.g. Paičs et al., 2018, 2019). However, self-care studies have gained particular relevance since the onset of the Covid-19 pandemic in the spring of 2020. In the framework of the State Research Programme "Covid-19 mitigation", a new self-care measure (Perepjolkina, Koļesņikova, Ruža, Bundzena-Ervika, & Mārtinsone, 2021) was developed within the project "Mental health and psychological resilience, and related factors in the population of Latvia during the Covid-19 pandemic, directions for future management" (Rancāns et al., 2021) to explore self-care in the general population of Latvia. In turn, the development and validation of the Self-Care Strategies Questionnaire (Mārtinsone et al., 2022) provided opportunities to conduct the research not only in the general adult sample (e.g. Ozola & Mārtinsone, 2022b) but also in different professional samples (Lāce & Mārtinsone, 2022; Liepiņa & Mārtinsone, 2022; Ozola & Mārtinsone, 2022a). At the same time, popular science developments in the field of self-care (Mārtinsone, 2021) and psychological help (Mārtinsone & Regzdiņa-Pelēķe, 2020) were also produced. The authors, having identified a lack of scientifically correct information on self-care issues in Latvian (Mārtinsone, 2021), provided an opportunity for a wider audience to learn about self-care and get support during the Covid-19 crisis by drawing inspiration for self-care from the experiences of psychological help providers.

Since the development and validation of the Self-Care Strategies Questionnaire (Mārtinsone et al., 2022), self-care research in Latvia has been dominated by studies based on exploration of the relationship between two characteristics of self-care strategies, namely importance and attainability. The idea of the importance and attainability of self-care strategies is derived from the conception of value conflict developed within general and clinical psychology (Fantalova, 1992, 2001). The importance is associated with an assessment or self-assessment of the significance and necessity of a value while attainability refers to an assessment or self-assessment of the achievability of a value (Fantalova, 1992, 2001).

In Latvia, both concepts have been used previously in research on professional competences (e.g. Angena & Mārtinsone, 2020; Kāpiņa & Mārtinsone, 2020). Besides, the Self-Care Strategies Questionnaire (Mārtinsone

et al., 2022) introduces an integrated characteristic of both, i.e. the interaction between importance and attainability. The relationship between the importance and attainability of self-care strategies may be characterized by a mutual balance or predominance of one or the other characteristic indicating the extent to which an individual implements self-care in line with his/her values while the interaction of the two reflects the effectiveness of the self-care strategy. Higher importance is associated with a state of an internal conflict while higher attainability indicates a state of internal vacuum (Fantalova, 1992; 2001).

It is noted that a state of internal conflict between importance and attainability contributes to an individual's motivation to seek solutions (Fantalova, 1992; 2001; Mihailova & Perepjolkina, 2020), thus leading to behaviour change. However, any behaviour change is influenced by multiple determinants.

Intervention Mapping (Eldredge et al., 2016) is a framework widely used to develop health promotion and behaviour change interventions (Fernandez, Ruitter, Markham, & Kok, 2019). Grounded in community-based participatory research methods, it provides a systematic process and detailed protocol for effective, step-by-step decision-making for intervention development (Fernandez et al., 2019). The first of six Intervention Mapping steps envisages to establish a detailed understanding of the problem, the population at risk, the behavioural and environmental causes, and the determinants of these behavioural and environmental conditions (Eldredge et al., 2016). Thus, in systematic development of a behaviour change intervention, a needs assessment is the first part of intervention planning and comprises studying of the discrepancy between the current status and one that is more desirable in terms of quality of life, health, behaviour, and environment (Eldredge et al., 2016). Conducting needs analysis helps the researchers articulate and document needed changes and desired outcomes (Fernandez et al., 2019).

Accordingly, the first step in development of an intervention to promote self-care in adult population is to identify how inadequate self-care practices affect individual's quality of life, i.e. what are the risks shaping the problem that needs to be addressed, and to identify factors (determinants) that influence the risk behaviours.

While the benefits of practicing self-care have been extensively researched (e.g. Luis et al., 2021; Martinez et al., 2021), little is known about the risks related to inadequate self-care practices and the determinants that may impact practicing self-care. In addition to literature reviewing and engagement of potential users and other stakeholders, exploring experts' perspectives is considered an effective way to study an issue.

The study aimed to explore the experts' perspectives on self-care needs among clinically healthy adults. The following research questions were posed: (1) what are the experts' perspectives on the impact of inadequate self-care practices

on quality of life; (2) what are the experts' perspectives on the determinants for practicing self-care according to one's needs.

Theoretical background

As mentioned above, self-care is understood as engagement in behaviours that support one's health and well-being (Lee & Miller, 2013; Mārtinsone et al., 2022). At the same time, it is acknowledged that its meaning remains unprecise due to the difficulty integrating the diverse definitions developed across disciplines (Martinez, Connelly, Perez, & Calero, 2021).

According to the World Health Organization (World Health Organization [WHO], 2022), self-care is the ability of individuals, families and communities to promote health, prevent disease, maintain health and cope with illness and disability with or without the support of a health worker. Thus, in healthcare self-care is understood as an active participation of individuals in taking care of their own health (WHO, 2022) and is an important part of the treatment and/or recovery process. Unlike healthcare, in psychology self-care is applied to different areas of an individual's life and interpreted very broadly. Self-care conceptualizations often include concepts that are not otherwise associated with self-care (e.g. social support, professional development). The relevance of activities to self-care is determined by the purpose of the behavior or activity, i.e. the focus on caring for oneself.

As identified in research, self-care is understood as an ability (Martinez et al., 2021), a behaviour (Lee & Miller, 2013), a process (Dorociak, Rupert, Bryant, & Zahniser, 2017) or a decision-making process (de Maria et al., 2020).

In defining the concept, the preconditions for self-care to be effective are emphasized. The understanding of self-care as the ability to take care of oneself, based on awareness, self-control and self-reliance, in order to achieve, maintain or promote optimal health and well-being (Martinez et al., 2021), points to the cognitive factors needed. In turn, defining self-care as multidimensional, multifaceted process of purposeful engagement in strategies that promote healthy functioning and enhance well-being (Dorociak et al., 2017) stresses the holistic nature of self-care and the conscious behaviour and determination of the individual. Conceptualizations of self-care include not only personal but also professional self-care (e.g. Dorociak et al., 2017; Lee & Miller, 2013).

Every self-care activity and strategy can be rated by the individual as more or less important to him or her. By giving preference to a particular strategy, an individual prioritize it over another strategy (Ozola & Mārtinsone, 2022a) indicating the value of that strategy and its place in his or her hierarchy of values. Thus, self-care can be viewed as a value (Mārtinsone et al., 2022), i.e. a belief in the desirability of a certain self-care behaviour over an opposite one.

Self-care as a value is characterized by its importance. In the context of self-care, the importance can be defined as an assessment or self-assessment of the significance and necessity of a self-care activity or strategy (Fantalova, 1992, 2001; Mārtinsone et al., 2022). Attainability, on the other hand, refers to the extent to which an individual implements an activity or strategy in his or her life and is defined as an assessment or self-assessment of the achievability of a self-care activity or strategy (Fantalova, 1992; 2001; Mārtinsone et al., 2022).

The relationship between importance and attainability may demonstrate a balance or predominance of one or the other indicating their correspondence or differences. It is believed that a discrepancy between importance and attainability gives rise to internal conflict or a state of internal vacuum (Fantalova, 1992; 2001). The state of internal conflict refers to predominance of the importance while the state of internal vacuum is associated with predominance of attainability. By examining a state characterized by the need to achieve internally meaningful values on the one hand, and the possibilities of achieving these values in reality on the other, the existence of internal conflict or internal vacuum can be identified (Fantalova, 2013). In the case of internal conflict, the discrepancy between the two characteristics is also considered to be one of the determinants of motivation while in the case of internal vacuum cause the sense of meaninglessness (Fantalova, 1992).

Despite a particular strategy is assessed as important, it cannot be effective without an appropriate practicing. The interaction of importance and attainability indicates its effectiveness (Mārtinsone et al., 2022). The optimal state to strive for is a balance between importance and attainability, characterized by a harmonious state without the presence of internal conflict (Fantalova, 2013), as the value that is meaningful to the individual is also achievable in a present or future perspective. Internal conflict resulting from the inability to realize one's values for internal or external reasons leads to psychological dissatisfaction (Fantalova, 1992). At the same time, it promotes motivation for life change and encourages the individual to look for ways of how to implement the unrealized values (Mihailova & Perepjolkina, 2020).

Thus, from a perspective of behaviour change, internal conflict can be considered being developmental, but it should be noted that it is also associated with increased tension. Most of behaviour change theories distinguish qualitatively different stages in an individual's journey towards behaviour change (Cheung, Hors-Fraile, & de Vries, 2021).

Intervention Mapping (Eldredge et al., 2016) is a theory- and evidence-based framework for intervention development that emphasizes the importance to initially understand why individuals engage or do not engage in certain behaviours (Kok et al., 2016) and to identify the determinants by conducting preliminary research in scientific sources and surveying the target population (Kok, Peters, & Ruiters, 2017). The determinants will impact the way of how the intervention will

lead to the expected outcome addressing behavioural, cognitive, emotional, interpersonal, social and environmental change objectives (Eldredge et al., 2016).

Knowledge is considered being one of the most important determinants in individual's understanding of a problem and its solutions. However, it is rarely sufficient to promote behaviour change. It is recommended to take into account as many determinants as possible (Cheung, Hors-Fraile, & de Vries, 2021). In systematic development of a behaviour change intervention, a needs assessment is the first part of intervention planning and comprises studying of the discrepancy between the current status and one that is more desirable in terms of quality of life, health, behaviour, and environment (Eldredge et al., 2016). Typically, it includes the assessment of behaviour and environmental contributors to health problems or risks (Eldredge et al., 2016) by development of a literature review and/or engagement of key stakeholders like experts and potential users.

Methodology

Data collection. The semi-structured interview plan was developed including the main questions and possible follow-up questions. The participants were also asked to provide commentaries on the determinants of behaviour change identified in the literature (de Vries, 2017) when addressed to the context of self-care.

Participants. Experts (n = 12) representing the fields of arts therapies (n = 8) and health psychology (n = 4) were invited to participate in the study. The following inclusion criteria were specified: (1) a graduate diploma in arts therapies or psychology; (2) experience of practice and/or research in arts therapies or health psychology; (3) experience of practice and/or research with clinically healthy adults.

Procedure. Online expert interviews were carried out and recorded in December 2022 and January 2023. The participants provided informed consent on confidentiality, anonymity and data security in line with research ethics.

Data processing and analysis. Interview recordings were transcribed and further processed applying qualitative content analysis (Elo & Kyngäs, 2008). The deductive analysis was used to develop a preliminary categorization matrix incorporating the categories derived from the literature, i.e. risk factors and determinants of behaviour change (Eldredge et al., 2016). The inductive content analysis allowed the identification of concepts extracted from the data. Primary codes were created and consequently combined into subcategories.

Results

To answer the first research question, namely what are the experts' perspectives on the impact of inadequate self-care practices on quality of life, the

statements on risk factors were extracted from interview transcripts. The primary codes were combined into three subcategories (see Table 1).

Table 1 Results of qualitative content analysis identifying the risk factors of inadequate self-care practices on quality of life (created by the authors)

Categories	Primary codes	Examples of statements
Physical health-related risk factors	Exhaustion	“.. namely to prevent burnout, exhaustion and physical health problems”
	physical health problems	
	reduced energy level	“.. causes increased stress levels, psychosomatic symptoms, anxiety, fatigue”
	psychosomatic symptoms	
	Diseases	
	Tiredness	
being physical unhealthy	“.. the threat is being physically, mentally, socially unhealthy”	
deterioration in health		
substance abuse		
<i>Continuation of Table 1</i>		
Categories	Primary codes	Examples of statements
Psychological risk factors	Burnout	“.. may reduce individual’s quality of life, sense of life meaningfulness, vitality and energy”
	deterioration in mental health	
	reduced sense of meaning in life	“.. as a result, burnout, depressive mood, somatic symptoms may develop”
	reduced vitality	
	depressive mood	
	increased stress level	“.. can lead to chronic stress, burnout, loss of balance and psychosomatic diseases”
	chronic stress	
loss of meaning		
Social risks	shrinking living space	“.. gradually narrowing the living space, digging in”
	being socially unhealthy	“.. the difficulty of building relationship, because instead of taking care of oneself, one expects care from others, but often does not receive enough of it and feels disappointed”
	negative impact on relationships with peers	
	difficulties to build relationship	

Risk factors in the subcategory of psychological risks dominated the experts' responses (53 % of statements). Burnout, deterioration in mental health, reduced sense of meaning in life, reduced vitality, depressive mood and stress-related conditions were mentioned.

Almost a third of statements (29 %) were associated with physical health-related risk factors. Exhaustion, physical health problems, reduced energy level, psychosomatic symptoms, diseases, tiredness, deterioration in health and substance abuse were among the mentioned factors.

The subcategory of social risks is relatively less represented (18 % of statements). The mentioned factors relate to building and maintaining relationships.

It was also suggested that “self-care strategies can be both harmful and helpful, and consequently the effects can be both beneficial and enhancing or diminishing in terms of quality of life”. The opinion is in line with findings from other studies (Mehrotra et al., 2017).

In sum, the analysis of experts’ perspectives indicated three subcategories of risk factors affecting quality of life due to inadequate self-care practices: psychological risks, physical health-related risks and social risks. Psychological risk factors predominated.

To answer the second research question, namely what are the experts’ perspectives on the determinants for practicing self-care according to one’s needs, the statements on behaviour change determinants were extracted from interview transcripts. The primary codes were combined into eight subcategories (see Table 2).

Table 2 Results of qualitative content analysis identifying the determinants for practicing self-care (created by the authors)

Categories	Primary codes	Examples of statements
Self-efficacy	willpower positive experience of practicing self-care Success self-efficacy	“.. positive experiences, small successes, are very important when starting to practice self-care...”
Social support	getting support from peers organizing support from others positive experience of getting support role models of peers	“.. and to be able to organize support for yourself (e.g. babysitting while I sing in the choir) from people around me”
Awareness	Awareness ability to be aware of change level of awareness	“.. the necessary behaviours are fostered by awareness of oneself, of one's needs...” “.. the key factors are the level of awareness, self-discipline and free time”
Knowledge	Knowledge Skills Information evaluation of information	“.. the more information a person has about the possibilities of self-care practices, the more likely he is to try to apply something in his daily life”

		“.. to start practicing the necessary behaviour change, you need skills and a simple structure”
Attitude	determination Attitude searching for solutions self-discipline	“.. [it depends on] whether the individual is prone to self-pity, pity and blame others, or to find and apply solutions”
Planning	Structure practice on a daily basis Regularity free time	“.. structure and the purposeful, regular practice of self-care are to strive for” “.. to find a place for this practice of self-care in everyday life”
Perceived cues to action	self-knowledge realistic perception awareness of consequences	“.. understanding the interconnectedness of current behaviour and its consequences”
Motivation	motivation to act	“.. motivation to act”

Experts’ responses related to the subcategory of knowledge predominated (21 % of statements) what is in line with findings from other studies recognizing knowledge as one of the key determinants of behaviour change both contributing to an individual's understanding of a problem and to the acquisition of new skills (Cheung, Hors-Fraile, & de Vries, 2021). The six subcategories mentioned fairly equally (ranging from 11 % to 16 %) were self-efficacy, attitude, perceived cues to action, planning, awareness and social support. Motivation was mentioned as well.

The analysis of experts’ perspectives indicates knowledge, self-efficacy, attitude, perceived cues to action, planning, awareness and social support as the main determinants for practicing self-care according to one’s needs. The importance of knowledge is particularly emphasized.

The limitations of the study arising from the lack of triangulation should be noted. In future research the quantitative exploration of risk factors and determinants of behaviour change is recommended followed by triangulation of qualitative and quantitative data. Triangulation of samples should be carried out by engagement of the target population and other key stakeholders.

Conclusions

The aim of the study was achieved. The experts’ perspectives on self-care among clinically healthy adults were explored.

It can be concluded that the impact of inadequate self-care practices on quality of life is determined by psychological, health-related and social risks.

Knowledge, self-efficacy, attitude, perceived cues to action, planning, awareness and social support are the main determinants of self-care practicing according to one’s needs.

The identified items will contribute to evidence-based development of the intervention to promote self-care. Further research is needed to identify perspectives from potential users and other key stakeholders.

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References

- Angena, A., & Mārtinsone, K. (2020). Latvijas supervizoru ētikas kompetences nozīmīguma un īstenojamības pašnovērtējums. *Society. Integration. Education. Proceedings of the International Scientific Conference, V*, 19-34. DOI: <http://dx.doi.org/10.17770/sie2020vol5.4926>
- Bundzena-Ervika, A., Mārtinsone, K., Perepjolkina, V., Ruža, A., Koļesņikova, J., & Rancāns, E. (2021). Relationship between psychological resilience and self-care strategies of healthcare professionals during Covid-19 pandemic in Latvia. *Society. Integration. Education. Proceedings of the International Scientific Conference, VII*, 24-38. DOI: <https://doi.org/10.17770/sie2021vol7.6258>
- Cheung, K. L., Hors-Fraile, S., & de Vries, H. (2021). How to use the Integrated Change Model to design digital health programs. In S. Syed-Abdul, X. Zhu, & L. Fernandez-Luque (Eds.), *Digital health: Mobile and wearable devices for participatory health applications* (pp.143-157). Elsevier. DOI: <https://doi.org/10.1016/b978-0-12-820077-3.00008-0>
- De Maria, M., Ferro, F., Ausili, D., Alvaro, R., de Marinis, M. G., di Mauro, S., Matarese, M., & Vellone, E. (2020). Development and psychometric testing of the Self-Care in COVID-19 (SCOVID) Scale, an instrument for measuring self-care in the COVID-19 pandemic. *International Journal for Environmental Research and Public Health, 17*, 7834. DOI: <https://doi.org/10.3390/ijerph17217834>
- De Vries, H. (2017). An integrated approach for understanding health behavior; The I-change model as an example. *Psychology and Behavioural Science: International Journal, 2*(2), 555–585. DOI: <https://doi.org/10.19080/pbsij.2.2>
- Dorociak, K. E., Rupert, P. A., Bryant, F. B., & Zahniser, E. (2017). Development of a Self-Care Assessment for Psychologists. *Journal of Counseling Psychology, 64*, 325–334. DOI: <http://dx.doi.org/10.1037/cou0000206>
- Eldredge, L. K., Markham, C. M., Ruitter, R. A. C., Fernández, M. E., Kok, G., & Parcel, G. S. (2016). *Planning health promotion programs: An intervention mapping approach*. John Wiley & Sons.

- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107–115. DOI: <https://doi.org/10.1111/j.1365-2648.2007.04569.x>
- Fantalova, E. (1992). Ob odnom metodicheskom podhode k issledovaniju motivacii i vnutrennih konfliktov (na kontingente bol'nyh arterial'noj gipertoniej i zdorovyh lic). *Psihologicheskij zhurnal*, 13(1), 107-117.
- Fantalova, E. (2001). Diagnostika i psihoterapija vnutrennego konflikta. Samara: Bahrah-M.
- Fantalova, E. (2013). Diagnostika cennostej i vnutrennih konfliktov v obshej i klinicheskoj psihologii. *Klinicheskaja i special'naja psihologija*, 1.
- Fernandez, M. E., Ruiter, R. A. C., Markham, C. M., & Kok, G. (2019). Intervention Mapping: Theory- and evidence-based health promotion program planning: Perspective and examples. *Frontiers in Public Health*, 7, 209. DOI: <https://doi.org/10.3389/fpubh.2019.00209>
- Fountoulakis, K. N., Karakatsoulis, G., Abraham, S., Adorjan, K., Ahmed, H. U., Alarc' on, R. D., ... Smirnova, D. (2022). Results of the COVID-19 mental health international for the general population (COMET-G) study. *European Neuropsychopharmacology*, 54, 21–40. DOI: <https://doi.org/10.1016/J.EURONEURO.2021.10.004>
- Garcia, A. C., Goncalves Ferreira, A. C., Soares Rodrigues Silva, L., Monteiro da Conceicao, V., Alves Nogueira, D., & Mills, J. (2022). Mindful self-care, self-compassion, and resilience among palliative care providers during the Covid-19 pandemic. *Journal of Pain and Symptom Management*, 64(1), 49-57. DOI: <https://doi.org/10.1016/j.jpainsymman.2022.03.003>
- Kāpiņa, L., & Mārtinsone, K. (2020). Latvijas supervizoru profesionālās kompetences pašnovērtējums. *Society. Integration. Education. Proceedings of the International Scientific Conference*, 5, 121-139. DOI: <http://dx.doi.org/10.17770/sie2020vol5.4908>
- Kok, G., Gottlieb, N. H., Peters, G.-J. Y., Mullen, P. D., Parcel, G. S., Ruiter, R. A. C., Fernández, M. E., Markham, C., & Bartholomew, L. K. (2016). A taxonomy of behavior change methods: An intervention mapping approach. *Health Psychology Review*, 10(3), 297-312. DOI: <https://doi.org/10.1080/17437199.2015.1077155>
- Kok, G., Peters, L. W. H., & Ruiter, R. A. C. (2017). Planning theory- and evidence-based behavior change interventions: A conceptual review of the intervention mapping protocol. *Psicologia, reflexao e critica: Revista semestral do Departamento de Psicologia da UFRGS*, 30(1), 19. DOI: <https://doi.org/10.1186/s41155-017-0072-x>
- Lāce, D., & Mārtinsone, K. (2022). Supervizoru pašpalīdzības stratēģiju pašnovērtējums. *Society. Integration. Education. Proceedings of the International Scientific Conference*, 1, 807-818. DOI: <https://doi.org/10.17770/sie2022vol1.6830>
- Lee, J. J., & Miller, S. E. (2013). A self-care framework for social workers: Building a strong foundation for practice. *Families in Society: The Journal of Contemporary Social Services*, 94(2), 96-103. DOI: <https://doi.org/10.1606/1044-3894.4289>
- Liepīņa, E., & Mārtinsone, K. (2022). Pedagogu pašpalīdzības stratēģijas un supervīzija kā pašpalīdzības aktivitāte pedagogiem. *Society. Integration. Education. Proceedings of the International Scientific Conference*, 1, 426-441. DOI: <https://doi.org/10.17770/sie2022vol1.6824>
- Luis, E., Bermejo-Martins, E., Martinez, M., Sarrionandia, A., Cortes, C., Oliveros, E. Y., Garces, M. S., Oron, J. V., & Fernández-Berrocal, P. (2021). Relationship between self-care activities, stress and well-being during COVID-19 lockdown: A cross-cultural mediation model. *BMJ Open*, 11(12), e048469. DOI: <https://doi.org/10.1136/bmjopen-2020-048469>

- Martinez, N., Connelly, C. D., Perez, A., & Calero, P. (2021). Self-care: A concept analysis. *International Journal of Nursing Sciences*, 8, 418-425. DOI: <https://doi.org/10.1016/j.ijnss.2021.08.007>
- Mārtinsone, A., Perepjolkina, V., & Ruža, A. (2022). Pašpalīdzības stratēģiju (PPS) aptaujas izveide un validēšana Latvijas pieaugušo izlasē. *Society. Integration. Education. Proceedings of the International Scientific Conference, II*, 38-54. DOI: <https://doi.org/10.17770/sie2022vol2.6833>
- Mārtinsone, K. (sast.), (2021). *Pašpalīdzības un pašvadības iespēju arsenāls krīzes un transformāciju laikā: Metodes ikvienam*. Rīgas Stradiņa universitāte. Pieejams: https://dspace.rsu.lv/jspui/bitstream/123456789/3885/1/Pas%cc%8cpali%cc%84dzi%cc%84bas%20gra%cc%84mata_Final.pdf
- Mārtinsone, K., & Regzdiņa-Pelēķe, L. (sast.), (2020). *Personības psiholoģiskā palīdzība Latvijā: (paš)pieredzes stāsti*. Rīgas Stradiņa universitāte. Pieejams: https://www.rsu.lv/sites/default/files/book_download/IPD-487_Paspieredze_Elektroniskais_DS.pdf
- Mehrotra, S., Kumar, S., Sudhir, P., Rao, G. N., Thirthalli, J., & Gandotra, A. (2017). Unguided mental health self-help apps: Reflections on challenges through a clinician's lens. *Indian Journal of Psychological Medicine*, 39(5), 707-711. DOI: https://doi.org/10.4103/IJPSYM.IJPSYM_151_17
- Mihailova, S., & Perepjolkina, V. (2020). Krieviski runājošo vidusskolēnu vērtību konfliktu salīdzinājums Baltijas valstīs. *Society. Integration. Education. Proceedings of the International Scientific Conference. VII*, 118-135. DOI: <http://dx.doi.org/10.17770/sie2020vol7.5129>
- Ozola, A., & Mārtinsone, K. (2022a). Mākslas terapeitu pašpalīdzības stratēģiju specifika. *Society. Integration. Education. Proceedings of the International Scientific Conference, I*, 828-845. DOI: <https://doi.org/10.17770/sie2022vol1.6849>
- Ozola, A., & Mārtinsone, K. (2022b). Pašpalīdzības stratēģijas kā psiholoģiskās noturības un apmierinātības ar dzīvi prognostiskie faktori. [Mutisks referāts]. *Rīgas Stradiņa universitātes 8. starptautiskā zinātniski praktiskā konference "Veselība un personības attīstība: starpdisciplināra pieeja"*, Rīga, Latvija. Pieejams: <https://panopto.rsu.lv/Panopto/Pages/Viewer.aspx?id=b62e715c-097d-47ee-bb3f-ae8400b25b81>
- Paičs, I., Mārtinsone, K., & Ļubenko, J. (2018). Pašpalīdzības prakses: literatūras apskats. *Society. Integration. Education. Proceedings of the International Scientific Conference, VII*, 196-207. DOI: <http://dx.doi.org/10.17770/sie2018vol7.3435>
- Paičs, I., Mārtinsone, K., & Ļubenko, J. (2019). Pašpalīdzības prakse kā viens no psiholoģiskās palīdzības veidiem. *Rīgas Stradiņa universitātes 5. starptautiskā zinātniski praktiskā konference "Veselība un personības attīstība: starpdisciplinārā pieeja"*, Rīga, Latvija. Pieejams: https://www.rsu.lv/sites/default/files/imce/Dokumenti/prezentācijas/vpa_2019/25_04_I_Paics.pdf
- Perepjolkina, V., Koļesņikova, J., Ruža, A., Bundzena-Ervika, A., & Mārtinsone, K. (2021). Development and psychometric properties of the Self-Care Strategies Questionnaire. *Rīga Stradiņš University 8th International Multidisciplinary Research Conference "Society. Health. Welfare", March, 24-26, 2021: Abstracts (136)*. Retrieved from: https://dspace.rsu.lv/jspui/bitstream/123456789/3647/1/SHW_2021_Abstracts-Book.pdf
- Rancāns, E., Mārtinsone, K., Vrubļevska, J., Aleskere, I., Rezgale, B., Šibalova, A., Perepjolkina, V., Koļesņikova, J., Ruža, A., Šuriņa, S., Paiča, I., Upesleja, G., Bundzena-Ervika, A., & Regzdiņa, L. (2021). *Psihiskā veselība un psiholoģiskā noturība un ar to*

saistītie faktori Latvijas populācijā Covid-19 pandēmijas laikā, turpmākās vadības virzieni. Valsts pētījumu programmas Covid-19 seku mazināšanai apakšprojekta "Covid-19 epidēmijas ietekme uz veselības aprūpes sistēmu un sabiedrības veselību Latvijā; veselības nozares gatavības nākotnes epidēmijām stiprināšana" projekta VPP-COVID-2020/1-0011 ziņojums. Pieejams:

https://www.rsu.lv/sites/default/files/imce/Projekti/VPP_COVID/2_darba_paka_gala_ziņojums.pdf

Sampogna, G., Pompili, M., & Fiorillo, A. (2022). Mental health in the time of Covid-19 pandemic: A worldwide perspective. *International Journal of Environmental Research and Public Health*, 19, 161. DOI: <https://doi.org/10.3390/ijerph19010161>

Sanchez-Hernandez, O., Barkavi-Shani, M., & Bermejo, R. M. (2022). Promotion of resilience and emotional self-care in families and health professionals in times of COVID-19. *Frontiers in Psychology*, 13, 879846. DOI: <https://doi.org/10.3389/fpsyg.2022.879846>

World Health Organization (2022). *WHO guideline on self-care interventions for health and well-being, 2022 revision*. DOI: <https://www.who.int/publications/i/item/9789240052192>

PROFESSIONAL SELF-CONCEPT OF NURSES AND WILLINGNESS TO REMAIN IN THE PROFESSION

Gunta Bēta

Rīga Stradiņš University, Latvia

Zane Baļķena

Rīga Stradiņš University, Latvia

Abstract. *The professional self-concept of nurses, who make up the majority of medical practitioners and who participate in the implementation of public health policy, plays an important role in job satisfaction, productivity, which leads to patient satisfaction and development of the profession. Whereas, nurse job satisfaction affects nurse's future plans related to willingness to remain in the profession. Nursing self-concept is shaped and influenced by many different factors, one of them global self-esteem. The aim of the study is to investigate the relationship between the factors forming the professional self-concept, self-esteem and willingness to remain in profession of practicing nurses. The results revealed that there are statistically significant links between some groups of socio-demographic data: age and self-esteem, level of education and self-esteem, as well as the desire to remain in the profession. Statistically significant differences have been identified between respondents' answers according to age group, education level, length of service and certificate in relation to different sub-scales of self-concept.*

Keywords: *nursing, self-concept, professional self-concept, self-esteem.*

Introduction

Nurses in providing holistic patient care are key elements at each stage of the healthcare delivery system and their contribution is essential to achieving health-related development goals (Engeda et al., 2014). The nursing profession has entered the new thousand years with a growing problem: the demand for nursing specialists, and as the European population ages, the demand for medical care is only increasing. In most European countries, there is or is projected to be a shortage of nurses in the labour market (Cowin et al., 2006; Halperin & Mashiach-Eizenberg, 2014) and retention is a priority worldwide.

Research has more frequently looked at potentially modifiable factors in nursing practice, such as workload, burnout and quality of care at the workplace, which are recognised as important influencers in nursing's intention to leave the workplace. However, other aspects as fulfilling the role and self-concept are often

underestimated in terms of attracting and sustaining care staff. The shortage of nurses highlights the importance to study nurses' life and work situation (Cowin et al., 2006; Heinen et al., 2013; Andresena et al., 2017). Evaluation of the nurses' self-concept can help to understand, address recruitment and retention problems (Cowin, 2001).

Many studies and publications (Heinen et al., 2013; Sharifard et al., 2019; Bordignon & Monteiro, 2019; Andresen et al., 2017; Drennan et al., 2015; Buchan et al., 2018) focuses on the nurses' intention to quit, because nursing leaders and healthcare organizations can potentially influence that intent to prevent the actual employee from leaving.

The aim of the study: to investigate the relationship between the factors forming the professional self-concept, self-esteem and willingness to remain in profession of practicing nurses.

Quantitative cross-sectional research was carried out in order to achieve the goal by determining the average results of factors creating the professional self-concept and self-assessment, their relation to self-assessment and the desire to remain in the profession, taking into account socio-demographic data.

Literature review

Global self-esteem or self-concept and specific professional self-concept have been studied for a long time. Professional self-concept - how nurses see themselves as a nurse is vital in current and future nursing research and practise as it affects patient care. Nurses with positive self-concept have a positive impact on patient care, while nurses with low self-concept are more likely to have a negative impact on patient care (Randle & Arthur, 2007). The professional self-concept of nurses has often been studied in relation to job satisfaction, work stress and willingness to leave the profession (Cowin & Hengstberger, 2006; Cowin et al., 2008), but the nurse's self-esteem, one of its internal values, has not been widely studied in relation to the nurse's willingness to leave the profession, although in the literature there are often claims that the nurse's self-concept also affects the nurse's self-esteem and interrelationship between them.

A nurse with a high professional self-concept also affects other nurses. They improve self-image, self-assessment and confidence of other nurses (Angel, Craven, & Denson, 2012; Juanamasta et al., 2018). Table 1 summarises the differences between nurses with a high and low level of professional self-concept. Negative self-concept is an obstacle to independent and efficient performance, and those with low professional self-concept fear authority, work with a negative routine, avoid initiative, are reticent about changes and are negative about themselves (Jahromi et al., 2014). Often, negative dominance of doctors in nurses creates oppressive group sensations, which can lead to the development of a low

self-concept, which in turn can lead to negative self-esteem (Ten Hoeve et al., 2013).

Self-concept and self-esteem (global self-esteem) are the two main elements of self-esteem, both related to self-assessment. Self-concept applies primarily to the cognitive dimension (as I am), while self-esteem on the emotional side (how I feel about who I am).

Table 1 Differences between nurses with High and low level of Professional self-Concept (adapted from Montazeralfaraj et al., 2018; Cowin & Hengstberger-Sims, 2006; Jahromi et al., 2014; Wang et al., 2019)

High level of professional self-concept	Low level of professional self-concept
Be more responsible for own results	Reduced clinical competence
Care for patients with greater interest and respect	Poorer clinical performance
Better interpersonal relationships	Burnout
Better ethical values	Job dissatisfaction
Better adapt to different changes	Desire to quit
More job satisfaction	High work stress
Reduced stress	Fear of authority
Reduced probability of burnout	Work routines
Has a positive impact on the profession	Fear to show initiative
Promotes patient satisfaction	Defies change
High self-confidence	Negative attitude towards self
Lower risk of leaving work	Higher risk of leaving work

Self-esteem is relatively stable, but in no case is there an inextricable feature. Individuals with a relatively high (or low) self-assessment at one stage of their life may have obtained a relatively high (or low) self-assessment decades later. Research has shown that the level of self-esteem of nurses is influenced both by the public image of nurses and by the professional self-concept of nurses. (Orth & Robins, 2014; Abdelrahman, 2018)

The intention to quit the job or profession is the process of thinking, planning and decision-making about leaving, and it does not necessarily lead to actual quitting; this is one step before the actual leaving (Sharififard, et al., 2019). Turnover and intention to leave the work are considered exactly the opposite terms of retention and intention to remain at work. A determinant that has a positive relationship to changeability is considered to deliver the same message as the same determinant that has a negative relationship to retention (Drennan et al., 2015).

Researcher L. Cowin has updated the concept of professional self-concept of nurses with six contributing factors. Whereas, in 2012, the group of researchers Angel E. and others (Angel et al., 2012) focuses on four dimensions of nursing self-concept. Each of the aforementioned authors has both common and different views on the factors creating the professional self-concept, but all three authors (see Figure 1) agree that the professional self-concept of the nurse consists of knowledge, care and leadership.

Lawrence D. (2000) created the theoretical concept of self-assessment. Self-esteem can be defined as a discrepancy (discrepancies, differences) between self-image (actual self) and ideal self. The concept of self-concept is a roof encompassing the actual self, ideal self and self-esteem, and self-esteem depends on the relationship between the actual self and the ideal self of the individual. (Lawrence, 2000; Çakir & Çakir, 2015)

Arthur, 1992	Cowin, 2001	Angel et al., 2012
<ul style="list-style-type: none"> •Satisfaction •Knowledge •Flexibility/Creativity •Communication •Skills/Competencies •Care •Leadership 	<ul style="list-style-type: none"> •General self-concept •Care •Human resources relations • Communication • Knowledge • Leadership 	<ul style="list-style-type: none"> •Care •Knowledge • Human resources relations • Leadership

Figure 1 Factors creating professional self-concept (Arthur, 1992; Cowin, 2001, Angel et al., 2012)

It should be noted that self-esteem does not always reflect a person's objective talents and abilities, or even how others see the person. Researchers Orth & Robins (2014) notes that self-esteem only applies to and individual's subjective assessment of how he or she perceive their value, and in their review authors provides an average predicted trajectory for self-assessment between the ages of 16 and 97, which concludes that self-esteem tends to increase from adolescence to average adulthood, peaking at around 50 to 60 and then declining sharply with age.

High self-esteem prospects success and well-being in areas of life such as relationships, work and health. Thus, self-confidence is a crucial factor in the nursing profession; it is the basis for the professional self-concept of nurses and plays the role of mediators in the performance of the work.

Nurses with healthy self-assessment work more successfully in their work (patient care), while nurses with low self-assessment do so with less value. Nurses with low self-assessment can develop immature behaviour in the workplace. A strong sign of low self-assessment is the inability or unwillingness to communicate effectively with patients or the use of inappropriate means of communication (e.g. negotiation) (Orth & Robins, 2014; Abdelrahman, 2018).

Nurses' desire to leave their jobs is concern throughout Europe. Research data show that in Norway (Andresen et al., 2017) one of the four nurses want to quit. The Project Report in London (Drennan et al., 2015) states that in England the nursing variability is 6% - 12% with the biggest variability in London. In addition, in Sweden (Rudman et al., 2014) one in five of the new nurses, five years on, seriously considered quitting profession.

The number of practising nurses in Latvia also decreases with each year, which results in provision of medical practitioners for 10,000 inhabitants being one of the lowest in Europe. Reducing the number of nurses leads other staff to take care of more patients, increasing the workload and stress of remaining staff which is contributing to job dissatisfaction and burnout (Bordignon & Monteiro, 2019). Although many determinants of nurse shortages have been nominated, nurse variability has been found to be one of the determinants, largely due to nurses' intention to quit profession (Engeda et al., 2014).

Methodology

Four instruments have been used in conducting the research: Nursing self-concept questionnaire (NSCQ); Rosenberg's self-esteem survey; Nursing retention index; socio-demographic data questionnaire.

Data collection was started after the authorisation of the Ethics Committee, taking into consideration the principle of the protection of participants and the information of the participant. Participation in the study was voluntary. The aim, volunteerism and confidentiality of the research have been explained to the participants.

The research was conducted in hospitals of cities X and Y of Latvia. 368 practising nurses have completed full questionnaires. The questionnaires are completed both in paper format 155 (67.5%) and electronically.

Data obtained during the survey has been coded and processed using data processing programs Microsoft Excel and IBM SPSS Statistics 20.0. Descriptive statistics are used for summarising socio-demographic data of nurses, for determining the minimum value (min), maximum value (Max) mean arithmetic (Mean), standard deviation (SD), percentage (%). According to the Kolmogorov-Smirnov coefficient, the compliance of the data with the normal distribution is determined. Spearman's coefficient of correlation, Mann Whitney U-test and Kruskal-Valisa H-test were used for the conclusive statistics. Bonferroni correction for identifying connections.

Research results

368 respondents with an average age of 40.7 participated in the research (SD = 11.43). Only women represented the study population, so the data were not further analysed by gender. 113 respondents represented the age group "40-49", which is 31% as a percentage. The second most represented age group was "30-39" - 98 respondents (27%) and "20-29" - 73 respondents (20%).

The breakdown of respondents by levels of education is 48% bachelor's degree, 26% first-level professional education, 18% secondary specialised education and 8% master's degree. The average length of service between respondents is 13.7 years (SD = 13.7). 35% of respondents have length of service

of more than 20 years, 29% 0-5 years, 17% 6-10 years. In the study, 65% are certified nurses and the others are not. The majority of respondents, i.e. 76% of the participants represented nurses from hospitals in Latvia, however, 24% of all the nurses interviewed represented outpatient practice. Most respondents, i.e. 71% work in one workplace, but the rest 29% of participants have two or more jobs.

Sub-scale averages of the Nursing self-concept instrument are shown in Table 2. The minimum number of points to be obtained for each sub-scale is 6, but a maximum of 48.

Table 2 Averages of sub-scales of the professional self-concept of nurses (n = 368)(created by the authors)

NSCQ sub-scales	Mean	SD	Median
general self-concept	39.82	5.83	41.00
care	38.84	5.09	39.50
staff relations	38.78	4.84	39.00
communication	39.29	5.02	40.00
knowledge	38.83	5.32	40.00
leadership	32.51	7.63	33.00

Note. Mean - mean arithmetic, SD - standard deviation, Median - median

Overall, general self-concept with average 39.82 got the highest result, followed by communication with average 39.29 and care with average 38.84, while lowest result for leadership sub-scale with indicator 32.51.

Analysing respondents' answers in Rosenberg's self-esteem survey, the minimum score obtained is 17, but the maximum score is 40 (a scale score of 10-40). The mean score obtained is 34.52 (SD = 4.99), but the median score is 36. Looking at the survey's items separately (see Table 3), the highest score of 3.74 is for the statement "All in all, I am inclined to feel that I am a failure." Since this is a reverse statement, it indicates that most of the responses to that question "strongly disagree", thereby obtaining a maximum score on that item.

Table 3 Rosenberg's self-esteem survey averages (n = 368) (created by the authors)

	M	SD
1. I feel that I'm a person of worth, at least on an equal plane with others	3.64	0.62
2. I feel that I have a number good qualities	3.69	0.60
3. All in all, I am inclined to feel that I am a failure	3.74	0.60
4. I am able to do things as well as most other people	3.58	0.66
5. I feel I do not have much to be proud of	3.48	0.86
6. I take a positive attitude toward myself	3.55	0.64
7. On the whole, I am satisfied with myself	3.55	0.65
8. I wish I could have more respect for myself	2.56	1.1
9. I certainly feel useless at times	3.24	0.99
10. At times, I think I am no good at all	3.48	0.88
Total	34.52	4.99

The second highest score of 3.69, just a little behind the highest score, has been earned by the item "I feel that I have a number of good qualities," followed

by the item ". I feel that I'm a person of worth, at least on an equal plane with others", averaging 3.64. With a strong preference, the low score of 2.56 is for the item "I wish I could have more respect for myself," which in turn has the highest standard deviation value, showing that the range of responses to this claim has been highest.

The second lowest score is for the item "I certainly feel useless at times." This is also a reversed claim, which means that the majority of respondents have responded negatively to this claim.

In order to answer the research concept, the relationship between Nurse Self-Concept Questionnaire sub-scales and self-esteem was sought. According to the results of the Spearman correlation coefficient, all sub-scales of the professional self-concept form positive, statistically significant correlations with self-esteem (see Table 4).

Table 4 Correlation between the results of professional self-concept and self-esteem (created by the authors)

MPI (NSCQ) sub-scales	R
general self-concept	0.34**
care	0.39**
Staff relations	0.32**
communication	0.40**
knowledge	0.25**
leadership	0.28**

**p<0.01

The relationship between the sub-scales of the professional self-concept and self-esteem is moderately close, except for the sub-scale of knowledge, where there is a weak correlation. The closest relationship with self-esteem is between communication (R = 0.40, n = 368, p < 0.01) and care (R = 0.39, n = 368, p < 0.01), but the weakest link to knowledge (R = 0.25, n = 368, p < 0.01).

Mann-Whitney U-test and Kruskal-Walisa H-test were used to find out if there were significant differences between respondents' responses based on socio-demographic data (see Table 5).

Table 5 Relationship between socio-demographic data and Rosenberg's self-esteem results (created by the authors)

Data	H/U
Age group	19.80*
Education level	17.16**
Length of service	2.69
Certified/Uncertified	13882
Primary workplace	12183
Workplace by region	13.11**
Number of jobs	3.22

*p<0.05; **p<0.01

The results reveal that there is a statistically significant relationship between age groups and self-esteem ($H = 19.80, p = 0.01 < 0.05$), between the level of education and self-esteem ($H = 17.16, p = 0.00 < 0.05$) and the place of placement according to the region of Latvia and self-esteem ($H = 13.11, p = 0.00 < 0.05$).

Comparing the differences in self-esteem according to the levels of education with Bonferoni correction, it was found that there is a statistically significant relationship between respondents with first level professional education and bachelor's degree ($Z=51.905^*$; $* p < 0.05$).

The range of points in the Retention index is between 6 and 48. The average score obtained in the study is 37.74 (SD = 8.54), median 40.

Analysing the statements of the retention index, Table 6 shows that among the 6 items the highest score of 6.57 has been obtained by the statement “It is my intention to continue with my nursing career in the foreseeable future”. The lowest score of 5.90 has been obtained by the statement “As soon as it is convenient for me I plan to leave the nursing profession,” which is consistent with the overall positive outcomes of the instrument.

Table 6 Average work retention index indicators (n = 368) (created by the authors)

	Mean	SD
1. It is my intention to continue with my nursing career in the foreseeable future	6.57	1.53
2. I would like to stay as in nursing as long as possible	6.48	1.51
3. As soon as it is convenient for me I plan to leave the nursing profession	5.90	1.85
4. I expect I will keep working as a nurse	6.50	1.46
5. My plan is to remain with my nursing career as long as I am able	6.27	1.65
6. I would like to find other employment by leaving nursing	6.02	1.95
Total	37.74	8.54

In the research, the relationship between factors creating the professional self-concept of nurses and the desire to remain in the profession has been sought. The Spearman correlation coefficient has been used. It is found that all sub-scales of the professional self-concept form positive, statistically significant correlations with self-esteem (see Table 7).

Table 7 Correlation of Professional sel- Concept and retention Index (created by the authors)

NSCQ sub-scales	R
general self-concept	0.57**
care	0.42**
staff relations	0.43**
communcation	0.35**
knowledge	0.41**
leadership	0.29**

**p<0.01

All the connections between the sub-scales of the professional self-concept and the desire to remain in profession are moderately close. The closest relationship with the desire to remain in profession is between general self-concept ($R = 0.57$, $n = 368$, $p < 0.01$), staff relations ($R = 0.43$, $n = 368$, $p < 0.01$) and care ($R = 0.42$, $n = 368$, $p < 0.01$), while the weakest relationship is related to leadership ($R = 0.29$, $n = 368$, $p < 0.01$).

Analysing the link between self-esteem and desire to remain in profession (see Table 8), a positive, moderately close, statistically significant correlation was found ($R = 0.29$, $n = 368$, $p < 0.01$).

Table 8 Correlation of self-assessment and retention index (created by the authors)

Scale	R
Rozenberg's self-esteem survey	.29**

** $p < 0.01$

Mann-Witney U-test and Kruskal-Walisa H-test (see Table 9) were used to find out whether there are significant differences between socio-demographic data and the desire to stay in profession.

Table 9 Relationship between socio-demographic data and willingness to remain in profession (created by the authors)

Data	H/U
Age group	20.88*
Education level	2.48
Length of service	2.71
Certified/Uncertified	15135.5
Primary workplace	12060
Workplace by region	9.61*
Number of jobs	1.65

* $p < 0.05$

In carrying out the data analysis, it was concluded that there is a statistically significant relationship between the age groups and the desire to remain in the profession ($H = 20.88$, $p = 0.00 < 0.05$), as well as between the workplace by region of Latvia and the desire to remain in the profession ($H = 9.61$, $p = 0.02 < 0.05$).

Analyzing the data in more detail comparing each age group with results of the retention index with the Bonferoni correction, was found that there is a statistically significant relationship between the age groups “20-29” and “50-59” ($Z = -53.225$ *), with willingness to remain in profession as well as between age groups “20-29” and “30-39” ($Z = -73.342$ *; * $p < 0.05$).

Discussion

The average results of the sub-scales of professional self-concept are very similar to the research conducted in Australia (Cowin et al., 2006; Cowin &

Hengstberger-Sims, 2006). The highest assessment among the sub-scales of the professional self-concept was obtained by the general self-concept and the lowest - leadership, which coincides with the findings of other researchers (Cowin et al., 2006; Cowin & Hengstberger-Sims, 2006). Also, a research conducted in China (Wang et al., 2019) found its lowest results directly on the leadership sub-scale. Such a result indicates that leadership is the area nurses should develop.

Rosenberg's self-esteem survey results are relatively high compared to the one in Poland (Kupcewicz & Józwick, 2019), where nurses had medium-level self-esteem results. Similarly, in Germany conducted study by researchers (Van Eckert et al., 2012) showed average self-esteem results of nurses, moreover, it was concluded that nurses with academic education have statistically significant higher self-esteem outcomes than nurses without academic education. The authors' research also found a link between self-esteem and the level of education, as well as between the age group. Higher self-esteem is graded by nurses with a master's and bachelor's degrees, which indicates how important education is to nurses, not only because of knowledge, but also to raise the nurse's self-esteem.

When comparing age groups, in study conducted by authors, significant differences in self-esteem results were found with almost all age groups. It should be noted that, as in the study conducted by Orth and Robins (Orth & Robins, 2014), self-esteem is lower in young nurses.

The research results reveal that all sub-scales of the professional self-concept form positive, statistically significant correlations with self-assessment. The closest correlation for self-assessment has been revealed with the communication sub-scale, indicating that nurses who have noted that they communicate effectively and without difficulty with colleagues and patients also showed better self-esteem results. Also research conducted in Turkey in 2017 (Sabanciogullari & Dogan, 2017) found a positive statistically significant correlation between the self-concept and self-esteem of nurses, and concluded that the self-concept has relation to the nurse's age, educational level and length of service.

Similarly to self-esteem, the retention index develops statistically significant correlations with all sub-scales of the professional self-concept, indicating that the professional self-concept of nurses is a very important aspect of both the development of the nurse's self-esteem and future plans of the professional career. The similarity of the research results is found in the conclusions of the group of authors (Cowin et al., 2008) that the desire to remain in the profession is most closely related to the overall self-concept of a nurse.

Taking into account that the results of the retention index are relatively high, analysing the statements of the questionnaire separately, the averages largely coincide with the research results of researchers (Cowin & Hengstberger-Sims, 2006), where the highest assessment was obtained by the item "It is my intention to continue with my nursing career in the foreseeable future". It is

younger age who is more associated with wanting to quit profession, similar to the study carried out in Sweden (Rudman et al., 2014), where one in five of the young nurses, after five years of work, seriously considered quitting profession.

The obtained results revealed that there are statistically significant links between some groups of socio-demographic data: age and self-esteem, level of education and self-esteem, as well as willingness to remain in the profession. Statistically significant differences have been identified between respondents' answers according to age group, education level, length of service and certificate in relation to different sub-scales of self-concept.

Conclusions

1. Nurses showed relatively high results (compared to the cap) in self-concept, self-esteem and retention index instruments.
2. The highest assessment among sub-scales of the self-concept was obtained by the general self-concept scale, but the lowest - by the sub-scale of leadership.
3. There is a statistically significant relationship between nurse self-concept, self-esteem and willingness to remain in profession.
4. Socio-demographic data create statistically significant differences in different outcomes: the sub-scale of the professional self-concept (age, level of education, length of service, certificate), the assessment of self-esteem (age, level of education) and the desire to remain in the profession (age).

References

- Abdelrahman, S. M. (2018). Relationship among public nursing image, self-image, and self-esteem of nurses. *IOSR J Nurs Health Sci*, 7(1), 10-16. DOI: 10.9790/1959-0701091016
- Andresen, I. H., Hansen, T., & Grov, E. K. (2017). Norwegian nurses' quality of life, job satisfaction, as well as intention to change jobs. *Nordic Journal of Nursing Research*, 37(2), 90-99. DOI: 10.1177/2057158516676429
- Angel, E., Craven, R., & Denson, N. (2012). The Nurses Self-Concept Instrument (NSCI): Assessment of psychometric properties for Australian domestic and international student nurses. *International Journal of Nursing Studies*, 49(7), 880-886. DOI: 10.1016/j.ijnurstu.2012.01.06.
- Arthur, D. (1992). Measuring the professional self-concept of nurses: a critical review. *Journal of Advanced Nursing*, 17(6), 712-719. DOI:10.1111/jan.1365-2648.1992.tb01969
- Bordignon, M., & Monteiro, M. I. (2019). Predictors of nursing workers' intention to leave the work unit, health institution and profession. *Revista Latino-Americana de Enfermagem*, 27. DOI: 10.1590/1518-8345.3280.3219
- Buchan, J., Shaffer, F., & Catton, H. (2018). Policy brief: nurse retention. International Center on Nurse Migration (ICNM). In.
- Çakır¹, V., & Çakır, V. (2015). The role of self-esteem and self image congruity with the Ad spokespersons in Ad attitude. Retrieved from: https://www.researchgate.net/publication/292982423_The_Role_of_SelfEsteem_and_Self_Image_Congruity_with_the_Ad_Spokespersons_in_Ad_Attitude

- Cowin, L. (2001). Measuring nurses' self-concept. *Western Journal of Nursing Research*, 23(3), 313-325. DOI: 10.1177/01939450122045177
- Cowin, L. S., Craven, R. G., Johnson, M., & Marsh, H. W. (2006). A longitudinal study of student and experienced nurses' self-concept. *Collegian*, 13(3), 25-31. DOI: 10.1016/s1322-7696(08)60529-6
- Cowin, L. S., & Hengstberger-Sims, C. (2006). New graduate nurse self-concept and retention: A longitudinal survey. *International Journal of Nursing Studies*, 43(1), 59-70. DOI: 10.1016/j.ijnurstu.2005.03.004
- Cowin, L. S., Johnson, M., Craven, R. G., & Marsh, H. W. (2008). Causal modeling of self-concept, job satisfaction, and retention of nurses. *International Journal of Nursing Studies*, 45(10), 1449-1459. DOI: 10.1016/j.ijnurstu.2007.10.009
- Drennan, V. M., Halter, M., Grant, R., Gale, J., Harris, R., & Gourlay, S. (2015). Adult nurse turnover and retention: South London project report. Retrieved from: <https://eprints.kingston.ac.uk/id/eprint/33053/7/Drennan-V-33053.pdf>
- Engeda, E. H., Birhanu, A. M., & Alene, K. A. (2014). Intent to stay in the nursing profession and associated factors among nurses working in Amhara Regional State Referral Hospitals, Ethiopia. *BMC nursing*, 13(1), 1-8. DOI: 10.1186/1472-6955-13-24
- Halperin, O., & Mashiach-Eizenberg, M. (2014). Becoming a nurse—A study of career choice and professional adaptation among Israeli Jewish and Arab nursing students: A quantitative research study. *Nurse Education Today*, 34(10), 1330-1334. DOI: 10.1016/j.nedt.2013.10.001
- Heinen, M. M., van Achterberg, T., Schwendimann, R., Zander, B., Matthews, A., Kózka, M., Ensio, A., Sjetne, I. S., Casbas, T. M., & Ball, J. (2013). Nurses' intention to leave their profession: a cross sectional observational study in 10 European countries. *International Journal of Nursing Studies*, 50(2), 174-184. DOI: 10.1016/j.ijnurstu.2012.09.019
- Jahromi, Z. B., Jahanbin, I., Sharif, F., Ghodsbin, F., & Keshavarzi, S. (2014). Investigation of the professional self-concept of nursing students in Shiraz, Iran. *Central European Journal of Nursing and Midwifery*, 5(3), 112-116. DOI: 10.15452/CEJNM.2014.05.0005
- Juanamasta, I., Kusnanto, SR Yuwono. (2018). Improving Nurse Productivity Through Professionalism Self-Concept. Proceedings of the 9th International Nursing Conference (INC 2018)
- Kupcewicz, E., & Jóźwik, M. (2019). Association of burnout syndrome and global self-esteem among Polish nurses. *Archives of Medical Science*, 16(1), 135-145. DOI: 10.5114/aoms.2019.88626
- Lawrence, D. (2000). Building self-esteem with adult learners. *Building Self-Esteem with Adult Learners*, 1-128. DOI: 10.4135/9781446217511.n1
- Montazeralfaraj, R. M., Ahmadi, E. A., Tafti, A. D. T., Barati, O., & Bahrami, M. A. (2018). Measuring the nurses' professional self-concept and its correlation with working stress in Iranian educational Hospitals. *Bali Medical Journal*, 7(2), 521-525. DOI: 10.15562/bmj.v7i2.938
- Orth, U., & Robins, R. W. (2014). The development of self-esteem. *Current directions in psychological science*, 23(5), 381-387. DOI: 10.1177/0963721414547414
- Randle, J., & Arthur, D. (2007). The professional self concept of nurses: a review of the literature from 1992-2006. *Australian Journal of Advanced Nursing*, The, 24(3), 60-64. Retrieved from: <https://search.ebscohost.com.db.rsu.lv/login.aspx?direct=true&db=a9h&AN=106116911&site=ehost-live&scope=site>

- Rudman, A., Gustavsson, P., & Hultell, D. (2014). A prospective study of nurses' intentions to leave the profession during their first five years of practice in Sweden. *International Journal of Nursing Studies*, 51(4), 612-624. DOI: 10.1016/j.ijnurstu.2013.09.012
- Sharififard, F., Asayesh, H., Rahmani-Anark, H., Qorbani, M., Akbari, V., & Jafarizadeh, H. (2019). Intention to leave the nursing profession and its relation with work climate and demographic characteristics. *Iranian Journal of Nursing and Midwifery Research*, 24(6), 457. DOI: 10.4103/ijnmr.IJNMR_209_18
- Van Eckert, S., Gaidys, U., & Martin, C. R. (2012). Self-esteem among German nurses: does academic education make a difference? *Journal of Psychiatric and Mental Health Nursing*, 19(10), 903-910. DOI: 10.1111/j.1365-2850.2011.01862.x
- Wang, M., Guan, H., Li, Y., Xing, C., & Rui, B. (2019). Academic burnout and professional self-concept of nursing students: A cross-sectional study. *Nurse Education Today*, 77, 27-31. DOI: 10.1016/j.nedt.2019.03.004

STROKE PARAMETER ANALYSIS PERFORMING A COMPETITION DISTANCE (200 M) ON WATER

Martins Veispals

Latvian Academy of Sport Education, Latvia

Antra Gulbe

Latvian Academy of Sport Education, Latvia

Abstract. *Canoe sprint is a water sport (under natural conditions, it takes place on water); therefore, for the most part, research is carried out under laboratory conditions, when the load is performed on various special exercise machines (ergometers) that try to simulate natural conditions as closely as possible since doing research in natural conditions is very challenging. However, technological development and recently available specific devices allow to go forward and overcome these challenges. The aim of the research is to provide information on stroke parameters for a 200 m distance with maximum effort in natural conditions of the sport – on water, provided by the only device currently available on the market that measures the power and force applied to the stroke, and result comparison with similar research done by other authors. Dynamometry was used as the primary method to obtain indicators on power and force applied to the paddle, using a specialized device – canoe sprint power meter (One Giant Leap, Nelson, New Zealand). The average force value to the brace in a 200 m distance between all 87 braces was found to be 456.2 ± 8.7 N.*

Keywords: *canoe sprint, force measurements, force of the stroke, power of the stroke, stroke analysis.*

Introduction

The main goal of a paddler during a competition is to cover the distance in the shortest time possible. Authors Kendal & Sanders (1992) found that the average speed of the kayak fluctuates during the stroke. Research on both canoe sprint and paddling have concluded that the speed of the boat increases during a brace due to the applied forces acting on the paddle, while water resistance slows down the speed of the boat between the braces (Mann & Kearney, 1980; Jackson, 1995; Baudouin & Hawkins, 2002). Thus, the characteristics of the brace and changes in speed are important valuables in predicting the time needed to cover the distance. The performance of a paddler can be improved in two ways:

- by increasing the forward driving force – the efficiency of the brace and/or the force applied to the paddle should be increased;
- by decreasing the total resistance acting on the boat during the stroke – considering the standards and technical regulations used in boat

production, resistance can be reduced by eliminating accelerations and rotations along and around all axes of its movement and by optimizing the athlete's power-to-weight ratio (Michael, Smith, & Rooney 2009).

Several researches have looked at the forces exerted by kayakers (of various training levels) under different conditions during a brace on water; however, there are only a few such studies as research is complicated by the specifics of canoe sprint. In general, there are two main forces that move the boat forward in canoe sprint (Mann & Kearney, 1980) – the first is the one that the athlete applies to the paddle, and the second – the one that the athlete applies to the foot rest (the spot against which the athlete supports himself/herself with his/her feet).

There are studies that reflect different values of the stroke force for different subjects and under different conditions (Aitken & Neal, 1992; Baker, 1998; Sperlich & Baker, 2002; Sturm et al., 2010; Brown et al., 2010; Gomes et al., 2015; Nilsson & Rosdahl, 2016; Hogan et al., 2019; Bonaiuto et al., 2020; Kong et al., 2020), but in general there is no specific data on stroke parameters (force and power values) in a competition distance. With the development of technology, various wearable receivers for biomechanical assessment of human movements have become available in sports. Inertia, force and electromyographic receivers are the most widely used in the field of sport (Taborri et al., 2020).

In canoe sprint, one of the wishes of coaches, athletes, and other specialists (including researchers) is to obtain information about the perfect stroke (the force-time curve). The obtained data would help to optimize the training process in a competition distance.

Currently, various devices have been used in research on stroke parameters in canoe sprint, most of which are not yet commercially available (Gomes et al., 2011; Sturm et al., 2010; Nilsson & Rodhal, 2016; Bonaiuto et al., 2020). Nonetheless, a commercially available device has been used in recent research (Hogan et al., 2019; Kong et al., 2020).

The opportunity to perform force measurements on water with the use of dynamometry and to carry out a full-fledged analysis of stroke parameters for a high-performing athlete (paddler), as well as to integrate the use of such a device (kayak power meter (One Giant Leap, Nelson, New Zealand)) for the optimization of the training process is the aim of this case study.

Literature Review

The types of biomechanical measurements in canoe sprint fall into three basic types: competition analysis, kinematic analysis, and force measurements on water (Sperlich & Baker, 2002). The third of the types is the one discussed in the study; moreover, it is also the most complicated one as it should be taken into account that, according to the authors Aitken & Neal (1992) and Stothart et al.

(1986), the devices that perform these measurements must meet a list of requirements:

- the device must be waterproof;
- the device must be light, < 3% of the total weight of the paddler and the boat, i.e., 2-3 kg;
- the device must be portable so that it can be used in different boat classes;
- there must be a robust signal energy transducer for the device to operate under variable temperature and humidity conditions;
- the length, weight, balance and blade area of the paddle must not change;
- the paddler's usual technique must not change;
- the device must have high signal and data recording capacity for at least 5 min;
- the device must have high data reliability and repeatability analysis with real-time reflection;
- the device must be able to acquire data from up to 4 paddlers at the same time, so that it could also analyse team boats (twos and fours).

The most important stroke parameters that can be obtained by using these devices are as follows:

- stroke frequency or pace (the number of strokes performed per minute);
- brace length (the distance from the water contact of a paddle blade until its removal from water);
- brace duration (the time from the water contact of a paddle blade until its removal from water);
- stroke length (the distance travelled from the start of a brace with one hand to the start of the next brace with the other hand);
- stroke duration (the time from the beginning of a brace with one hand to the start of the next brace with the other hand);
- air phase time (the part of the stroke time in which the paddle blade is out of the water);
- brace length (the distance travelled by the boat only during the brace phase);
- stroke force variables (the maximum achieved force, average force, force ratio, rate/frequency of force increase, impulse and impulse frequency);
- stroke power variables (the maximum power achieved/peak power in a stroke, average power, power ratio and work performed).

A more thorough analysis of stroke parameters would be possible along with the development of measuring devices. Until now, a large part of the equipment used for on-water measurements has been experimental and of limited availability (not commercially distributed). Most of the stroke parameters in canoe sprint could only be obtained by performing measurements under laboratory conditions, i.e., on various ergometers. However, it is clearly visible that the on-water

measurements (see Table 1), in which the force of the stroke (the force applied to the paddle) was recorded, were done at the end of the 20th century. Moreover, the authors mentioned in the table sometimes refer to even older measurements – from the 70s of the 20th century. It can be seen that at the beginning of the century, the researcher Baker has spoken about these indicators several times (Baker, 1998; Sperlich & Baker, 2002), but then a 10-year period followed, during which silence can be observed on this topic in sports science. In the last decade, researchers have become more active again and several measuring devices have been created, with the help of which the stroke force parameters have been determined, mainly – the force applied to the paddle. Still, there are also studies that have examined the force applied to the foot rest.

Table 1 The highest values of the stroke force and power recorded in research (authors' summary)

Boat Class	Research Place	Maximum Force, (N)		Maximum Power, (W)		Authors
		Men	Women	Men	Women	
K1	On water	213.5	-	-	-	Aitken & Neal, (1992)
K1	On water	~220.0	-	-	-	Mononen & Viitasalo, (1995)
K2	On water	~180.0	-	-	-	Mononen et al., (1994)
K1	On water	525.0	-	-	-	Baker, (1998)*
K1	On water	375.0	290.0	-	-	Baker (1998); Sperlich & Baker (2002)
-	Laboratory	120.0	-	-	-	Sturm et al., (2010)
K1	On water	354.4		-	-	Brown et al., (2010)
K1	On water	274.0	153.0	-	-	Gomes et al., 2015
-	Laboratory	-	-	610.0	359.0	Bjerkefors et al., (2018)
-	On water	-	-	-	373.0	Hogan et al., (2019)
K1	On water	324.1	152.8	-	-	Bonaiuto et al., (2020)
K2	On water	344.3	-	924.8	-	Kong et al., (2020)
-	Laboratory	600.2	-	-	-	Petrovic et al., (2020)

*A claim that it should equal this value (it is not clear if this is an obtained measurement).

The column of the table “Maximum Force” reflects the force (N) values presented in research. The research by author Baker (1998) stands out from the rest, as it states that the values of the maximum force applied to the paddle by Australian national-level male paddlers were 375N, but when discussing high-performing paddlers (participants of international championships), he states that at the start of a 1000 m distance they should show a force applied to the paddle of 525N. On average, it should be 400N over the distance. However, specific graphs with exact units of measurement have not been displayed. If these values are true, then it contradicts Gomes et al. (2015) who also examined high-performing

paddlers (participants of international championships), who took on a 200 m distance in competition mode. For these athletes, the values of the maximum force applied to the paddle were only 274N. Nonetheless, similar values were reported by Bonaiuto et al. (2020) and Kong et al. (2020), although the measurements of the latter were taken while paddling in the K2 boat class. The highest recorded force in one stroke was recorded in a study by Petrovic et al. (2020). Still, in this study, the force applied to the paddle was determined on a specific ergometer – a one-sided sliding ergometer, on which simulations of the kayaking movement can be performed with each side of the body (the right and the left stroke, respectively).

Overall, no similar trend can be observed, and the differences in the obtained measurements are quite large. The measurements of the maximum distance covered by high-performing athletes have not yet been published, and there are various attempts to perform individual sections at respective speeds or stroke frequencies. It is clearly necessary to measure the actual distances covered in order to be able to determine the correlation and differences of stroke parameters depending on the planned competition distance and to further adjust it to the training process.

Methodology

In order to solve the research task, it was necessary to obtain the stroke parameters of a high-performing paddler during a 200 m distance in natural conditions – a field experiment had to be carried out. The experiment was conducted in a competition distance, at the end of the competition period. Within the framework of the experiment, the athlete covered a 200 m distance at maximum effort in a competition distance; the following methods were used to obtain data: heart rate measurements (for obtaining HR recovery indicators); blood biochemical analysis (for obtaining lactate recovery indicators); dynamometry (for obtaining indicators of the power and force applied to the paddle, using a specialized device – a kayak power meter (*One Giant Leap, Nelson, New Zealand*/ <https://onegiantleap.co.nz> ^).

Heart Rate Measurements. The study used a Garmin heart rate monitor (model: Forerunner 935) together with a heart rate belt (model: HRM-Tri™ monitor) for data acquisition. The belt was placed around the athlete's chest, and an adapter was attached in the middle of it, which recorded the heart rate and transmitted it telemetrically to the heart rate monitor. The heart rate monitor was placed on the boat, wrapped around a special watch holder, placed in easy sight of the athlete so that he could see the information reflected on it.

Blood Biochemical Analysis (Lactate Measurement During a Load). In order to assess the special load of the sport under natural conditions on water, a biochemical analysis of blood was performed, as the lactate value was measured

before the load, immediately after the load and during the first 30 minutes of recovery. Lactate measurement was performed with the portable test strip analyser Accutrend® Plus. Based on the scientific literature on portable lactate devices in sport, it is one of the most commercially available (Baldari et. al., 2009; Tanner, Fuller & Ross, 2010). It is a device capable of determining glucose, total cholesterol, triglyceride and lactate values in capillary blood and plasma by using special test strips (Baldari et al., 2009).

Dynamometry (On-Water Force Measurements). A special device – a kayak power meter (*One Giant Leap, Nelson, New Zealand*) – was used to measure the force and power of a stroke. Currently, it is the only freely available device on the market, with the help of which it is possible to obtain data on the force and power of a stroke. The device is an adjustable shaft of a canoe paddle, which, like all paddle shafts, is made from a composite material – carbon fibre. The only difference is that this shaft is about 100 g heavier than the shafts of conventional paddle manufacturers. In assembled form (together with the blades), its mass is slightly over 1000 g; in a study conducted in Singapore in 2020, the mass difference of an assembled paddle (using this equipment) compared to a standard assembled paddle was 12% (1010 g to 901 g) (Kong, 2020). In our case, the difference is ± 3 g. This specialized shaft is heavier because it is equipped with receivers (voltage meters and gyroscopes). The device validity ranges from 0.12% to 1.4% (Macdermid & Fink, 2017). To prepare the device for work, one must use an online application with a *Bluetooth* connection, the operation of which is ensured through the Adaptive Network Technology (ANT+™).

Data recording is done using a Windows desktop application or a paired compatible ANT+™ device, which is running in bike mode (as power display is required). The device we used is already of the second generation, therefore data reflection is possible in two ways. First, by using a paired compatible smart device, for example, a sports watch, as it is possible to keep track of one's power output, as well as the heart rate and speed during the workout. After the workout, these various parameter graphs are available in the Garminconnect application.

Secondly, the device is capable of operating in high-speed data mode (HSD). In this mode, instantaneous stroke force and power values are recorded every 0.01 seconds at a frequency of 100 Hz (hertz). The device can operate in the HSD mode for approximately 12 minutes; the data are recorded on the device (in the paddle shaft) and then the data can be downloaded via Windows desktop application, using an ANT+™ USB transmitter.

Research results

The power meter recorded the covered competition distance at a frequency of 50 hertz (Hz); each value (for upper and lower arm) of the power (W) and applied force (N) was recorded every 0.01 s. The device stored the file in its

internal memory, and it was then possible to analyse the data using an internet connection by accessing the manufacturer's data reflection application. Furthermore, the data were downloaded into the *Microsoft Excel* application format. A total of 27834 cells were filled with the data as the device was operated in the high-speed data recording mode for approximately five minutes and recorded all of the subject's force and power values applied to the strokes every 0.005 s. Then data filtering was performed, and only the data (3814 cells) reflecting the power and force values during a competitive distance (200 m) on water were extracted. Data comparison was conducted in the MS Excel application and the online application, as it was important to mark the end and the beginning of the strokes, as well as to separate the brace phases in order to further record and analyse the average values of these indicators. Moreover, the stroke and brace durations were recorded and summarized. These actions were performed for each of the 87 strokes performed by the athlete in the 200 m distance on water. The power meter recorded six different values in high-speed data mode every 0.01 s: the upper arm force applied to the paddle shaft (left stroke), the lower arm force applied to the paddle shaft (left stroke), the upper arm force applied to the paddle shaft (right stroke), the lower arm force applied to the paddle shaft (right stroke), power (left stroke), power (right stroke) (see Figure 1). Accordingly, during the execution of each stroke (right or left), there were changes in the indicators of the relevant active side, for instance, when the athlete performed a left stroke, there were changes (an increase) in the values of upper and lower arm forces of the left stroke and in the power values of the left stroke.

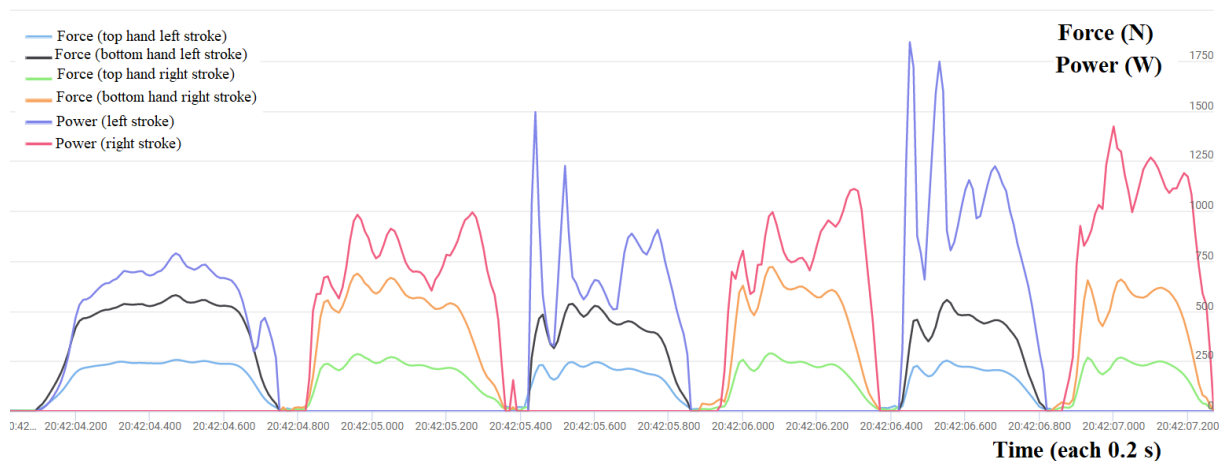


Figure 1 The ratio of the stroke power and force values per unit of time, graphical representation (the first six strokes of the 200 m distance on water) (created by the authors)

The above-mentioned parameters (upper arm force, lower arm force and power of the stroke) are displayed in the application with curves of various colours. In this case, the red curve represents the power values (W) in the right stroke, the orange curve represents the lower arm force in the right stroke (N), and the green curve represents the upper arm force in the right stroke (N). The blue

curve represents the power values (W) in the left stroke, the black curve represents the lower arm force in the left stroke (N), and the light blue curve represents the upper arm force in the left stroke (N). It is possible to read instantaneous values (in every 0.2 s) for both force and power on each curve. It can be seen that, when comparing the actions of both arms, the lower arm applies the greatest force to the paddle during the stroke (comparatively – orange versus green and black versus light blue curves), and these values differ by more than two times during some moments of the stroke.

The figure shows the first six strokes; the athlete started the competition distance from the spot (the speed of the boat at the start of the movement was 0 km/h), so in the first four braces there was a small difference between the applied lower arm force and the stroke power, but as the boat gradually approaches the competition speed, the difference increases.

In the third and fifth brace, two “peaks” of rapid power increase were observed, which is partially explained by the measurement frequency of the device, the above-mentioned 50 Hz (value recording every 0.01 s), as well as by the subject’s manner of performing the left stroke, which is influenced, first of all, by the technical performance with an aggressive execution of the brace hook phase, and, secondly, – by the fact that the athlete holds the paddle in the left grip. In general, two types of grips can be observed in the world – left and right. The type of grip refers to which arm holds the shaft of the paddle and turns it with the wrist to place the opposite blade of the paddle in the water at the appropriate angle. This also explains the flatter increase in power and force for the athlete’s right-hand strokes throughout the distance.

All strokes performed by the athlete and the values of applied force and power shown in them were summarized, and the average values were calculated in each stroke and brace, as well as the average values were calculated in every 0.01 s. The values of stroke and brace duration (s) were summarized; then a third value was calculated from these two values – the duration of the unsupported phase of the stroke (s). Table 2 summarizes the values of stroke and brace durations. Since paddling in canoe sprint takes place with both the right and the left side, the average stroke durations for both the right and the left stroke were compared; the average stroke duration for the right side is 0.43 s, and 0.45 s for the left side, respectively. According to Student’s T-Test for paired samples $t < t_{\alpha, v}$, the difference is not significant.

Table 2 Stroke duration values (s) (created by the authors)

	Stroke duration	Brace duration	Unsupported phase duration
Average in phase	0.44	0.34	0.10
Percentage wise (%):	1	0.78	0.22
Total:	38.1	29.74	8.36

The table 2 shows the average durations (s) of the stroke phases and in percentages – the average stroke duration; covering a 200 m distance on water, it is 0.44 s, which is divided into two parts: first, in the brace phase with a duration of 0.34 s, and second, in the unsupported phase with a duration of 0.1 s. Overall, 78% of the time spent in the distance (29.74 s) the paddle was in the brace phase, while 22% of the time spent in the distance the paddle spent in the unsupported phase (8.36 s).

By summing up all the average stroke values and the average values every 0.01 s, an average brace graph was created with the athlete covering a 200 m distance on water (see Figure 2).

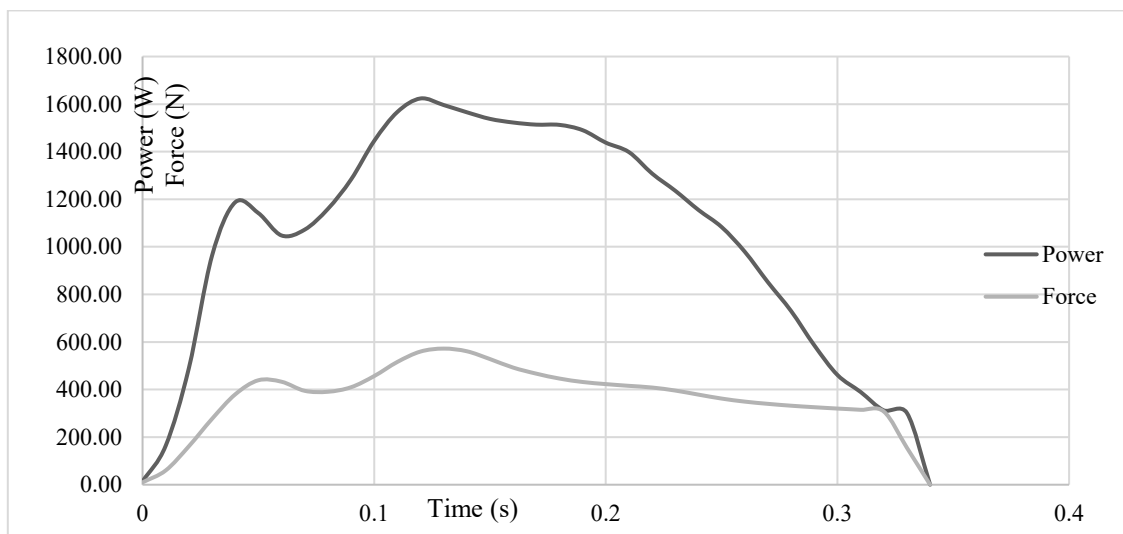


Figure 2 Average brace power and force graph for a 200 m distance on water (created by the authors)

The average force value for a brace in the 200 m distance between all 87 braces was 456.2 ± 8.7 N. The average value of the strongest brace was 655.1 N (in the 2nd brace), and the average lowest value of a brace was 257.5 N (in the 87th brace), while the average brace duration was 0.34 s. Logically, it would seem that the first stroke should have the highest value of the force applied to the paddle; however, starting from the spot is a specific condition, and inertia appears in the second brace, which creates a greater force applied to the paddle. On the other hand, the lowest value being in the last brace can be explained by the fact that the brace was 0.04 s longer than the average and the subject performed it partially, as the finish was already reached during the brace.

The average power value for a brace in a 200 m distance between all 87 braces was 1071.5 ± 22.8 W. The average value of the strongest brace was 1407.2 W (in the 14th brace), and the average lowest value of a brace was 546 W (in the 1st brace), while the average brace duration was 0.34 s. The 14th brace could also be related to reaching the maximum speed, as it is the 7th second (the time spent in the distance at the end of a brace is 6.46 s); however, according to the

Garminconnect application, the maximum movement speed in the speed graph appears around 10 s, but in practice it had been observed that sports watches display the speed with a delay, since the athlete himself mentioned in his training diary that he can reach the maximum speed already in the 8th second.

Small differences were also observed between the power values between the two sides of paddling – the average value of brace power for the left side was 1055.6 W in contrast to the 1087.7 W of the right side. Nonetheless, according to the T-Test for paired samples $t < t_{\alpha, v}$, the difference is not significant.

As for heart rate and lactate measurements, - the maximum registered heart rate value after performing 200 m distance was 183 bpm (beats per minute), the maximum registered lactate value was 13 mmol/l (millimoles per litre), however those measurements were made for overall characterizing of the physical load and for recovery data for athlete's coach. As aim of the study was to obtain, analyse and compare the stroke parameter data of high-class athlete to other researches, the heart rate and lactate were not analysed wider.

One of the initially set goals was a graphical representation of the “perfect brace” in a 200 m distance. In order to depict and analyse it, 20 consecutive braces were selected out of the 87 braces performed in a 200 m distance. The 23rd-42nd brace was analysed. These braces were selected because, according to the GPS data reflected by the sports watch Garmin, at this moment the highest movement speed is on average 21.66 ± 0.13 km/h. Looking at the time spent in the distance, these strokes were performed from 9.64 s to 17.84 s, which is consistent with the athlete being in the 50th-100th metre of the distance in real life, which is related to achieving the maximum speed.

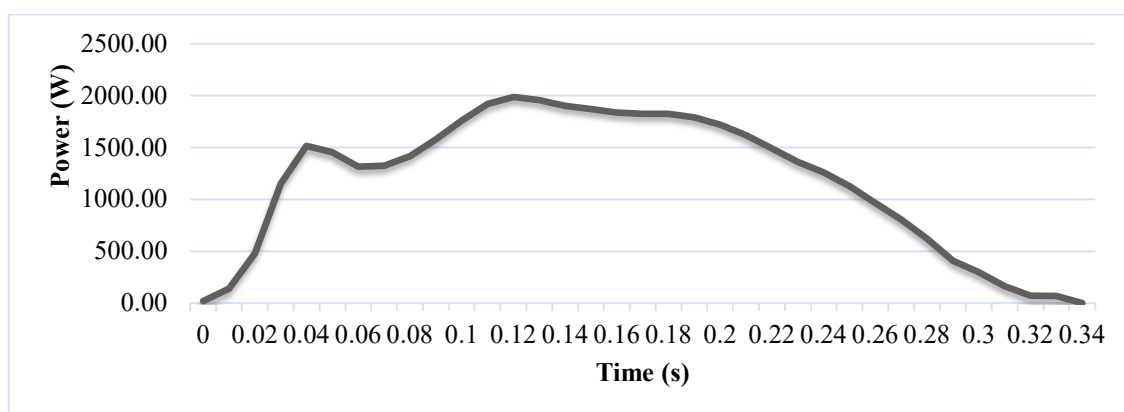


Figure 3 Average brace graph at maximum movement speed ($\bar{X}=21.66$ km/h) in a 200 m distance (created by the authors)

Conclusions and discussion

After looking at all 20 braces performed during a 200 m distance at the maximum movement speed and carrying out descriptive statistics and univariate analysis of variance, it was found that the highest instantaneous power value of

2526 W was detected in the 29th brace. It should be noted that the instantaneous power values did not exceed the 2000 W mark in only three braces (31st, 33rd and 34th brace). Analysis of variance showed a p value of 0.98; $p > 0.05$ so the differences between the braces are not considered significant.

The average stroke values were calculated for every 0.01 s, thus obtaining the average time-to-power ratio (graph) for a brace in a 200 m distance at an average speed of 21.66 km/h (see Figure 3).

The average power value for the 20 considered braces when paddling at maximum speed in a 200 m distance was 1171.9 W; however, it is lower than the value recorded in a single separate stroke. This can be explained by the fact that all the considered 20 strokes were not of the same duration; the duration of each stroke was different, therefore the average values also changed. The two highest average values of these strokes were detected in the 26th and 27th brace (1389.1 and 1357.6 W, respectively), and these braces also had the shortest brace durations of 0.29 s, which is 0.05 s less than the average brace duration.

Comparing the recorded force and power values in the author's study with the values recorded in literature, it was concluded that the highest correspondence was with the statement by author Baker (1998) that the average power of a stroke for high-performing paddlers can exceed 580 N, and that the force of a brace on average for men in a 1000 m distance can be as much as 525 N (in the first 20 seconds of the start), which is 53.5 kg when converted into force kilograms. As the distance continues, this value decreases and on average stays within the limits of 400 N. In our case, the average force value of a stroke in a 200 m distance was sometimes > 600 N. A certain idea was also given by V. Kong (2020) who, together with his team, conducted a numerically large study for canoe sprint with $n=79$, in which they looked at the differences in how the characteristics of athletes' strokes changed when paddling in a two-person boat class and changing positions – sitting as the first and sitting as the second number. This study also used a device purchased for the purposes of the author's research; however, the idea of author Kong to look at the teams of the two-person boat class is inspiring and in a short period of time someone should come up with a new research, if not in the context of such a large sample, then in the analysis of high-performing two-person boat teams.

References

- Aitken, D. A., & Neal, R. J. (1992). An on-water analysis system for quantifying stroke force characteristics during kayak events. *Journal of Applied Biomechanics*, 8(2), 165-173. DOI: <https://doi.org/10.1123/ijsb.8.2.165>
- Baker, J. (1998). Evaluation of biomechanic performance related factors with on-water tests. *International seminar on kayak-canoe coaching and science* (pp. 50-66). University of Gent Press: Gent, Belgium. Retrieved from: <https://ojs.ub.uni-konstanz.de/cpa/article/view/5171/4747>

- Baldari, C., Bonavolontà, V., Emerenziani, G. P., Gallotta, M. C., Silva, A. J., & Guidetti, L. (2009). Accuracy, reliability, linearity of Accutrend and Lactate Pro versus EBIO plus analyzer. *European journal of applied physiology*, 107(1), 105-111. DOI: <https://doi.org/10.1007/s00421-009-1107-5>
- Baudouin, A., & Hawkins, D. (2002). A biomechanical review of factors affecting rowing performance. *British journal of sports medicine*, 36(6), 396-402. DOI: 10.1136/bjism.36.6.396
- Bjerkefors, A., Tarassova, O., Rosén, J. S., Zakaria, P., & Arndt, A. (2018). Three-dimensional kinematic analysis and power output of elite flat-water kayakers. *Sports biomechanics*, 17(3), 414-427. DOI: 10.1080/14763141.2017.1359330
- Bonaiuto, V., Gatta, G., Romagnoli, C., Boatto, P., Lanotte, N., & Annino, G. (2020). A pilot study on the e-kayak system: A wireless DAQ suited for performance analysis in flatwater sprint kayaks. *Sensors*, 20(2), 542. DOI: <https://doi.org/10.3390/s20020542>
- Brown, M., Lauder, M., & Dyson, R. (2010). Activation and contribution of trunk and leg musculature to force production during on-water sprint kayak performance. *ISBS-Conference Proceedings Archive*. Retrieved from: <https://ojs.ub.uni-konstanz.de/cpa/article/view/4417/4107>
- Gomes, B. B., Ramos, N. V., Conceição, F. A., Sanders, R. H., Vaz, M. A., & Vilas-Boas, J. P. (2015). Paddling force profiles at different stroke rates in elite sprint kayaking. *Journal of Applied Biomechanics*, 31(4), 258-263. DOI: 10.1123/jab.2014-0114
- Gomes, B., Viriato, N., Sanders, R., Conceição, F., Vilas-Boas, J. P., & Vaz, M. (2011). Analysis of the on-water paddling force profile of an elite kayaker. *ISBS-conference proceedings archive*. Retrieved from: <https://ojs.ub.uni-konstanz.de/cpa/article/view/4822>
- Hogan, C., Binnie, M. J., Doyle, M., Lester, L., & Peeling, P. (2019). Comparison of training monitoring and prescription methods in sprint kayaking. *International journal of sports physiology and performance*, 15(5), 654-662. DOI: 10.1123/ijsp.2019-0190
- Jackson, P. S. (1995). Performance prediction for Olympic kayaks. *Journal of sports Sciences*, 13(3), 239-245. DOI: <https://doi.org/10.1080/02640419508732233>
- Kendal, S. J., & Sanders, R. H. (1992). The technique of elite flatwater kayak paddlers using the wing paddle. *Journal of Applied Biomechanics*, 8(3), 233-250. DOI: <https://doi.org/10.1123/ijbs.8.3.233>
- Kong, P. W., Tay, C. S., & Pan, J. W. (2020). Application of Instrumented Paddles in Measuring On-Water Kinetics of Front and Back Paddlers in K2 Sprint Kayaking Crews of Various Ability Levels. *Sensors*, 20(21), 6317. DOI: 10.3390/s20216317
- Macdermid, P. W., & Fink, P. W. (2017). The validation of a paddle power meter for slalom kayaking. *Sports medicine international open*, 1(2), E50. DOI: 10.1055/s-0043-100380
- Mann, R. V., & Kearney, J. T. (1980). A biomechanical analysis of the Olympic-style flatwater kayak stroke. *Medicine and Science in Sports and Exercise*, 12(3), 183-188. Retrieved from: https://journals.lww.com/acsm-msse/Abstract/1980/23000/A_biomechanical_analysis_of_the_Olympic_style.10.aspx
- Michael, J. S., Smith, R., & Rooney, K. B. (2009). Determinants of kayak paddling performance. *Sports Biomechanics*, 8(2), 167-179. DOI: <https://doi.org/10.1080/14763140902745019>
- Mononen, H., & Viitasalo, J. (1995). Stroke parameters and kayak speed during 200m kayaking. *Proceedings of the XVth Congress of the International Society of Biomechanics, Jyväskylä, Finland* (pp. 632-633).
- Mononen, H., Kolehmainen, E., Salonen, M., & Viitasalo, J. (1994). Paddle force characteristics during 200 m Kayaking. *International congress on applied research in sport* (pp. 151-155).

- Nilsson, J. E., & Rosdahl, H. G. (2016). Contribution of leg-muscle forces to paddle force and kayak speed during maximal-effort flat-water paddling. *International Journal of Sports Physiology and Performance*, 11(1), 22-27. DOI: 10.1123/ijsp.2014-0030
- Petrovic, M. R., García-Ramos, A., Janicijevic, D. N., Pérez-Castilla, A., Knezevic, O. M., & Mirkov, D. M. (2020). The Novel Single-Stroke Kayak Test: Can It Discriminate Between 200-m and Longer-Distance (500-and 1000-m) Specialists in Canoe Sprint? *International Journal of Sports Physiology and Performance*, 1(aop), 1-8. DOI: 10.1123/ijsp.2019-0925
- Sperlich, J., & Baker, J. (2002). Biomechanical testing in elite canoeing. *ISBS-Conference Proceedings Archive*. Retrieved from: <https://ojs.ub.uni-konstanz.de/cpa/article/download/2827/2672>
- Stothart, J. P., Reardon, F. D., & Thoden, J. S. (1986). Paddling ergometer kinematics of elite kayakers. *ISBS-Conference Proceedings Archive*. Retrieved from: <https://ojs.ub.uni-konstanz.de/cpa/article/view/1505>
- Sturm, D., Yousaf, K., & Eriksson, M. (2010). A kayak training system for force measurement on-water. *ISBS-Conference Proceedings Archive*. Retrieved from: <https://ojs.ub.uni-konstanz.de/cpa/article/view/4566/4253>
- Taborri, J., Keogh, J., Kos, A., Santuz, A., Umek, A., Urbanczyk, C., Van der Kruk, E., & Rossi, S. (2020). Sport Biomechanics Applications Using Inertial, Force, and EMG Sensors: A Literature Overview. *Applied bionics and biomechanics*, 2020. DOI: 10.1155/2020/2041549
- Tanner, R. K., Fuller, K. L., & Ross, M. L. (2010). Evaluation of three portable blood lactate analysers: Lactate Pro, Lactate Scout and Lactate Plus. *European journal of applied physiology*, 109(3), 551-559. DOI: 10.1007/s00421-010-1379-9

THE ROLE OF SELF-EFFICACY IN PHYSICAL ACTIVITY IN STUDENTS: A LITERATURE REVIEW

Lāsma Reide

Rīga Stradiņš University, Latvia

Una Veseta

Rīga Stradiņš University, Latvia

Agita Ābele

Latvian Academy of Sport Education, Latvia

Abstract. *Physical activity among adults and adolescents do not meet the recommendations of WHO. Many studies focus on investigation of physical activity in students and the role of self-efficacy as important factor in predicting physical activity behaviour. Aim of the study was to determine the role of self-efficacy in physical activity in students. A literature review has been conducted to determine the self-efficacy measurements in physical activity studies and to determine factors related to self-efficacy and physical activity. Through search in the PubMed database 206 records were identified and 24 articles were included in further analysis. Thirteen studies used the General Self-Efficacy Scale [GSES] to measure self-efficacy level. Two studies considered The Exercise Self-Efficacy scale [ESES] focusing specifically on physical activity. Other studies considered different self-efficacy measurement tools including separate questions about physical activity self-efficacy as part of the questionnaire or survey used in the study. One study focused on emotional self-efficacy measures. Other factors investigated in relation to self-efficacy and physical activity were health beliefs, anxiety, depression, perceived stress, academic behaviour, academic procrastination, academic burnout, emotional intelligence, subjective well-being, Self-control, motivation and addiction, self-esteem, body image, sense of inferiority, and social support.*

Keywords: *measurement tools, physical activity, self-efficacy, students*

Introduction

Physical activity is important in preventing and maintaining health for all people of all ages. Physical activity plays an important role both in physical and mental health and wellbeing. However, data of World Health Organization [WHO] shows prevalence of insufficient physical activity among adult. One in four adults and four out of five adolescents do not reach the recommendations of daily physical activity. Women and girls are generally less active than men and boys. Older adults and people with disabilities are also less active and lose physical, mental and social health (WHO, 2021). At all times there have been may researchers focusing on physical activity studies, trying to determine the factors

influencing and predicting physical activity. Many studies have investigated the influential factors of the self-efficacy of physical activity.

The concept of self-efficacy was introduced by the psychologist Albert Bandura in the social cognitive theory (Bandura, 1997; 1989). Self-efficacy is defined as an individual's belief in their ability to cope with various life situations. A person with low self-efficacy tends to run away or give up when faced with difficulties. In contrast, a person with high self-efficacy will take specific actions to solve a problem when faced with difficulties (Luszczynska & Schwarser, 2005). Self-efficacy plays a central role in behavioral self-regulation because it influences the formation and strength of intentions and the persistence of action in the face of obstacles (Bandura, 1977; Bandura, 1986).

Self-efficacy is the most frequently identified psychosocial determinant of physical activity. Researches (Gong & Sheng, 2022; Hou, Li, Zheng, Qi & Zhou, 2022; Wang et al., 2022a; Xue-Liu & Mu, 2021) show that self-efficacy frequently influences or mediates physical activity behavior.

The current study aims to determine the role of self-efficacy in physical activity in students by literature review. Two research questions were considered:
What self-efficacy measurements are used in physical activity studies?
What other factors are related to self-efficacy and physical activities?

Methodology

A literature review has been conducted through the PubMed database following the PRISMA Group workflow (Figure 1).

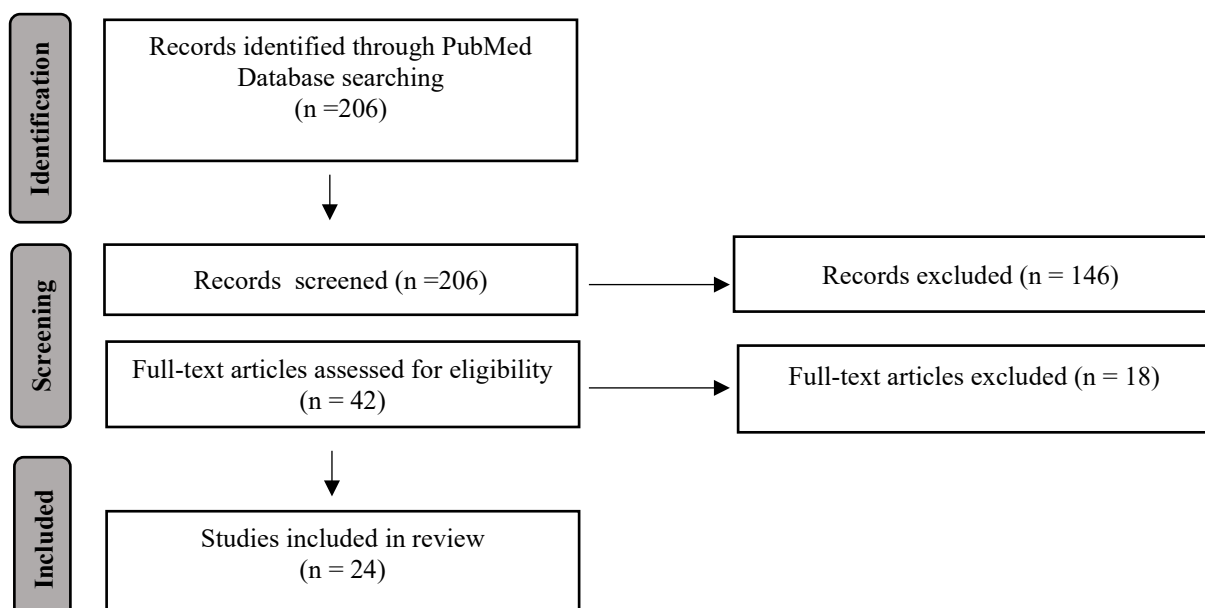


Figure 1 Preferred Reported Items for Systematic Reviews and Meta-analyses (PRISMA) chart summarizing the identification of the studies and selection process

The following key words were considered: self-efficacy, physical activity, students. To be included in the review process studies should consider: measurements of self-efficacy and physical activity; respondents of the study should be students; studies should be fully written in English; studies should be published in last 5 years. Review articles and Meta-Analysis meeting the above inclusion criteria were also considered. Studies that met any of following criteria were excluded from the study: focus only on self-efficacy or only on physical activity measurements; respondents were not students of college or university.

Research results

Through search in the PubMed database 206 records were identified. Records were analyzed by the author and in the first stage 146 records were excluded because the inclusion criteria were not met. In the next step 42 full-text articles were assessed for the eligibility by in depth analysis of the goal and method description of the article. At first 29 articles were included in the further analysis but in process 5 were excluded as the self-efficacy or physical activity measures were conducted indirectly. There were 24 research articles included in the literature review that considered the main inclusion criteria. Most articles were published in 2022, in total 16 articles; in 2021 two articles; in 2020 three articles; in 2019 two articles; in 2018 one article were published. All studies conducted the measurement of physical activity (incl. physical exercise, exercise health beliefs, physical exercise intentions, exercise behavior, use of physical activity apps, sports habits) and self-efficacy, and participants were students of college or university. Other factors that have been investigated in studies are health beliefs, anxiety, depression, perceived stress, academic behavior, academic procrastination, academic burnout, emotional intelligence, subjective well-being, self-control, motivation and addiction, self-esteem, body image, sense of inferiority, social support (Table 1).

24 analyzed studies considered different measurement tools for self-efficacy and physical activity (Table 2). Thirteen studies (Chen, Liu, Mou, Zhao, & Guo, 2022; Ding, Jiang, Li, & Wen, 2020; Du & Zhang, 2022; Ouyang et al., 2020; Han et al., 2022; Li, Hu, & Ren, 2022; Liu, 2022; Li, Liu, Yu, Zhang, & He, 2022; Wang, Li, Zhang, & Luo, 2022; Wang et al., 2020; Song, Ren et al., 2021; Yu, Yang, Tian, Austin, & Tao, 2022; Zhang, Hasibagen, & Zhang, 2022) used the General Self-Efficacy Scale [GSES] to measure the students' self-efficacy level. German version was developed by Jerusalem and Schwarzer (Schwarzer & Jerusalem, 1995). The scale was created to assess a general sense of perceived self-efficacy with the aim in mind to predict coping with daily hassles as well as adaptation after experiencing all kinds of stressful life events.

Table 1 Main characteristics of the 24 articles reviewed (created by the authors)

Author, year	Sample size N, gender, age (Mean, SD)	Factors measured
Chen, K., Liu, F., Mou, L., Zhao, P., & Guo, L. (2022)	1,270 (Male = 476, Female = 794)	Physical exercise, academic burnout, self-efficacy, resilience
Du, Z., & Zhang, X. (2022)	855 (Male = 497, Female = 358), Age (M = 19.84, SD = 2.48)	Self-efficacy, self-control, physical activity, internet addiction
Gong, L., & Sheng, J. (2022)	313 (Male = 138, Female = 175); Age 19.5 ± 1.5	Exercise health beliefs, self-efficacy
Han, S. S., Li, B., Wang, G. X., Ke, Y. Z., Meng, S. Q., Li, Y. X., Cui, Z. L., & Tong, W. X. (2022).	1,923 (Male = 951, Female = 972)	Physical fitness, exercise behavior, and self-efficacy
Hou, B., Li, L., Zheng, L., Qi, Y., & Zhou, S. (2022)	218 (Male = 64, Female = 154); Age 19.53 ± 1.01	The physical exercise intention, coping planning, action planning, and self-efficacy
Lawrence, M. R., Wan, H.I., Liu, W., McDonough, D.J., Mishra, S., & Gao, Z. (2022)	60 (Male = 30, Female = 30); Age 23.6 ± 4.1	Anthropometric Measures, Situational Interest, Self-Efficacy, Equilibrium Chang
Lee, D., & Young, S. (2018)	164 (Male = 91, Female = 73); Mean age = 21.68	Social support, self-efficacy, and behavioral change in physical activity
Lee, K., Bae, H., & Jang, S. (2022)	175 (Male = 175); Age 21.37 ± 0.87	Effects of short-term exercise, positive psychological capital sub-factors (self-efficacy, optimism, and hope)
Li, C., Hu, Y., & Ren, K. (2022)	564 (Male = 251, Female = 313); Age (M = 19.44, SD = 0.87)	Physical activity, self-control, self-efficacy, and academic procrastination
Li, X., Liu, M., Yu, H., Zhang, Z., & He, Z. (2022)	552 (Male = 201, Female = 351); Age (Mean = 20.12, SD = 1.58)	Self-efficacy, personality, academic performance
Lin, B., Teo, E. W., & Yan, T. (2022)	1787 (Male = 628, Female = 1159); Age (Mean = 18.85, SD = 0.93)	Motives, self-efficacy, smartphone addiction, physical activities
Liu, C. (2022).	110 (Male = 62, Female = 48)	Self-esteem, self-efficacy, sports activities, sense of inferiority
Ouyang, Y., Wang, K., Zhang, T., Peng, L., Song, G., & Luo, J. (2020)	887 (Male = 472, Female = 415); Age 20.91 ± 1.39	Self-efficacy, self-esteem, body image, physical activity
Parsons, J. L., MacDonald, L., Cayer, M., Hoepfner, M., Titterton, A., Willsie, J., & Webber, S. C. (2019).	24 (Male = 2, Female = 22); Age 23	Physical activity, knowledge, outcome expectations, and self-efficacy
Ren, K., Liu, X., Feng, Y., Li, C., Sun, D., & Qiu, K. (2021)	687 (Male = 350, Female = 337); Age (M = 19.59, SD = 0.89)	Academic procrastination, physical activity, self-efficacy
Song, X., Ding, N., Jiang, N., Li, H., & Wen, D. (2020).	686 (Male = 276, Female = 410); Age 20.27 ± 0.73	Out-of-class activities, self-efficacy, perceived stress
Tang, S., Chen, H., Wang, L., Lu, T., & Yan, J. (2022)	479 (Male = 293, Female = 186); Age (M = 19.94, SD = 1.25)	Physical activity, anxiety, depression, emotion regulation, self-efficacy

Continuation of Table 1

Author, year	Sample size N, gender, age (Mean, SD)	Factors measured
Wang, F., Gao, S., Chen, B., Liu, C., Wu, Z., Zhou, Y., & Sun, Y. (2022)	1,300 (Male = 620; Female = 680)	Exercise Self-Efficacy, Exercise Motivation, and Exercise Behaviour
Wang, K., Li, Y., Zhang, T., & Luo, J. (2022)	826 (Male = 381, Female = 445); Age 20.13 ± 1.05	Physical exercise, self-efficacy, emotional intelligence, and subjective well-being
Wang, K., Yang, Y., Zhang, T., Ouyang, Y., Liu, B., & Luo, J. (2020)	835 (Male = 374, Female = 461); Age 20.13 ± 1.06	Physical activity, self-efficacy, and emotional intelligence
Wang, T., Ren, M., Shen, Y., Zhu, X., Zhang, X., Gao, M., Chen, X., Zhao, A., Shi, Y., Chai, W., Liu, X., & Sun, X. (2019)	1245 (Male = 466, Female = 779); Age 20.5 ± 2.6	Use of physical activity apps, sports habits, social support, self-efficacy
Xue-Liu, L., & Mu, X. (2021)	801 (Male = 242 boys, Female = 559); Age 20	Physical evaluation self-efficacy, perceived exercise benefit and perceived severity of disease and weakness
Yu, H., Yang, L., Tian, J., Austin, L., Tao, Y. (2022)	1627 (Male = 968, Female = 659), Age (M = 19.41, SD = 0.66)	Self-efficacy, self-control, physical activity
Zhang, Y., Hasibagen, & Zhang, C. (2022)	1,440 (Male = 662, Female = 778)	Social support, self-efficacy, physical exercise behavior

The scale is designed for the general adult population, including adolescents. The GSES consist of 10 items and measured in 4-point Likert scale. The total score ranges between 10 and 40, with a higher score indicating more self-efficacy. Two studies (Lin, Teo, & Yan, 2022; Wang et al., 2022a) considered The Exercise Self-Efficacy scale [ESES] focusing specifically on physical activity. However, the ESES used in the studies, differed in items or measurement scale. Also other studies (Gong & Sheng, 2022; Hou, Li, Zheng, Qi, & Zhou, 2022; Lawrence et al., 2022; Lee, Bae, & Jang, 2022; Lee & Young, 2018; Marcus & Forsyth, 2018; Parsons, et al., 2019; Wang et al., 2019; Xue-Liu & Mu, 2021) considered self-efficacy measurement tools with items of questions about physical activity specifically (n = 6), including separate questions about physical activity self-efficacy as part of the questionnaire or survey used in the study (n = 4). One study (Tang, Chen, Wang, Lu, & Yan, 2022) focused on emotional self-efficacy measures.

For physical activity measures there were used internationally recognized scales. Eight studies (Chen, Liu, Mou, Zhao, & Guo, 2022; Han et al., 2022; Li, Hu, & Ren, 2022; Ren et al., 2021; Tang, Chen, Wang, Lu, & Yan, 2022; Wang, Li, Zhang, & Luo, 2022; Wang et al., 2020; Zhang, Hasibagen, & Zhang, 2022) used Physical activity rating scale [PARS-3] (Liang, 1994). The scale has three items that measure exercise intensity, exercise frequency, and single exercise time

measured in 5-point Likert scale. Four studies used International Physical Activity Questionnaire (IPAQ) (Craig et al., 2003). IPAQ is mainly used to evaluate physical activity level against the recommended level. It can also be used to evaluate the results of a physical activity intervention. Seven studies used different tools to measure physical activity and 5 studies conducted experimental methods implementing physical activity routines.

Table 2 Self-efficacy and physical activity measurement tools (created by the authors)

Self-efficacy	N	Physical activity	N
The General Self-Efficacy Scale (GSES)	13	Physical activity rating scale (PARS-3)	8
The Exercise Self-Efficacy Scale (ESES)	2	International Physical Activity Questionnaire (IPAQ)	4
A six-item physical activity self-efficacy scale	1	Physical Activity Level Scale,	1
Physical Fitness Evaluation Self-Efficacy subscale	1	The degree of sports participation scale	1
Physical activity self-efficacy subscale	1	Perceived Benefits of Exercise subscale	1
The emotion regulation self-efficacy scale (RES)	1	Physical exercise behavior scale	1
		Physical activity measurements scale	1
		Exercise Health Belief Survey	1
		National Survey of Student Engagement	1
Other: Self-efficacy scale (3items) questions regarding self-regulatory self-efficacy; self-efficacy survey (5 items); Self-efficacy subscale	6	Other: exercise action (single item); Situational interest survey after 20-min exercise session; Exercise routine (experiment); twelve-week experiment; exercise two or more times a week for 30–60 min	5

Exercise behavior, exercise intention, motivation, situational interest

In the study (Hou et.al., 2022) the aim was to identify whether self-efficacy can serve as a moderator to facilitate the transition from intention to planning, as well as from planning to action in physical activities. The self-efficacy moderated the relationship between physical exercise intention and coping planning, but not between physical exercise intention and action planning. For students with high self-efficacy, both coping planning and action planning served as mediators in the relationship between exercise intention and exercise action. Results point to a

moderated mediation effect of self-efficacy on the transition from intention to action in the context of physical exercise. Findings suggest that the epidemic situation of COVID-19 affects students' participation in physical activities. There is a positive correlation between exercise motivation, exercise self-efficacy, and exercise behaviour (Wang et al., 2022a). Exercise behaviour (intensity, length, frequency) is important mediator in relationship between physical fitness and self-efficacy. Physical fitness (body shape, cardiorespiratory endurance, flexibility, and power) can improve self-efficacy (Han et al., 2022).

Type and environment of physical activity has impact on exercise behaviour. Use of exergame instead of traditional treadmill exercise show statistically significantly higher situational interest scores. However, there are no differences in self-efficacy scores (Lawrence et al., 2022). The scores of self-efficacy, optimism and hope were higher of the groups in the natural environment and visual stimulation exercise conditions than those in the indoor exercise group (Lee, Bae, & Jang, 2022).

Exercise and health beliefs

Recent studies have evaluated the role of exercise self-efficacy, health beliefs (Gong & Sheng, 2022) and perceived exercise benefit and perceived severity of disease and weakness (Xue-Liu & Mu, 2021) as well as knowledge of core stabilization and body mechanics principle and outcome expectations related to engaging in core stabilization/functional fitness exercises (Parsons et al., 2019).

Self-efficacy and perceived barriers (such as inconvenience for the participation of exercise or lack of time and companionship) are important factors of exercise belief that impact exercise behaviour. However, there was no significant association among exercise self-efficacy and perceived benefits, perceived objective barriers, perceived severity, or cues to action. This study revealed a significant negative correlation between perceived subjective barriers and exercise self-efficacy (Gong & Sheng, 2022).

The study (Xue-Liu & Mu, 2021) concluded that perceived exercise benefit and exercise self-efficacy (as positive motivational factors) have a positive correlation with amount of exercise. Therefore, confirming that self-efficacy is important positive motivational factor. Physical evaluation self-efficacy mediated the positive effect of perceived exercise benefits on the amount of exercise and inhibited the negative effects of perceived severity of disease and weakness on the amount of exercise.

In a quazi-experimental study (Parsons et al., 2019) it was found that weekly participation in mandatory functional fitness classes led to some improvements in physical competence, but no changes in knowledge, outcome expectations or self-efficacy to engage in exercise.

Anxiety, depression, perceived stress

Investigating relationship between physical activity and negative emotions, it was concluded that the physical activity participation was positively related to emotion regulation self-efficacy, and indirectly negatively related to anxiety and depression (Tang et al., 2022). The results of the study (Song et al., 2020) demonstrated that with higher perceived stress, less time was devoted to physical exercise among students with a lower level of self-efficacy.

Academic performance, academic procrastination, academic burnout

Studies shows that self-efficacy can predict academic behaviour in students. The aim of the study (Li et al., 2022b) was to explore the mediating effect of self-efficacy on the relationship between the proactive personality and academic performance of college students. The level of self-efficacy of those students who participated in exercise two or more times a week for 30-60 min each time was significantly higher than that of the non-sports group. Self-efficacy plays a fully mediating role between proactive personality and academic performance. Proactive personality is a stable individual variable that improves performance by actively manipulating the environment in which it is placed. Individuals with high levels of proactive personality have positive attitudes and behaviours toward environmental adaptation and are able to adopt a proactive approach to cope with stress and frustration, thus enhancing self-efficacy in work and study.

Self-efficacy plays a mediating role between physical activity and academic procrastination. Individuals who actively participate in physical activity are more likely to have a higher level of self-efficacy which lead to a lower level of academic procrastination (Ren et al., 2021). Higher self-efficacy was associated with more time spent preparing for class and studying, thereby promoting students' academic performance (Song et al., 2020). Physical activity significantly predicted higher levels of self-control and self-efficacy, as well as lower levels of academic procrastination. Self-control and self-efficacy were significant moderators between physical activity and academic procrastination (Li et al., 2022a).

In the study (Chen et al., 2022) was explored the relationship between physical exercise and academic burnout, with a focus on the serial mediating roles of self-efficacy and resilience. Physical exercise was significantly and negatively associated with academic burnout. Self-efficacy mediated the relationship between physical exercise and academic burnout. It was suggested that college students can enhance self-efficacy via physical exercise, which then promotes resilience and ultimately ease their academic burnout.

Emotional intelligence and subjective well-being

There is significant correlation among physical activity amount, self-efficacy, and emotional intelligence (Wang et al., 2020). Students who regularly participate in physical exercises often have a higher sense of self-efficacy, could be more determined of being able to complete a certain behaviour and achieve expected goals, were more able to perceive and evaluate the emotions of others in specific situations, could also be correctly applying and managing emotional intelligence, and could better obtain subjective well-being experiences such as positive emotions and life satisfaction. Physical exercise can positively and directly affect the subjective well-being and indirectly affect subjective well-being through the chain mediating effect of self-efficacy and emotional intelligence (Wang et al., 2022).

Self-control, motivation and addiction

Nowadays when Internet and smart phone use plays a major role in peoples' daily life, the focus on physical activity levels must be considered. Smartphone addiction negatively predicts intrinsic motivation to engage in physical activity and positively predicts extrinsic motivation. Smartphone addiction can predict lower level of intrinsic motivation and self-efficacy and this leads to decrease in physical activity level (Lin et al., 2022). Self-control has a mediation role between self-efficacy and physical activity (Yu et al., 2022). Analysing differences between physical activity levels on self-efficacy, self-control and Internet addiction, the results showed that physical activity was more likely to reduce symptoms of Internet addiction. Self-efficacy and self-control as important psychological factors, played a mediation role in the effect of physical activity and Internet addiction. Self-efficacy was significantly positively correlated with physical activity, and significantly negatively correlated with Internet addiction (Du & Zhang, 2022).

Self-esteem, body image and sense of inferiority

The study (Ouyang et al., 2020) found that body image and self-efficacy had a significant positive influence on sports participation and that higher the body image scores, the higher degree of sports participation. The results showed that college students can directly influence their sports participation by promoting a correct and positive body image and indirectly affect their sports participation behavior by improving self-efficacy. This study found that the body image of college students had an impact on the degree of sports participation by self-efficacy, and self-efficacy affected the sports participation by partial mediation of self-esteem. Students with higher body image can promote self-efficacy, therefore

enhancing their sense of self-esteem and self-affirmation and promoting sports participation.

In the experimental study (Liu, 2022) during 12-weeks two groups performed competitive scenarios and recreational sport scenarios. Both had positive effect on student's inferiority feeling. Throughout the experiment, the scores of sense of inferiority decreased and scores of self-esteem and general self-efficacy increased with the increase of experiment time.

Social support

Social support has impact on physical activity and self-efficacy. There is relationship between social support (family support, school support, peer support), self-efficacy, and physical exercise behaviour. The influence of family support on physical exercise behaviour is only achieved through the intermediary role of self-efficacy. The impact of school support on physical exercise behaviour has direct influence and is achieved through the intermediary effect of self-efficacy. Peer support has a direct impact on physical exercise behaviour (Zhang, Hasibagen & Zhang, 2022). Use of physical activity apps is associated with higher physical activity levels. This effect was mainly through the mediation effect of social support and self-efficacy, rather than the direct effect on physical activity apps. Higher social support level and high self-efficacy score are associated with higher physical activity levels (Wang et al., 2019).

In contrary, one study (Lee & Young, 2018) focusing on the measurements of social support, self-efficacy, and behavioral change in physical activity concluded that social support for physical activity did not have effect on physical activity. Physical activity stages of change are significant predictors of physical activity behavior and the path of physical activity self-efficacy to physical activity was indirect.

Conclusions

Self-efficacy is proved to be most frequently identified factor determining physical activity. By improving students' general self-efficacy, it could be an effective measure to foster participation in physical activities, which would then enhance both physical and mental wellbeing. Self-efficacy plays an important mediating role between physical activity and other factors such as health beliefs, anxiety, depression, perceived stress, academic behavior, academic procrastination, academic burnout, emotional intelligence, subjective well-being, self-control, motivation and addiction, self-esteem, body image, sense of inferiority, social support. The obtained research results are the basis for further

research, which allows to increase the perception of the importance of self-efficacy in the context of physical activities and health behavior.

References

- Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), 191–215. DOI: 10.1037/0033-295X.84.2.191
- Bandura, A. (1986). *Social foundations of thought and action: A social-cognitive theory*. Englewood Cliffs, NJ: PrenticeHall.
- Chen, K., Liu, F., Mou, L., Zhao, P., & Guo, L. (2022). How physical exercise impacts academic burnout in college students: The mediating effects of self-efficacy and resilience. *Front Psychol*, 13, 964169. DOI: 10.3389/fpsyg.2022.964169
- Craig, C. L., Marshall, A. L., Sjöström, M., Bauman, A. E., Booth, M. L., Ainsworth, B. E., Pratt, M., Ekelund, U., Yngve, A., Sallis, J.F., & Oja, P. (2003). International physical activity questionnaire: 12-country reliability and validity. *Med Sci Sports Exerc*, 38(8), 1381. DOI: 10.1249/01.MSS.0000078924.61453.FB
- Du, Z., & Zhang, X. (2022). Analysis of the mediating effects of self-efficacy and self-control between physical activity and Internet addiction among Chinese college students. *Front Psychol*, 13, 1002830. DOI: 10.3389/fpsyg.2022.1002830
- Gong, L., & Sheng, J. (2022). The Current Health Belief of Exercise Conditions of Chinese College Students and Ways of Improvements: An Analysis Based on the Health Belief Model. *Front Psychol*, 13, 906297. DOI: 10.3389/fpsyg.2022.906297
- Han, S. S., Li, B., Wang, G. X., Ke, Y. Z., Meng, S. Q., Li, Y. X., Cui, Z. L., & Tong, W. X. (2022). Physical Fitness, Exercise Behaviors, and Sense of Self-Efficacy Among College Students: A Descriptive Correlational Study. *Front Psychol*, 13, 932014. DOI: 10.3389/fpsyg.2022.932014
- Hou, B., Li, L., Zheng, L., Qi, Y., & Zhou, S. (2022). Linking Exercise Intention to Exercise Action: The Moderating Role of Self-Efficacy. *Front Psychol*, 13, 921285. DOI: 10.3389/fpsyg.2022.921285
- Lawrence, M. R., Wan, H.I., Liu, W., McDonough, D.J., Mishra, S., & Gao, Z. (2022). Effects of Exergaming on College Students' Situational Interest, Self-Efficacy, and Motion Sickness. *J Clin Med*, 11(5), 1253. DOI: 10.3390/jcm11051253
- Lee, D., & Young, S. (2018). Investigating the effects of behavioral change, social support, and self-efficacy in physical activity in a collectivistic culture: Application of Stages of Motivational Readiness for Change in Korean young adults. *Prev Med Rep*, 14(10), 204-209. DOI: 10.1016/j.pmedr.2018.03.001
- Lee, K., Bae, H., & Jang, S. (2022). Effect of Exercise Combined with Natural Stimulation on Korean College Students' Concentration and Positive Psychological Capital: A Pilot Study. *Healthcare (Basel)*, 10(4), 673. DOI: 10.3390/healthcare10040673
- Li, C., Hu, Y., & Ren, K. (2022). Physical Activity and Academic Procrastination among Chinese University Students: A Parallel Mediation Model of Self-Control and Self-Efficacy. *Int J Environ Res Public Health*, 19(10), 6017. DOI: 10.3390/ijerph19106017
- Li, X., Liu, M., Yu, H., Zhang, Z., & He, Z. (2022). The influence of sports on proactive personality and academic achievement of college students: The role of self-efficacy. *Front Psychol*, 13, 943347. DOI: 10.3389/fpsyg.2022.943347
- Liang, D., Q. (1994). The relationship between stress level and exercise in college student (in Chinese). *Chin. Ment. Health* 8, 5–6

- Lin, B., Teo, E. W., & Yan, T. (2022). The Impact of Smartphone Addiction on Chinese University Students' Physical Activity: Exploring the Role of Motivation and Self-Efficacy. *Psychol Res Behav Manag*, *15*, 2273-2290. DOI: 10.2147/PRBM.S375395
- Liu, C. (2022). Research on the influence of college students' participation in sports activities on their sense of inferiority based on self-esteem and general self-efficacy. *Front Psychol*, *13*, 994209. DOI: 10.3389/fpsyg.2022.994209
- Luszczynska, A., & Schwarzer, R. (2005). Social cognitive theory. From: Conner, M., Norman, P. (Eds.). *Predicting Health Behaviour*. 127-170. Open university Press.
- Ouyang, Y., Wang, K., Zhang, T., Peng, L., Song, G., & Luo, J. (2020). The Influence of Sports Participation on Body Image, Self-Efficacy, and Self-Esteem in College Students. *Front Psychol*, *10* (3039). DOI: 10.3389/fpsyg.2019.03039
- Parsons, J. L., MacDonald, L., Cayer, M., Hoepfner, M., Titterton, A., Willsie, J., & Webber, S. C. (2019). Functional fitness for dental hygiene students: Does it make them fit to sit? *Can J Dent Hyg.*, *53*(3), 149-156.
- Ren, K., Liu, X., Feng, Y., Li, C., Sun, D., & Qiu, K. (2021). The Relationship between Physical Activity and Academic Procrastination in Chinese College Students: The Mediating Role of Self-Efficacy. *Int J Environ Res Public Health*, *18*(21), 11468. DOI: 10.3390/ijerph182111468
- Schwarzer, R., & Jerusalem, M. (1995). Generalized Self-Efficacy scale. In J. Weinman, S. Wright, & M. Johnston, *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35-37). Windsor, UK: NFER-NELSON
- Song, X., Ding, N., Jiang, N., Li, H., & Wen, D. (2020). Time use in out-of-class activities and its association with self-efficacy and perceived stress: data from second-year medical students in China. *China. Med Educ Online*, *25*(1), 1759868. DOI: 10.1080/10872981.2020.1759868
- Tang, S., Chen, H., Wang, L., Lu, T., & Yan, J. (2022). The Relationship between Physical Exercise and Negative Emotions in College Students in the Post-Epidemic Era: The Mediating Role of Emotion Regulation Self-Efficacy. *Int J Environ Res Public Health*, *19* (19), 12166. DOI: 10.3390/ijerph191912166
- Xue-Liu, L., & Mu, X. (2021). The Positive Effect of Perceived Exercise Benefit and the Negative Effect of Perceived Severity of Disease and Weakness on College Students' Amount of Exercise: The Mediate and Suppressor Role of Physical Fitness Evaluation Self-Efficacy. *Front Psychol*, *12*, 762865. DOI: 10.3389/fpsyg.2021.762865
- Yu, H., Yang, L., Tian, J., Austin, L., & Tao, Y. (2022). The Mediation Role of Self-Control in the Association of Self-Efficacy and Physical Activity in College Students. *Int J Environ Res Public Health*, *19*(19), 12152. DOI: 10.3390/ijerph191912152
- Wang, T., Ren, M., Shen, Y., Zhu, X., Zhang, X., Gao, M., Chen, X., Zhao, A., Shi, Y., Chai, W., Liu, X., & Sun, X. (2019). The Association Among Social Support, Self-Efficacy, Use of Mobile Apps, and Physical Activity: Structural Equation Models with Mediating Effects. *JMIR Mhealth Uhealth*, *7*(9). DOI: 10.2196/12606
- Wang, K., Yang, Y., Zhang, T., Ouyang, Y., Liu, B., & Luo, J. (2020). The Relationship Between Physical Activity and Emotional Intelligence in College Students: The Mediating Role of Self-Efficacy. *Front Psychol*, *9*(11), 967. DOI: 10.3389/fpsyg.2020.00967
- Wang, F., Gao, S., Chen, B., Liu, C., Wu, Z., Zhou, Y., & Sun, Y. (2022). A Study on the Correlation Between Undergraduate Students' Exercise Motivation, Exercise Self-Efficacy, and Exercise Behaviour Under the COVID-19 Epidemic Environment. *Front Psychol*, *13*, 946896. DOI: 10.3389/fpsyg.2022.946896

- Wang, K., Li, Y., Zhang, T., & Luo, J. (2022). The Relationship among College Students' Physical Exercise, Self-Efficacy, Emotional Intelligence, and Subjective Well-Being. *Int J Environ Res Public Health*, 19(18), 11596. DOI: 10.3390/ijerph191811596
- World Health Organization. (2021). *World health statistics 2021: monitoring health for the SDGs, sustainable development goals*. Retrieved from: <https://apps.who.int/iris/bitstream/handle/10665/342703/9789240027053-eng.pdf>
- Zhang, Y., Hasibagen, & Zhang, C. (2022). The influence of social support on the physical exercise behavior of college students: The mediating role of self-efficacy. *Front Psychol*, 13, 1037518. DOI: 10.3389/fpsyg.2022.1037518

MASSAGE EFFECT ON PSYCHOEMOTIONAL STATE AND BLOOD GLUCOSE IN TYPE 1 DIABETES ADOLESCENTS

Una Veseta

Red Cross Medical College of Rīga Stradiņš University, Latvia

Māra Pakalniške

Red Cross Medical College of Rīga Stradiņš University, Latvia

Ingrīda Trups-Kalne

Rīga Stradiņš University, Latvia

Abstract. *In 2021, there were approximately 1.5 million people under age 20 with type 1 diabetes mellitus (T1D) worldwide. Massage affects both physiological processes and also improves the psycho-emotional state. There have been studies on diabetes and the effects of massage on blood glucose levels, but the topic is under-researched. The purpose of the study: to find out the effect of classical massage on the psycho-emotional state and blood glucose level (BGL) in adolescents with T1D. Fifteen adolescents aged 12 to 16, diagnosed with T1D for at least six months, participated in the study. During the study, teenagers were given five classic back massages (once a week, 30 minutes). BGL was measured with glucometer before and after each massage. Participants completed the Positive and Negative Affect Schedule before each massage and the Depression Anxiety Stress Scales at the beginning and end of all massage sessions. Oscillometric method was used to determine the heart rate. The study results show that classical massage positively affects BGL and emotional states in adolescents with T1D. The overall results show a reduced BGL as well as heart rate. Although the differences are not statistically significant, and the effect is not large due to the sample size, the change direction is clinically relevant. When evaluating the results, it is necessary to consider the adolescents' specific age.*

Keywords: *adolescents, blood glucose level, classical massage, heart rate, psycho-emotional state, type 1 diabetes.*

Introduction

Nowadays, more and more children and young people are diagnosed with type 1 diabetes mellitus (T1D) - a complex of metabolic disorders characterized by chronic hyperglycemia of insulin secretion, insulin action, or a combination of these disorders (ISPAD Clinical Practice Consensus Guidelines 2022).

In 2021, there were approximately 8.4 (95% CI 8.1–8.8) million people with type 1 diabetes (T1D) worldwide: of these, 1.5 million (18%) were younger than 20 years (Gregory et al., 2022).

These young people with an established diagnosis of T1D often feel physically and emotionally bad (Henríquez-Tejo & Cartes-Velásquez, 2018).

Tiffany Field's publication discusses research that shows the positive effects of massage on a person's psycho-emotional and physical health (Field, 2019).

The purpose of the study: To find out the effect of classical massage on the psycho-emotional state and blood glucose level in teenagers with T1D.

Research hypotheses:

1. Adolescents with T1D heart rate will have a statistically significant decrease due to massage.
2. Adolescents with T1D blood glucose levels will have a statistically significant decrease due to massage.
3. Adolescents with T1D depression, anxiety, and stress indicators will have a statistically significant decrease due to massage.
4. Adolescents with T1D indicators of negative emotions will have a statistically significant decrease, and positive ones - an increase due to massage.

T1D is a chronic condition, in which the pancreas produces little or no insulin (Mayo Clinic, 2022).

Certain factors that can contribute to the onset of T1D include family history, genetics, geography, age (Mayo Clinic, 2022). However, in the case of adolescents, this condition seems to be crucial as this stage of life is coupled with puberty which is characterized by intense hormonal changes and developing physical and social factors. Since 1989 there have been investigations showing increased insulin resistance during adolescence (Caprio et al., 1989). Also, compliance to the various control treatments can be quite tasking and this can induce stress in the patients. When stressed, insulin levels fall, epinephrine levels rise and more glucose is released from the liver. At the same time, growth hormone and cortisol levels rise, which causes body tissues to be less sensitive to insulin, thereby increasing the level of glucose available in the bloodstream (UCSF, 2022). This exposes the patient to higher risks of complications (e.g chronic hyperglycemia).

Diabetes affects life's physical, emotional, social, and financial aspects (Fatati, 2014). A link between negative emotions, especially anxiety and diabetes, and the effect of emotional state on adherence to disease control has been confirmed (Muscatello et al., 2017).

Negative emotions in adolescence are a natural phenomenon, but diabetes can noticeably intensify these emotions. A teenager has to take more responsibility for his actions than other teenagers, constantly control the sugar level in the body, follow diets, observe his feelings, and take other actions so that his health condition does not get worse. Adolescents get tired and show more

anger, shame, guilt, fear, disgust, sadness, anxiety, and other emotions, as well as tension and stress (Henríquez-Tejo & Cartes-Velásquez, 2018).

Massage helps to reduce the level of negative emotions - anger, fear, dissatisfaction, stress, and depression, as well as improve physical sensation and create joy, optimism, and a feeling of happiness (Field, 2019).

Massage affects both physiological processes and also improves the psycho-emotional state. It has been studied that massage can reduce stress and anxiety levels and improve mood in both children and adults (Hohl, Deslandes, & Mármora, 2019; Chen et al., 2019; Zadkhosh, Ariaee, Atri, Rashidlamir, & Saadatyar, 2015).

In 2011, a study in Iran investigated the effects of Swedish massage on blood glucose levels in children with T1D. It was concluded that massage significantly lowers glucose levels in children with T1D (Sajedi, Kashaninia, Hoseinzadeh, & Abedinipoor, 2011). A similar study conducted in 2008 concluded that massage and muscle relaxation techniques contribute to the reduction of glycated hemoglobin (HbA 1C) in children with T1D (Ghazavi, Talakoob, Abdeyazdan, Attari, & Joazi, 2008).

Based on repeated studies on the effectiveness of massage in reducing stress, anxiety, and depression and improving sleep quality, as well as on studies on the effectiveness of massage in normalizing glucose levels, massage could be used as a preventive method for normalizing the psycho-emotional state and blood glucose level in adolescents with T1D (Sherman et al., 2010; Field, 2016; Ghazavi et al., 2008).

Although the topic is current, more recent research in this area is lacking.

Methodology

The study was conducted within the scientific project "Effect of classical massage on psycho-emotional state, blood glucose level and other physiological processes related to the diagnosis in adolescents with type 1 diabetes mellitus," funded by Riga Stradins University Red Cross Medical College (RSU RCMC). The study took place from September 2021 to May 2022. The study has approval from the RSU RCMC Ethics Committee (session protocol nr. 20, September 6, 2021). Participants were assigned an identification code, and confidentiality of the obtained data was provided.

Forty-eight participants applied for this study, of which 15 were eligible participants. Thirty-three participants did not meet the inclusion criteria due to age, duration of diagnosis, and, most often, lack of a COVID-19 vaccination certificate.

Inclusion criteria

In order for the research to have an impact and the obtained results to be most accurately attributed directly to the effect of massage, the necessary conditions for the research participants were as follows:

- The diagnosis of T1D was established no earlier than six months ago (or the remission has ended, if there was one, so the diagnosis is conclusive, insulin release does not occur).
- Participant was in the age group of 12-16 years.
- The participant can take blood glucose readings (sensor or strips) before and after the massage.
- The participant has a COVID-19 vaccination certificate.
- Two hours before the massage, the participant did not inject short-acting insulin (because the short-acting insulin has a 2-hour effect time).
- The participant has not taken food containing carbohydrates two hours before the massage. The blood glucose level rises to 2 hours after a meal.

Exclusion criteria:

- The participant does not use an insulin pump (because its operation is not regulated, and it would be possible to introduce artificial insulin during the massage, in which case the results would not be credible).
- In cases where a participant showed up for a massage but did not meet the study criteria (hypoglycemia, hyperglycemia and administered artificial insulin, ingested carbohydrates), the results were not recorded, or the data were not selected for analysis.

Participants

Fifteen teenagers (10 females, 5 males), aged between 12 and 16 (M=14,29, SD=1,31), average body mass M=53,18 kg, SD=12,94, average height M=168,75 cm, SD=10,50, who have been diagnosed with T1D for at least six months, participated in the study. Parents signed an informed consent to participate in the study.

Instruments:

- Study participant's individual continuous glucose monitoring system for measurement of glucose level in interstitial fluid.
- Heart rate measurements using the digital sphygmomanometer device Omron M7 – IT.
- Positive and Negative Affect Schedule (PANAS) questionnaire (Watson, Clark, & Tellegen, 1988).
- Depression Anxiety Stress Scales (Lovibond & Lovibond, 1995).

Procedure

The application for participation in the study was published on social network pages of diabetes societies, where parents of children with T1D participate. Participants could apply for the study by filling out an electronic

application form. A total of 48 participant forms were submitted; 15 were recognized as appropriate for the study due to prerequisites necessary for participation. The participants and parents were introduced to the course of the study, and the parents signed the informed consent.

Massages were performed in the afternoons for each participant on the same day of the week and at the same time. The massage occurred in a medical institution at a room temperature of 22 degrees Celsius. The massage duration was 30 minutes. The classic massage was performed with stroking, rubbing, kneading, and vibration techniques in a specific order according to a uniform protocol.

Before the first and after the fifth massage treatment, the participant completed the Depression Anxiety Stress Scales. The PANAS questionnaire was filled out before each massage. Heart rate measurements were taken three times before and after each massage. In processing the results, the average of those measurements was used. Glucose level measurements were recorded before and after each massage and recorded in an electronic table using the Microsoft Excel program. Each participant received a back massage after the classical massage.

Data analysis methods

Descriptive and inferential statistical methods were used for data analysis - calculating the arithmetic mean and standard deviation, Wilcoxon Signed Ranks Test, Friedman test, and Coen d's criterion. Calculations were performed using MS Excel and IMB SPSS version 27.

Research results

To test the 1st hypothesis, "Adolescents with T1D heart rate will have a statistically significant decrease due to massage", heart rate before and after the massage was compared, using the Wilcoxon Signed Ranks Test. It demonstrated that heart rate decreased under the influence of massages (Figure 1). After the first massage session, changes in heart rate were not statistically significant. However, in subsequent times, the heart rate decreased statistically significantly (Table 1). The obtained results confirm the 1st hypothesis.

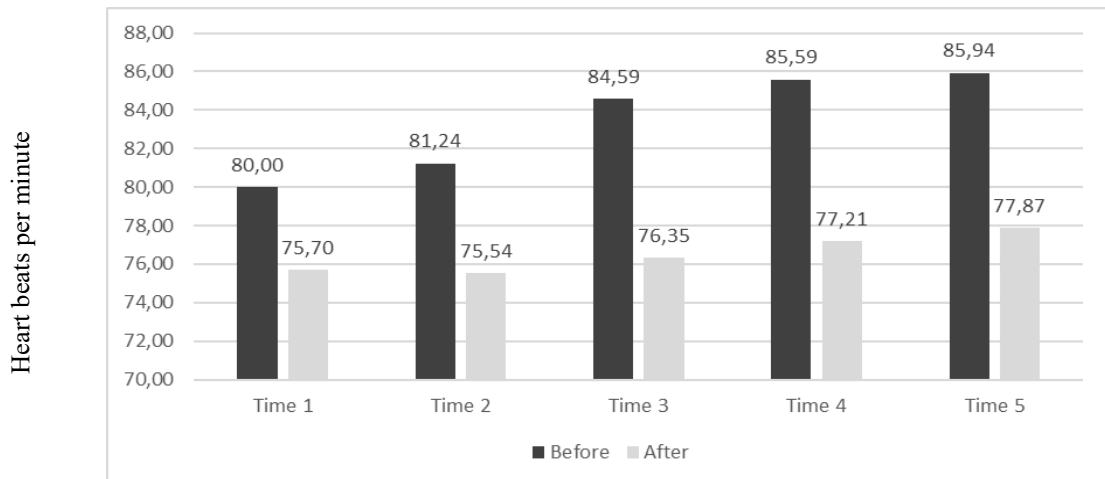


Figure 1 *Heart rate changes during a course of five massage sessions* (created by the authors)

Table 1 *Wilcoxon Signed Ranks Test results of the effect of massage on changes in heart rate during a course of five massage sessions* (created by the authors)

	<i>Difference</i>	<i>Wilcoxon Signed Ranks Test</i>	<i>p</i>	<i>Coen d</i>
<i>Time 1</i>	4,3	-1.686	.092	.27
<i>Time 2</i>	5,7	-2.335*	.020	.43
<i>Time 3</i>	8,29	-3.524***	<.001	1.04
<i>Time 4</i>	8,38	-3.576***	<.001	0.81
<i>Time 5</i>	8,08	-3.081***	<.001	0.77

*p<0,05, **p<0,01, ***p<0,001

To test 2nd hypothesis, "Adolescents with T1D blood glucose levels will have a statistically significant decrease due to massage", blood glucose levels were compared before and after massage using Wilcoxon Signed Ranks Test (Table 2). The results show that the blood glucose level also decreased due to the massage (Figure 2). It changed statistically significantly in the first three massages, but the changes were not statistically significant in the fourth and fifth massages. Therefore, the 2nd hypothesis is partially confirmed.

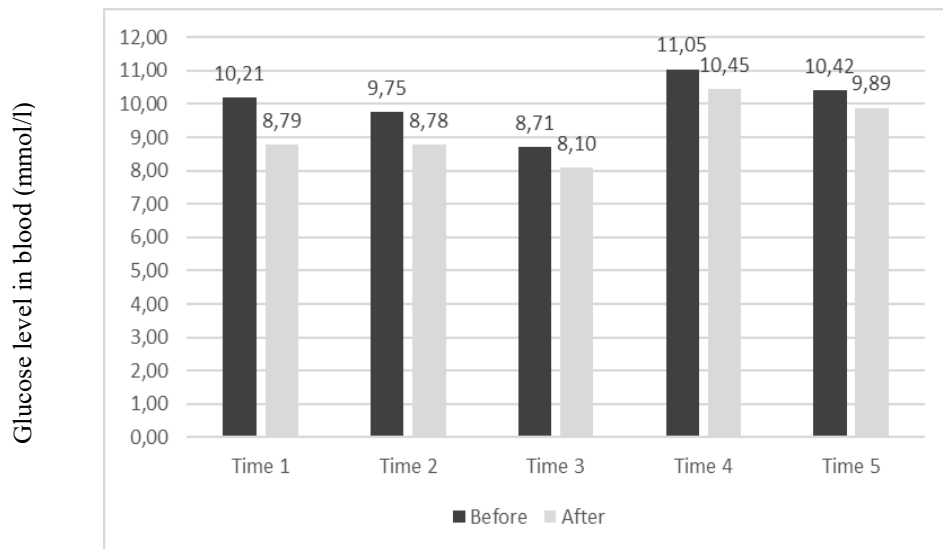


Figure 2 Changes in glucose levels during five massage sessions (created by the authors)

Table 2 Wilcoxon Signed Ranks Test results of the effect of massage on changes in glucose levels during a course of five massage sessions (created by the authors)

	<i>Difference</i>	<i>Wilcoxon Signed Ranks Test</i>	<i>p</i>	<i>Coen d</i>
<i>Time 1</i>	1,42	-3.458***	<.001	.28
<i>Time 2</i>	0,97	-2.273*	.023	.28
<i>Time 3</i>	0,61	-2.250*	.024	.22
<i>Time 4</i>	0,6	-1.873	.061	.11
<i>Time 5</i>	0,53	-.880	.379	.10

*p<0,05, **p<0,01, ***p<0,001

To test the 3rd hypothesis, "Adolescents with T1D depression, anxiety, and stress indicators will have a statistically significant decrease due to massage", depression, anxiety, and stress scores were compared at the beginning and after the massage course using the Wilcoxon Signed Ranks Test (Table 3). The results revealed no statistically significant differences in depression, anxiety, and stress scores during the massage course (Figure 3). Rates of depression, anxiety, and stress did decrease, but the change was not statistically significant. Therefore, the 3rd hypothesis is not confirmed.

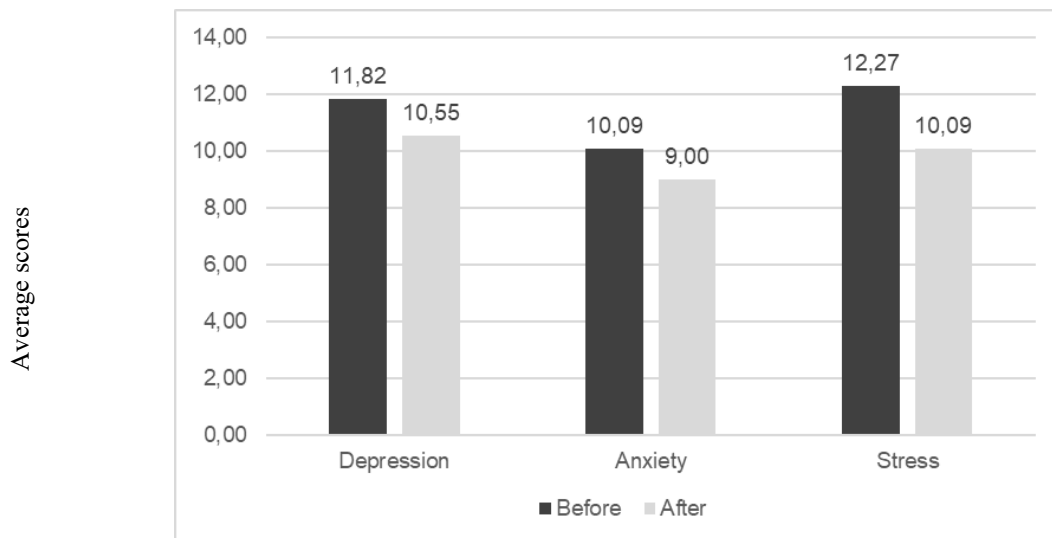


Figure 3 *Changes in the psycho-emotional state during the massage course (created by the authors)*

Table 3 *Wilcoxon Signed Ranks Test results of changes in the psycho-emotional state during the massage course (created by the authors)*

	<i>Difference</i>	<i>Wilcoxon Signed Ranks Test</i>	<i>p</i>	<i>Coen d</i>
<i>Depression</i>	1,27	-.578	.563	0.10
<i>Anxiety</i>	1,09	-.889	.374	0.23
<i>Stress</i>	2,18	-1.069	.285	0.22

To test the 4th hypothesis, the Friedman Test was used to compare positive and negative emotion scores between five massage sessions. The obtained results (Table 4) revealed that during five massage sessions, there were no statistically significant changes in either positive or negative emotions level (Figure 4). Friedman test results for positive emotions $\chi^2(4, 15) = 2.874, p = .579$, and for negative emotions $\chi^2(4, 15) = 8.601, p = .072$. The indicators of negative emotions decreased slightly at first, then returned to the previous level, while the indicators of positive emotions almost did not change (Figure 4). Thus, the 5th hypothesis is not confirmed.

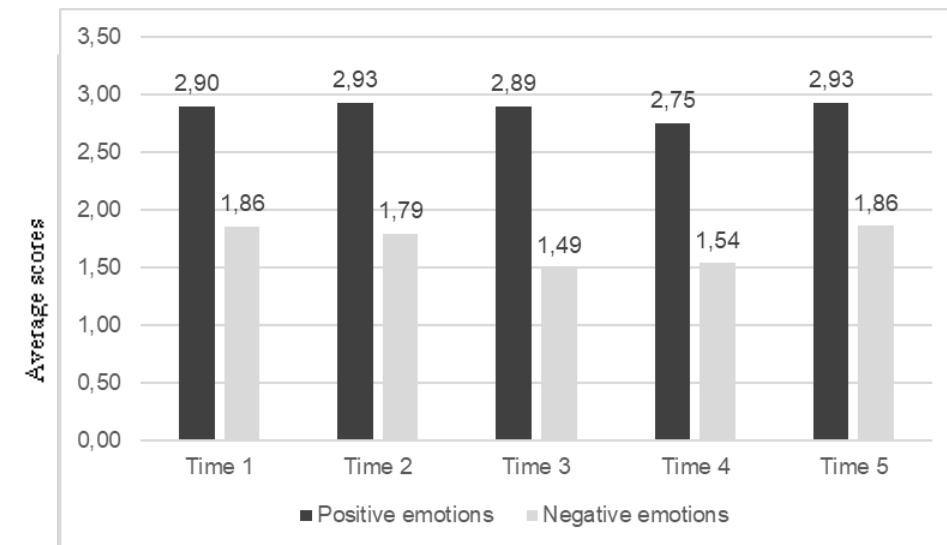


Figure 4 Changes in positive and negative emotions during the massage course (created by the authors)

Discussion

In Latvia, 268 adolescents aged 10 to 14 and 188 young people aged 15 to 17 are diagnosed with T1D (SPKC, Statistical data for 2020).

During this study, a classic back massage was performed once a week for 30 min. It was five massages in five weeks in total. The differences in the results of the Positive and Negative Affect Schedule questionnaire and the Depression Anxiety Stress Scales are not statistically significant, and the effect is not large. However, the direction of the changes is clinically significant. When evaluating the results, the specific age of teenagers from 12 to 16 years should be considered when their emotional state is affected by various factors. These are mood changes and physical changes in the adolescent's body.

The effect of massage has been widely studied in connection with various chronic diseases, proving its effectiveness in reducing pain of various origins and improving the quality of life. Massage affects the heart and circulatory system depending on the techniques used and their intensity. Massage treatments have been studied to normalize blood pressure and heart rate both in the short term (during and shortly after the massage) and in the long term (throughout the course of the massage) (Field, 2016; Rich, 2010; Wettlaufer, 2017; Sridani, Russeng, Nur, Fauzan, & Devi, 2020).

In this study, the heart rate of adolescents with T1D decreased because of classical massage. After the first session, the changes were not statistically significant. However, in subsequent times, the heart rate decreased statistically significantly, which can be attributed to the massage activating the body's parasympathetic nervous system through skin pressure receptors and stimulating vasodilation, resulting in a decrease in heart rate (Nelson, 2015). Vasodilation and

activation of the parasympathetic nervous system indicate a reduced stress response. Similar results have been observed in studies with healthy patients, where heart rate decreased after a massage (Lindgren et al., 2010).

A 2011 study in Iran (Sajedi, Kashaninia, Hoseinzadeh, & Abedinipoor, 2011) also observed a decrease in blood glucose levels in adolescents with T1D after massage. It changed statistically significantly in the first three massage times, but changes in the fourth and fifth massage times were not statistically significant. The GLUT4 glucose transporter activation can explain the glucose uptake in the absence of insulin during physical exercise (Richter & Hargreaves, 2013). Classical massage activates the skeletal muscles similarly to physical exercise, thus, lowering blood glucose levels. However, during this and the previously mentioned study in Iran, blood glucose level decrease was not statistically significant after successive massage sessions. As earlier described, massage activates the parasympathetic nervous system, particularly the vagal nerve, which also controls glucagon release. Glucagon is a hormone that augments blood glucose levels if they are too low. Previous studies have shown that the glucagon response due to low glucose levels in blood is absent in patients with T1D. However, it is uncertain whether the glucagon release could be triggered in these patients by other stimuli, such as exercise or massage (Bisgaard Bengtsen & Møller, 2021). It is possible that continuous massages induced the patients' glucagon response, raising the glucose level. An additional extended study with more massage sessions, where glucose and glucagon levels in blood are measured after each session, is necessary.

The conducted research is the first experimental study of this kind in Latvia. Although the small sample size and the increased psychoemotional stress due to the pandemic can be considered limitations, the results reveal that massage could help stabilize the psychoemotional state and sugar blood levels in adolescents with T1D.

Conclusion

Although the differences are not statistically significant, and the effect is not large due to the sample size, the change direction is clinically relevant. When evaluating the results, it is necessary to consider the specific age of adolescents when their emotional state is affected by various factors. These are not only mood changes but also physical changes in the adolescent's body, changes in the way of thinking, and self-awareness. Adolescents are subjected to a complex of emotions that include anger, guilt, shame, and a mixture of other emotions constantly interspersed daily with the influence of the home and surrounding environment, relationships, health issues, and resolution of those.

Reducing negative feelings with massage help for most participants is a good indicator of how to give a positive direction to teenagers with T1D, whose life

with this diagnosis is rather difficult. Massage can help reduce negative emotions and, to some extent, also increase positive emotions, which is a good indicator.

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References

- Caprio, S., Plewe, G., Diamond, M. P., Simonson, D. C., Boulware, S. D., Sherwin, R. S., & Tamborlane, W. V. (1989). Increased insulin secretion in puberty: A compensatory response to reductions in insulin sensitivity. *The Journal of Pediatrics*, *114*(6), 963–967. DOI: [https://doi.org/10.1016/s0022-3476\(89\)80438-x](https://doi.org/10.1016/s0022-3476(89)80438-x)
- Bisgaard Bengtsen, M., & Møller, N. (2021). Mini-review: Glucagon responses in type 1 diabetes – a matter of complexity. *Physiological Reports*, *9*(16). DOI: <https://doi.org/10.14814/phy2.15009>
- Richter, E. A., & Hargreaves, M. (2013). Exercise, GLUT4, and Skeletal Muscle Glucose Uptake. *Physiological Reviews*, *93*(3), 993–1017. DOI: <https://doi.org/10.1152/physrev.00038.2012>
- Chen, S. C., Yu, B. Y. M., Suen, L. K. P., Yu, J., Ho, F. Y. Y., Yang, J. J., & Yeung, W. F. (2019). Massage therapy for the treatment of attention deficit/hyperactivity disorder (ADHD) in children and adolescents: A systematic review and meta-analysis. *Complementary Therapies in Medicine*, *42*, 389–399. DOI: <https://doi.org/10.1016/j.ctim.2018.12.011>
- Fatati, G. (2014). Diabete, disagio psicosociale e qualità delle cure | Recenti Progressi in Medicina. *Diabete, Disagio Psicosociale E Qualità Delle Cure | Recenti Progressi in Medicina*, *105*(10). DOI: <https://doi.org/10.1701/1626.17668>
- Field, T. (2016). Massage therapy research review. *Complementary Therapies in Clinical Practice*, *24*, 19–31. DOI: <https://doi.org/10.1016/j.ctcp.2016.04.005>
- Field, T. (2019). Pediatric Massage Therapy Research: A Narrative Review. *Children*, *6*(6), 78. DOI: <https://doi.org/10.3390/children6060078>
- Gregory, G. A., Robinson, T. I. G., Linklater, S. E., Wang, F., Colagiuri, S., de Beaufort, C., Donaghue, K. C., Magliano, D. J., Maniam, J., Orchard, T. J., Rai, P., Ogle, G. D., Harding, J. L., Wander, P. L., Zhang, X., Li, X., Karuranga, S., Chen, H., Sun, H., . . . Ma, R. C. (2022). Global incidence, prevalence, and mortality of type 1 diabetes in 2021 with projection to 2040: a modelling study. *The Lancet Diabetes & Endocrinology*, *10*(10), 741–760. DOI: [https://doi.org/10.1016/s2213-8587\(22\)00218-2](https://doi.org/10.1016/s2213-8587(22)00218-2)
- Ghazavi, Z., Talakoob, S., Attari, A., & Joazi, M. (2008). Effects of Massage Therapy and Muscle Relaxation on Glycosylated Hemoglobin in Diabetic Children. *shiraz e medical journal*, *9*, 11-16.
- Henríquez-Tejo, R., & Cartes-Velásquez, R. (2018). Impacto psicosocial de la diabetes mellitus tipo 1 en niños, adolescentes y sus familias. Revisión de la literatura. *Revista Chilena De Pediatría, ahead*, 0–0. DOI: <https://doi.org/10.4067/s0370-41062018005000507>
- Hohl, R., Deslandes, A. C., & Mármora, C. H. C. (2019). The Effect of Single-Dose Massage Session on Autonomic Activity, Mood, and Affective Responses in Major Depressive

- Disorder. *Journal of Holistic Nursing*, 37(4), 312–321. DOI: <https://doi.org/10.1177/0898010119832493>
- International Society for Pediatric and Adolescent Diabetes (2022). *ISPAD Clinical Practice Consensus Guidelines 2022*. Retrieved from: https://cdn.ymaws.com/www.ispad.org/resource/dynamic/forums/20221028_072422_12759.pdf
- Lindgren, L., Rundgren, S., Winsö, O., Lehtipalo, S., Wiklund, U., Karlsson, M., Stenlund, H., Jacobsson, C., & Brulin, C. (2010). Physiological responses to touch massage in healthy volunteers. *Autonomic Neuroscience*, 158(1–2), 105–110. DOI: <https://doi.org/10.1016/j.autneu.2010.06.011>
- Lovibond, P., & Lovibond, S. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behaviour Research and Therapy*, 33(3), 335–343. DOI: [https://doi.org/10.1016/0005-7967\(94\)00075-u](https://doi.org/10.1016/0005-7967(94)00075-u)
- Mayo Clinic Staff (2022). Type 1 Diabetes. *Patient care & Health Information: Diseases and Conditions*. Retrieved from: <https://www.mayoclinic.org/diseases-conditions/type-1-diabetes/symptoms-causes/syc-20353011>
- Muscattello, M. R. A., Troili, G. M., Pandolfo, G., Mento, C., Gallo, G., Lanza, G., Pintaudi, B., Vieste, G. D., Benedetto, A. D., Zoccali, R. A., & Bruno, A. (n.d.). *Depressione, ansia e rabbia in soggetti affetti da diabete mellito di tipo 1 | Recenti Progressi in Medicina*. Depressione, Ansia E Rabbia in Soggetti Affetti Da Diabete Mellito Di Tipo 1 | Recenti Progressi in Medicina.
- Nelson, N. L. (2015). Massage therapy: understanding the mechanisms of action on blood pressure. A scoping review. *Journal of the American Society of Hypertension*, 9(10), 785–793. DOI: <https://doi.org/10.1016/j.jash.2015.07.009>
- Rich, G. J. (2010). Massage therapy: Significance and relevance to professional practice. *Professional Psychology: Research and Practice*, 41(4), 325–332. DOI: <https://doi.org/10.1037/a0020161>
- Sajedi, F., Kashaninia, Z., Hoseinzadeh, S., & Abedinipoor, A. (2011). How effective is Swedish massage on blood glucose level in children with diabetes mellitus? *Acta medica Iranica*, 49(9), 592–597.
- Sherman, K. J., Ludman, E. J., Cook, A. J., Hawkes, R. J., Roy-Byrne, P. P., Bentley, S., Brooks, M. Z., & Cherkin, D. C. (2010). Effectiveness of therapeutic massage for generalized anxiety disorder: a randomized controlled trial. *Depression and Anxiety*, 27(5), 441–450. DOI: <https://doi.org/10.1002/da.20671>
- SPKC, Veselības statistikas datubāze (2022). *Cukura diabēta pacienti sadalījumā pa cukura diabēta tipiem, dzimumiem un vecuma grupām*. [Diabetic patients by type of diabetes, gender and age group] Pieejams: https://statistika.spkc.gov.lv/pxweb/lv/Health/Health__Saslimstiba_Slimibu_Izplatiba__Cukura_diabets/CDG015_tips_vecuma_grupa_dzimums.px/table/tableViewLayout2/
- Sridani, N. W., Russeng, S., Nur, R., Fauzan, & Devi, R. (2020). The effect of back massage EPRO method on blood pressure in hypertension patients. *Enfermería Clínica*, 30, 31–34. DOI: <https://doi.org/10.1016/j.enfcli.2019.10.035>
- University of California, San Francisco (2022). *Blood sugar and stress*. *Diabetes Education Online*. Retrieved from: <https://dte.ucsf.edu/types-of-diabetes/type2/understanding-type-2-diabetes/how-the-body-processes-sugar/>
- Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: The PANAS scales. *Journal of Personality and Social Psychology*, 54(6), 1063–1070. DOI: <https://doi.org/10.1037/0022-3514.54.6.1063>

- Wettlaufer, D. E. (2017). *The Effects of Massage on Student Stress*. The University of the Rockies ProQuest Dissertations Publishing, 2017. 10607659.
- Zadkhosh, S. M., Ariaee, E., Atri, A. E., Rashidlamir, A., & Saadatyar, A. (2015). The effect of massage therapy on depression, anxiety and stress in adolescent wrestlers. *International Journal of Sport Studies*, 5(3), 321-327.

DEVELOPMENT OF A SET OF CONTROL EXERCISES BASED ON THE ASSESSMENT OF COMBAT CAPABILITIES

Oskars Blaus

Latvian Academy of Sports Education, Latvia

Inta Bula-Biteniece

Latvian Academy of Sports Education, Latvia

Abstract. *As the military environment is characterized by high levels of physical activity, physical activity is an important component of military action. The aim of the present study was to identify the most physically demanding daily and training (expected battle) tasks performed in the Latvian Army Land Force units (NAF LFU) through the development and application of a questionnaire survey. The results obtained in the study were used to start developing a set of NAF physical fitness control exercises. Based on adapted questionnaires, was developed a questionnaire for the NAF LFU, which allowed to determine most physically demanding daily and combat tasks, as well as dominant physical qualities and physical activities. The questionnaire was then distributed to 70 ground combat soldiers (with the most service and deployments experience as well as sports education), of whom 57 responded (81%). A field test – GB Combat test was carried out as part of the case study in the NAF LFU. Test was chosen by specialists and determined as the most suitable, evaluating the results of the questionnaire and the tasks to be performed by the NAF LFU. 52 soldiers participated in the pilot test. The five most physically demanding training tasks were identified: attack/ quick attack, fight in built-up area (FIBUA), defense, retreat/ delay and preparing fighting positions. The most common physical activities that characterize these tasks are indicated: crawling, running and bending, squatting. As the most important physical qualities indicated – muscular endurance 27.74%, less important physical qualities – speed 22.10%, muscular strength 21.32% and agility 20.36%. The five most physically demanding daily tasks were identified: field training, maintenance of equipment, marching, relocation of equipment and physical fitness training. The most common physical activities that characterize these tasks are indicated: carrying, lifting and running. As the most important physical qualities indicated - muscular endurance 33.08% and muscular strength 31.54%. The GB Combat test, evaluating by a rating system developed by the British Armed Forces (system - pass/fail), was not passed by 11 soldiers.*

Keywords: *control exercises, military, physical qualities, professional skills.*

Introduction

Physical fitness standards may serve a wide range of goals, including improving general well-being, increasing productivity, reducing injuries and lost workdays, boosting unit morale and eliminating stress. Depending on the goal,

the standards could be the same for everyone or applied differentially, e.g., by age or sex. Standards developed for specific occupational tasks would be applied to all who perform those tasks (Robson et al., 2017).

In order to find out the level of a person's physical readiness, it is necessary to perform control exercises or tests. With the help of control exercises, the physical properties and the level of these properties are checked. The results of these tests, especially the dynamics of the results, indicate the efficiency of the training process or, on the contrary, the shortcomings and errors in the training process (Payne & Harvey, 2010). The compilation of standardized, uniform test results provides the opportunity to obtain regular and the latest data on the level of physical fitness, working capacity and development of people, which is one of the most important indicators (Payne & Harvey, 2010; Karpljuk, Meško, Videmšek, & Tkavc, 2009; Jackson & Andrew, 2000).

The ideal test battery should include as many components of fitness as possible. The components of fitness can be broken down into 2 major categories: health related and skill related. Health-related components of fitness include body composition, flexibility, muscular strength, muscular endurance, and cardiovascular endurance (encompassing both aerobic and anaerobic capacity). Skill-related components of fitness include power, speed, agility, coordination, reaction time and balance (Baechle & Earle, 2008).

For a test battery to effectively measure physical fitness, it needs to be valid, reliable, and feasible (Miller, 2012). Validity means that a particular test measures what it is supposed to measure. Reliability means that the test is repeatable and free from individual bias. Feasibility means that the test is easily administered and does not require a great deal of skill or equipment (Peterson, 2015).

In addition to being valid, reliable, and feasible, a test battery should also be operationally relevant. Operational relevance (also known as face validity) refers to the extent that a particular test mimics actual occupational and/or battlefield requirements. Current research suggests that traditional military physical fitness tests have poor operational relevance (Peterson, 2015).

Leading NATO members, as well as the armed forces of other countries, have changed their physical fitness systems in recent years and, in the meantime, Army physical fitness tests (APFT) (British army, 2018; Canadian Forces, 2017; Foulis et al., 2017; Kirknes & Aandstad, 2016; Rayson, Holliman, & Bell, 1994). APFT are designed in such a way that the most typical battlefield activities are simulated and the obtained results of control exercises facilitate the task of unit commanders to assess the true combat capabilities of their units (Worden & White, 2012; Knapik et al., 2004; Lee et al., 1992). It is possible to make sure that a soldier is comprehensively physically trained by performing various physical fitness tests, and the wider the range of these tests, the more objective results can be obtained by assessing the soldiers' physical fitness (Foulis et al., 2017; Robson et al., 2017; Panichkul, Hatthachote, Napradit, Khunphasee, & Nathalang, 2007).

To date, the Latvian NAF Land Force units has not performed an analysis of the most physically demanding tasks and performance criteria while the armies of other countries have performed such an analysis. For example, Canadian forces identified digging, marching and manual materials handling as the most physically demanding tasks (Jaenen, 2009), Swedish army research show that transport of wounded, carrying heavy loads, care of wounded, movement in combat and attack in urban terrain are the most physically demanding work tasks in Swedish Army Land force units (Larsson, Dencker, Olsson, & Bremander, 2020) while Ukrainian army research identified the main types of combat actions carried out by future officers are march, defense, duty at checkpoints and guard (Oderov et al., 2017), but the British army identified four key activities - single lift, carry, repetitive lift and loaded march (Rayson, 1998).

The aim of the study is to determine the most physically demanding daily and training (expected combat) tasks with the help of questionnaires based on the results obtained, as well as to test the soldiers according to the most appropriate combat test chosen by specialists within the framework of the pilot study. This is the second in a series of studies and intends to serve as a foundation for the development of a valid physical work capacity test applicable to the Latvian army Land force units.

Methodology

Development of a work task analysis questionnaire: in order to reach the forwarded aim, the questionnaire was applied as a data collection method. The data were collected in the period November – December 2021.

The questionnaire consisted of 3 parts: questions related to the soldier's age, sex, anthropometric data (height, weight), questions related to the self – assessment of physical fitness – 7 questions and analysis of the most physically demanding daily and combat tasks – 40 questions, with the answers arranged in the Likert scale and an open question of soldier's comments was also given (see Table1). The questionnaire was disseminated electronically to 70 respondents, receiving back 57 valid answer sheets.

In part of physically demanding tasks analysis the tasks were grouped into 4 scales: importance, frequency, duration, intensity. The scale of importance contained 5 statements on the Likert scale from 1 to 5 where 1 meant “Not important”; 2 – “Somewhat important” 3 – “Moderately important”; 4 – “Very important”; 5 – “Very, very important”. The scale of frequency contained 5 statements where 1 meant “Never performed”; 2 – “Seldom performed” (e.g., once or just a few times during deployment) 3 – “Occasionally performed” (e.g., between once a week to a few times a month); 4 – “Often performed” (e.g., at least a few times each week); 5 – “Always Performed” (e.g., daily to several times a day)”. The scale of duration contained 5 statements where 1 meant “0 to 2

minutes”; 2 – “Between 2 to 30 minutes”; 3 – “Between 30 minutes to 1 hour”; 4 – “Between 1 to 2 hours”; 5 – “More than 2 hours”. The scale of intensity contained 5 statements where 1 meant “Very Light”; 2 – “Light”; 3 – “Somewhat Hard”; 4 – “Hard”; 5 – “Very Hard”. As well as each task was described in terms of physical activity: lifting, carrying, pushing or pulling, bending, squatting or kneeling, walking, running, crawling, climbing, shoveling or digging, using hand-held tools (prepared by the author based on Robson, Leamon, Lytell, Matthews & Chamberlin 2021) and the relative distribution of usage of physical qualities – strength, endurance, speed, agility and flexibility in combat actions (tasks) in terms of "personal feelings" in the questionnaires were carried out (prepared by the author based on Oderov et al., 2017).

The study was approved by the Ethical commission of the Latvian Academy of Sport Education, as well as permission was received from the NAF commander. Individual responses to the questionnaire could not be traced by the researchers since the survey was designed to be non-identifiable.

The Combat test was organized in the Infantry Brigade, as a protocol was taken Great Britain (GB) Army combat test (ADR009651, Issue 13.1 – Jan 2021). Subjects in this combat test were 32 soldiers from the Infantry Brigade (32 male). Tests are evaluated according to the system – pass/fail. Between exercises is 5-15 min rest and total test time is 160 min. The combat test consists of 6 exercises: 1. Loaded March (minimum standard – 4km (with 40kg) in 50min + 2km (with 25kg) in 15min); 2. Fire & Movement + 15m crawling and 15m sprinting (minimum standard – 20 x (7.5m overrun – 8sec, holding the shooting position – 8sec) + crawling 15m and sprinting 15m – 55sec); 3. Casualty Drag (minimum standard – 110kg pulled over 20m in 35sec); 4. Water Can Carry (minimum standard – carry two 22kg cans over 240m in 4min); 5. Vehicle Casevac (minimum standard – 70kg lift, hold for 3sec); 6. Repeated lift & carry (minimum standard – shifting bags weighing 20kg 20 times over a 30m distance in 14min).

In each study, incumbents were told that they were participating in a project to develop new army physical tests. All were assured that their ratings or scores were confidential and would not be used for any purpose beyond the research.

Data analysis: descriptive data were expressed as mean, standard error (SE), standard deviation (SD) and coefficient of variation (CV). The statistical calculations were performed with an Excel software package. The analysis of the predominant physical properties - endurance, strength, speed, agility and flexibility of the tasks was performed separately.

Table 1 Structure of the questionnaire (created by the authors)

Area of interest	Question
Background	Soldier's age, sex, anthropometric data, unit, position, and duration of military service.
The self – assessment of physical fitness	The result of the APFT. Amount of physical activity. Type of physical activity. Coach – led sports training experience. Individual training experience. Physical feeling. Mental feeling.
Characterization of the most physically demanding daily and training (combat) tasks.	5 the most physically demanding daily tasks: <ul style="list-style-type: none"> - importance, frequency, duration, intensity; - identify the 3 most typical physical activities while performing a task; - dominance of physical qualities in performing tasks 5 the most physically demanding training (combat) tasks: <ul style="list-style-type: none"> - importance, frequency, duration, intensity; - identify the 3 most typical physical activities while performing a task; - dominance of physical qualities in performing tasks

Results

Subjects - out of 70 soldiers invited to participate in the study, 57 soldiers (81%) accepted the invitation (4 women and 53 men), the age of the respondents was between 20 and 46 years ($M=29$; $SD=8.86$), 44% were aged 21– 29, 28% were 30– 35, another 18% were 36– 40, and 10% were 41– 46. The mean body weight (kg) of soldiers was 82.4 ± 9.5 and the mean body height (cm) was 179 ± 8.6 . 100% ($n=57$) soldiers were from the Land Force Mechanized Infantry Brigade. The average duty experience of the soldiers was 10.91 years ($SD=6.92$). The shortest work experience was 3 years, the longest work experience was 26 years.

Summarizing the results of the questionnaires there were determined the 5 most characteristic daily actions (tasks) of the Land force units, which require the greatest physical effort. In total, 18 separate tasks were described by respondents (the Table 2 shows the five most frequently mentioned tasks).

Analyzing various daily tasks to determine the most appropriate ones, the author took into account the questionnaire results of combatants who identified their main types of daily tasks, evaluated by importance, frequency, duration and intensity - march ($\bar{x} - 4.48$), field training exercise ($\bar{x} - 4.4$), physical fitness training ($\bar{x} - 4.33$), relocation of equipment, machinery and weapons ($\bar{x} - 3.95$) and maintenance of equipment, machinery and weapons ($\bar{x} - 3.9$).

Table 2 Daily Task Categories and Average Ratings (created by the authors)

Tasks	n	Importance	Frequency	Duration	Intensity	\bar{x}	Physical activity
1. March	29	4.9	3.6	4.5	4.9	4.48	Carry – 100% Run – 100% Walk – 80%
SE		0.02	0.04	0.03	0.02		
SD		0.42	0.73	0.71	0.40		
CV		0.11	0.20	0.16	0.08		
2. Field training exercises	48	4.3	4.7	4.5	4.1	4.4	Walk – 70% Run – 55% Crawl – 50%
SE		0.03	0.02	0.02	0.02		
SD		0.63	0.69	0.77	0.57		
CV		0.19	0.15	0.17	0.14		
3. Physical fitness training	28	4.8	3.5	4.1	4.9	4.33	Run – 90% Lift – 85% Bend, squat – 40%
SE		0.03	0.05	0.03	0.02		
SD		0.56	0.84	0.73	0.44		
CV		0.15	0.24	0.18	0.09		
4. Relocation of equipment, machinery, weapons	29	4.9	3.1	3.7	4.1	3.95	Lift – 100% Carry – 95% Push or pull – 55%
SE		0.02	0.03	0.04	0.04		
SD		0.42	0.49	0.75	0.86		
CV		0.11	0.16	0.20	0.21		
5. Maintenance of equipment, machinery, weapons	36	4.5	4.1	3.9	3.1	3.9	Lift – 80% Carry – 70% Push or pull – 55%
SE		0.04	0.03	0.03	0.03		
SD		0.75	0.70	0.64	0.65		
CV		0.21	0.17	0.16	0.21		

More than 50 percent of the tasks described involved some degree of carrying, lifting and running, 49 percent of the tasks included some degree of walking and pushing or pulling and 29 percent of the tasks included some degree of bending or squatting and crawling.

General physical qualities during the different types of daily actions (tasks) are given in Table 3.

Table 3 Comparative table of usage of general physical qualities during the different types of daily actions (tasks) (created by the authors)

Tasks	n	Physical qualities, %				
		Strength	Endurance	Speed	Agility	Flexibility
Field training exercises	48	24.4	32.6	12.2	18.6	12.2
Maintenance of equipment, machinery, weapons	36	44.5	12.0	16.2	17.8	9.5
March	29	14.2	51.6	11.0	12.4	10.8
Relocation of equipment, machinery, weapons	29	49.0	28.0	6.0	9.0	8.0
Physical fitness training	28	36.5	36.5	12.0	8.0	7.0
\bar{x}		33.7	32.1	11.5	13.2	9.5

The relative distribution of usage of physical qualities in daily actions (tasks) in terms of "personal feelings" in the questionnaires were carried out. The ratio of usage of general physical qualities in all of the types of daily actions showed the leading role of the endurance level in forming of high degree readiness of troops for daily activity. The high level of endurance is defined by experts as a leading physical quality in a march (51.6%), field training exercises (32.6%) and physical fitness training, except maintenance of equipment, machinery, weapons, and relocation of equipment, machinery, weapons where strength is rated as a leading physical quality – 44.5% and 49.0% (mainly due to the carrying out of some actions that are inherent in not only special but also all other military positions). In addition, analysis shows relatively balanced distribution of the rest of physical qualities with a slight predominance of agility and speed over flexibility.

Summarizing the results of the questionnaires were determined the 5 most characteristic combat actions (tasks) of the Land Force units, which require the greatest physical effort. In total, 22 separate tasks were described by respondents (the Table 4 shows the five most frequently mentioned tasks).

Analyzing various combat tests to determine the most appropriate, the author took into account the questionnaire results of combatants who identified the main types of combat actions, evaluated by importance, frequency, duration and intensity - defense (\bar{x} - 4.58), retreat/delay (\bar{x} - 4.45), establishment of defense positions (\bar{x} - 4.4), attack/quick attack (\bar{x} - 4.38) and fight in built-up area (FIBUA) (\bar{x} - 4.35).

More than 60 percent of the tasks described involved some degree of running, 40 percent of the tasks included some degree of walking, crawling and operating with tools and 19 percent climbing, bending and carrying.

Table 4 Combat action categories and average ratings (created by the authors)

Tasks	n	Importance	Frequency	Duration	Intensity	\bar{x}	Physical activity
1.Defense	32	4.9	3.7	4.7	5.0	4.58	Crawl – 100% Bend, squat– 60% Run – 40%
SE		0.02	0.04	0.02	0.02		
SD		0.39	0.78	0.66	0.45		
CV		0.10	0.21	0.14	0.09		
2.Retreat/ delay	29	4.9	3.4	4.6	4.9	4.45	Crawl – 95% Bend, squat– 70% Run – 50%
SE		0.02	0.04	0.03	0.02		
SD		0.39	0.75	0.73	0.43		
CV		0.10	0.22	0.16	0.09		
3.Establish ment of defense positions	21	4.8	3.7	4.2	4.9	4.4	Dig – 100% Lift – 75% Operate with hand tools –70%
SE		0.03	0.04	0.03	0.02		
SD		0.59	0.66	0.59	0.42		
CV		0.15	0.18	0.14	0.09		
4.Attack, quick attack	52	4.7	3.7	4.6	4.5	4.38	Run – 80% Walk – 75% Crawl, sneak – 60%
SE		0.03	0.03	0.02	0.02		
SD		0.73	0.71	0.73	0.73		
CV		0.20	0.19	0.16	0.16		
5.FIBUA	36	4.4	3.9	4.4	4.7	4.35	Run – 70% Climb, clamber – 70% Operate with hand tools –50%
SE		0.04	0.04	0.03	0.02		
SD		0.77	0.87	0.81	0.65		
CV		0.23	0.22	0.18	0.14		

General physical qualities during the different types of combat actions (tasks) are given in Table 5.

Table 5 Comparative table of usage of general physical qualities during the different types of combat actions (tasks) (created by the authors)

Tasks	n	Physical qualities, %				
		Strength	Endurance	Speed	Agility	Flexibility
Attack, quick attack	52	17.7	31.2	21.6	24.1	5.4
FIBUA	36	17.8	13.5	24.7	28.2	15.8
Defense	32	25.8	32.8	17.2	18.1	6.1
Retreat/ delay	29	20.9	31.0	22.9	17.8	7.4
Establishment of defense positions	21	33.7	30.2	14.5	14.9	6.7
\bar{x}		23.2	27.7	20.2	20.6	8.3

The relative distribution of usage of physical qualities in combat actions (tasks) in terms of "personal feelings" in the questionnaires were carried out. The

ratio of usage of general physical qualities in all of the types of combat actions showed the leading role of the endurance level in forming of high degree readiness of troops for combat activity. The high level of endurance is defined by experts as a leading physical quality in attack (31.2%), defense (32.8%) and retreat/delay (31.0%), agility is defined as a leading physical quality in FIBUA (28.2%) and strength in establishment of defense positions (33.7%). Strength is defined by experts as a second leading physical quality in combat actions. In addition, more detailed analysis shows relatively balanced distribution of the rest of physical qualities with slight predominance of agility and speed over flexibility.

In order to assess the combat capability of soldiers based on the results of the survey, the soldiers were tested with the GB combat test (chosen by LFU specialists). The test was organized in September 2022 and 52 soldiers from the Infantry brigade took part in the test. The age of the test participants was between 21 and 32 years ($M=26$; $SD=4.36$), 54% were aged 21– 25, 38% were 26– 30, another 8% were 31– 32. The mean body weight (kg) of soldiers was 88.7 ± 7.6 and the mean body height (cm) was 182.4 ± 8.2 . The soldiers' results (see Table 6) are as follows: the test was not passed by 11 or 21.2% from all participants, of which 2 soldiers did not pass 2 exercises. 1. Exercise $\bar{x} = 1;02:31h$ (pass – 47 soldiers), 2. Exercise $\bar{x} = 50sec$ (pass – 48), 3. Exercise $\bar{x} = 31.1 sec$ (pass – 49), 4. Exercise $\bar{x} = 03:39min$ (pass – 51), 5. Exercise 100% – pass, 6. Exercise $\bar{x} = 13:33min$ (pass – 51).

Table 6 **GB combat test results** (created by the authors)

Participants	Loaded march 4+2km	Fire & Movement + 15m crawling and 15m sprinting	Casualty Drag	240m Water Can carry 2x22kg	70kg Vehicle Casevac	20kg Repeated lift & carry 20x30m
n- 52	$\bar{x} = 1; 02:31h$	$\bar{x} = 50 sec$	$\bar{x} = 31.1 sec$	$\bar{x} = 03:39 min$	$\bar{x} = 100\% - pass$	$\bar{x} = 13:33 min$

Exercise No.1 “March” was carried out by soldiers individually without a tempo holder, thus disregarding the developed protocol of combat test – to complete the distance as a part of the unit (up to 10 soldiers), finishing all together at the same time. 5 soldiers withdrew from the exercise (all 5 soldiers withdrew in the 2nd part of the exercise, performing a 2km march with 25kg). The main reason for the withdrawal was the high pace of the second part of the exercise. According to the evaluation criteria - the minimum standard for the performance of the exercise is 1;05 h but the average score of the test group was 1; 02:31h. The high value result indicates a developed physical qualities of the NAF LFU soldiers – endurance and strength endurance.

Exercise No.2 “Fire & Movement” was not completed by 4 soldiers (1 soldier in the 1st part of the exercise performing a movement with fire and 3 soldiers in the 2nd part of the exercise performing a 15m crawl with the following

15m sprint). The main reason for not completing the exercise mentioned by soldiers was the lack of recovery after Exercise No.1 and the "unordered" equipment. According to the evaluation criteria - the minimum standard for the performance of the exercise is 55sec but the average score of the test group was 50sec. The results show that NAF LFU soldiers have well-developed physical qualities - agility and speed.

Exercise No.3 "Casualty Drag" was not completed by 3 soldiers. The main reason mentioned by soldiers for not completing the exercise was the towing weight and grip problems. According to the evaluation criteria - the minimum standard for the performance of the exercise is 35sec but the average score of the test group was 31.1sec. The results show that NAF LFU soldiers have developed lower and upper body musculature and explosive power.

Exercise No.4 "Water Can carry" was not passed by 1 soldier who refused to perform the exercise, adverted physical fatigue after previous exercises as the main reason. According to the evaluation criteria - the minimum standard for the performance of the exercise is 4min but the average score of the test group was 3;39min. The results show that NAF LFU soldiers have developed upper body musculature.

Exercise No.5 "Vehicle Casevac" was passed 100% by all soldiers. The soldiers stated that the exercise was too easy. The results show that NAF LFU soldiers have developed lower and upper body musculature.

Exercise No.6 "Repeated Lift & Carry" was not passed by 1 soldier. The soldier mentioned physical fatigue after previous exercises as the main reason for his withdrawal. According to the evaluation criteria - the minimum standard for the performance of the exercise is 14min but the average score of the test group was 13;33min. As in the first exercise, the results once again confirm that NAF LFU soldiers have developed physical qualities - endurance and strength endurance.

Discussion

Analyzing the results of the research according to the criteria of importance, frequency, duration and intensity, we determined that the most physically demanding combat task, according to the soldiers of the LFU, is defense, mainly due to the intensity and duration of the task (Table 4). Defense has also been identified as one of the most physically demanding military tasks in the armed forces of other countries (Oderov et al., 2017). The most physically demanding daily task, according to the questionnaire of the LFU, is the march, mainly due to the intensity and duration of the task (Table 2). The results of both sexes did not show different views on the march as the most physically demanding daily task in the LFU. In several studies in other countries, the march has also been identified

as one of the most physically demanding military tasks (Oderov et al., 2017; Jaenen, 2009).

The results of the soldiers' questionnaires detect the dominant physical qualities of the most physically demanding daily tasks (Table 3) and combat tasks (Table 5). The analysis of the results shows that the dominant physical properties in performing daily and combat tasks are muscular strength and muscle endurance.

In other studies, muscular strength (Pandorf et al., 2003; Rayson et al., 1998) and muscular endurance (Robson et al., 2021; Oderov et al., 2017; Friedl et al., 2015) have also been cited as predominant physical properties in military actions.

Results of the questionnaires show that main physical activities in daily and combat actions are running, carrying, lifting, pushing and pulling (Table 2, Table 4). According to the author, this is due to the increased performance of combat support tasks on a daily basis. The role of combat support tasks in performing high-intensity tasks such as lifting various materials as military equipment, medical equipment, accessories, food, tools and sandbags is undeniable. Other studies also indicate that the dominant physical activities in the military environment are carrying, lifting, pushing, and pulling (Tipton, Milligan, & Reilly, 2013; Rayson, Holliman, & Belyavin, 2000; Sharp, Patton, & Vogel, 1996).

The analysis of the results shows that the dominant physical properties in performing combat tasks are muscle endurance, speed and muscle strength (Table 5). The speed of reaction is another important form of physical quality for a soldier due to quick reaction, which is important in every day's military tasks (such as quick response in shooting – pulling a trigger, hitting the target).

In relation to the adapting the set of GB combat test exercises to the Latvian Infantry Brigade, it has to be concluded that the requirements for the performance and minimum standard of certain exercises should be reviewed. For example, comparing the armament and quantity of military equipment of the British and Latvian armies, it can be concluded that a soldier of the Latvian army will have to march in full combat gear over a longer distance compared to British soldiers. As well as the amount and duration of the wounded evacuation should be reviewed, as an average soldier in full combat gear weighs 110 – 120 kilograms and the time taken to bring the wounded soldier under cover is 30sec to 1min. As the main reason for the relatively low evaluation standards, the authors state - the age and gender neutrality of the test.

Conclusions

The results of this study show that the process and methodology can be used to identify the most physically demanding tasks in the National Armed Forces of

Latvia. Five daily and five training (combat) tasks were identified as the most physically demanding for Latvian Army Land Force unit soldiers.

Based on the results of the survey, LFU specialists conducted an analysis of the tests of 6 NATO member states, recognizing the GB combat test as the most suitable for LFU soldiers of the Latvian Army, as well as starting the testing of soldiers as part of a pilot study.

The analysis of the most physically demanding daily and combat tasks, based on the assessment of physical characteristics and physical activities, as well as military skills, provides an opportunity to develop a physical test and would allow more accurate evaluation of combat capabilities of soldiers from different specialties.

References

- Baechle, T.R., & Earle, R.W. (Eds.). (2008). *Essentials of Strength Training and Conditioning Human Kinetics*.
- British army. (2018). Retrieved from: <https://www.army.mod.uk/>
- Canadian Forces. (2017). Force Evaluation. Retrieved from: <https://www.cafconnection.ca/National/Programs-Services/For-Military-Personnel/Military-Fitness/FORCE-Program/FORCE-Evaluation.aspx>
- Foulis, S. A., Sharp, M. A., Redmond, J. E., Frykman, P. N., Warr, B. J., Gebhardt, D. L., & Zambraski, E. J. (2017). U.S. Army Physical Demands Study: Development of the Occupational Physical Assessment Test for Combat Arms soldiers. *J Sci Med Sport*. 20(4), 74–78. DOI: <https://doi.org/10.1016/j.jsams.2017.07.018>
- Friedl, K. E., Knapik, J. J., Häkkinen, K., Baumgartner, N., Groeller, H., Taylor, N. A. S., Duarte, A. F. A., Kyröläinen, H., Jones, B. H., Kraemer, W. J., & Nindl, B. C. (2015). Perspectives on aerobic and strength influences on military physical readiness. *Journal of Strength and Conditioning Research*, 29(11), 10-23. DOI: <https://doi.org/10.1519/JSC.0000000000001025>
- Jackson, A., & Andrew, S. (2000). Types of Physical Performance Tests. The Process of Physical Fitness Standards Development, Wright-Patterson Air Force Base, Ohio: *Human Systems Information Analysis Center*. 101–138. Retrieved from: https://archive.org/stream/DTIC_ADA495349/DTIC_ADA495349_djvu.txt
- Jaenen, S. P. (2009). Identifying the most physically demanding tasks.
- Karpljuk, D., Meško, M., Videmšek, M., & Tkavc, S. (2009). The relationships between tests, measurements and evaluation in human performance. *CISM International Symposium – Prague, September 2009*, Abstract, 50-53.
- Kirknes, J., & Aandstad, A. (2016). New physical fitness tests and employment standards in the Norwegian Armed Forces.
- Knapik, J. J., Bruce, H. J., Sharp, M. A., Darakjy, S., Jones, S., Hauret, K. G., & Piskator, G. (2004). The Case for Pre-Enlistment Physical Fitness Testing: Research and Recommendations. Aberdeen Proving Ground, Md.: *U.S. Army Center for Health Promotion and Preventive Medicine*. 12-HF-OIQ9D-04, 8–17. Retrieved from: <https://apps.dtic.mil/sti/pdfs/ADA426848.pdf>
- Larsson, J., Dencker, M., Olsson M. C., & Bremander, A. (2020). Development and application of a questionnaire to self-rate physical work demands for ground combat soldiers. *Applied Ergonomics*. 83. DOI: <https://doi.org/10.1016/j.apergo.2019.103002>.

- Lee, S. W. (1992). Task-related aerobic and anaerobic physical fitness standards for the Canadian Army. Edmonton, Alberta, Canada: University of Alberta, Department of Physical Education and Sports Studies. PhD Dissertation.
- Miller, T. (Eds.). (2012). *NSCA's Guide to Tests and Assessments*. Human Kinetics.
- Oderov, A., Romanchuk, S., Fedak, S., Kuznetsov, M., Petruk, A., Dunets– Lesko, A., Lesko, O., & Olkhovyi, O. (2017). Innovative approaches for evaluating physical fitness of servicemen in the system of professional training. *Journal of Physical Education and Sport*. 17(1), 23 – 27. DOI: <https://doi.org/10.7752/jpes.2017.s1004>
- Pandorf, C. E., Nindl, B. C., Montain, S. J., Castellani, J. W., Frykman, P. N., Leone, C. D., & Harman, E. A. (2003). Reliability Assessment of two military relevant occupational physical performance tests. *Can. J. Appl. Physiol.* 2827-2837. DOI: <https://doi.org/10.1139/h03-003>
- Panichkul, S., Hatthachote, P., Napradit, P., Khunphasee, A., & Nathalang, O. (2007). Systematic review of physical fitness testing to evaluate the physical combat readiness of Royal Thai Armed Forces. *Military Medicine*. 172(12), 1234-1238. DOI: <https://doi.org/10.7205/MILMED.172.12.1234>
- Payne, W., & Harvey, J. (2010). A framework for the design and development of physical employment tests and standards. *Ergonomics*, 53(7), 858–871. DOI: <https://doi.org/10.1080/00140139.2010.489964>
- Peterson, D. (2015). The Navy Physical Fitness Test. A Proposed Revision to the Navy Physical Readiness Test. *Strength and Conditioning Journal*, 37(4), 60-68. DOI: <https://doi.org/10.1519/SSC.0000000000000122>
- Rayson, M.P. (1998). The development of physical selection procedures. Phase 1: Job analysis. *Contemporary Ergonomics*, 393-397.
- Rayson, M., Holliman, D. E. & Bell, D. G. (1994). Physical selection standards for the British Army: Phase 3 Development of physical selection tests and pilot study (Report NO. DRA/CHS/WP94006). Farnborough, UK: Defence Research Agency.
- Rayson, M., Holliman, D., & Belyavin, A. (2000). Development of a physical selection procedure for the British Army. Phase 2: Relationship between physical performance tests and criterion tasks. *Ergonomics*, 73–105.
- Robson, S., Lytell, M. C., Sims, C. S., Pezard, S., Manacapilli, T., Anderson, A., Bohusch, T., & Haddad, A. (2017). Fit for Duty? Evaluating the Physical Fitness Requirements of Battlefield Airmen. Retrieved from: <https://bootcampmilitaryfitnessinstitute.com/elite-special-forces/us-elite-special-forces/afsoc-us-air-force-special-operations-command/us-air-force-battlefield-airmen-fitness-assessment-bafa/>
- Robson, S., Leamon, I., Lytell, M.C., Matthews, M., & Chamberlin, M. (2021). A Review of the Air Force Fitness Assessment. *RAND Corporation*, Santa Monica, California.
- Sharp, M. A., Patton, J. F., & Vogel, J. A. (1996). A data base of physically demanding tasks performed by US army soldiers. *Proc Hum Factors Ergonom Soc*, 40, 673–677.
- Tipton, M. J., Milligan, G. S., & Reilly, T. J. (2013). Physiological employment standards. I. Occupational fitness standards: Objectively subjective? *Eur J Appl Physiol*, 113, 2435–2446.
- Vickers, R. R. Jr. (2002). Physical Strength and Performance of Moderate Duration Physical Tasks. Technical Report No. NHRC-03-08. San Diego, CA: *Naval Health Research Center*.
- Worden, T., & White, E.D. (2012). Modifying the U.S. Air Force Fitness Test to reflect physical combat fitness: one study's perspective. *Mil Med*. 177(9), 1090-1094. DOI: [10.7205/milmed-d-12-00066](https://doi.org/10.7205/milmed-d-12-00066)

TRANSGENDER'S ISSUES IN SPORT COMPETITIONS

Daiva Petrenaite

Utena University of Applied Sciences, Lithuania

Abstract. *The recognition and development of the rights of transgender people raises various problems, one of which is their possibility to participate in sports. The aim of the article is to identify and analyze the issues of transgenders' participation in sports, reviewing possible ways of solving them. There used such research methods as analysis of new scientific literature and legal documents, qualitative content and comparative analysis, historical analysis. Study showed that international sports organizations and research bodies do not have a unanimous view how to ensure transgender rights to participate in sports with equality and fairness. New scientific researches may help to change this unclear and ambivalent position as well as established legal regulations and a unified policy of states in this area can help to solve such problems.*

Keywords: *gender identity, International Olympic Committee, sport competition, testosterone, transgender.*

Introduction

A transgender is a person whose biological gender does not match a social one. The achievements of medicine and social sciences have made it possible to look at them in a different way and help solve their problems. Also, the development of the rights of transgenders allows us to discuss their opportunities to participate in sports competitions. Many types of sports are differentiated by sex. Also, there are different standards for males and females participating in sports, because women and men have different heights, muscle mass, body build, blood hemoglobin concentration and so on. Transgenders in sport meet many issues related to the most important questions: Could they participate in sports competitions? If, yes, which type: female or male? How to ensure equality and fair competition in sport?

So, following these questions, the aim of the article is to identify and analyze the issues of transgenders' participation in sports, reviewing possible ways of solving them.

Research methods: analysis of new scientific literature and legal documents, qualitative content and comparative analysis, historical analysis.

Review of Literature

In recent years, more scientific articles have appeared related to the topic of transgender opportunities to participate in sports competitions. And it is connected with changes in regulation of their rights to equality, dignity, non-discrimination. For example, a new article, published online 2022 January 18 from the medicine point of view is “Joint position statement of the International Federation of Sports Medicine (FIMS) and European Federation of Sports Medicine Associations (EFSMA) on the IOC framework on fairness, inclusion and non-discrimination based on gender identity and sex variations”(Pigozzi et al., 2022) where authors critically analyze new framework (2021) of the International Olympic Committee (IOC) seeing it only from perspectives of human rights with less consideration for medical/scientific issues.

Another significant article “Competitive Fairness or Inclusion: Balancing Governance and Human Rights Law” is based on analysis of the problems of transgenders where author Lauren McCoy Coffey rises such questions: “What if an international federation or national governing body concludes that transgender athletes should be prohibited or subjected to rigorous conditions for participation? Would those qualifications stand up to legal challenge by an affected athlete? Will some athletes have better legal protection based on the location of their challenge?” (Coffey, 2022).

In the article “Transgender Athletes in Sports Competitions: How Policy Measures Can Be More Inclusive and Fairer to All” (Reynolds & Jahromi, 2021) authors analyze environmental and social barriers to transgender athlete participants as well as biological differences related to athletic performance.

Kerry O’Halloran in the book “Sexual Orientation, Gender Identity and International Human Rights Law” in the context of rights of sexual minorities, includes the topics about transgenders’ rights participating in sports competitions (O’Halloran, 2021).

It should be mentioned other articles: Cesar R. Torres, Francisco Javier Lopez Frias & María José Martínez Patiño “Beyond Physiology: Embodied Experience, Embodied Advantage, and the Inclusion of Transgender Athletes in Competitive Sport”; Joshua D Safer, “Fairness for Transgender People in Sport” (Torres, Frias, & Patiño, 2022); Joanna Harper, “Transgender Athletes and International Sports Policy” (Harper, 2022) etc.

Historical review

Sport for women were prohibited during many centuries for spectators. For example, during the Ancient Olympic games they had to stay at the other side of the river Aplheios. „The only woman to attend the games was the priestess of Demeter. A law stipulated that every other female spectator had to be thrown off a high cliff. For other games, such laws are not known. It is, however, probable that women were also not allowed as spectators of other athletic contests <...> Only once a woman was caught at Olympia. She was one of the daughters of Diagoras of Rhodes - the sources do not agree if it was Pherenike or Kallipateira -, the head of a family of successful athletes. Disguised as a trainer, she brought her son to the games after the death of her husband. When he won the boxing contest, in her joy she jumped over the fence, which separated the trainers from the athletes, and lost her clothes. So it became apparent she was a woman, but out of respect for her father, brothers and son, all Olympic winners, she was not punished“ (Women as spectators, 2012). Later, a law was passed requiring all trainers to come to the games naked. It was considered one of the first rules of knowledge, requiring the determination of true sex.

In the Middle Ages, women were allowed to compete with men, including ball games (Liguori, 2016). Later restrictions have been declined, and women step by step started to participate in different sports: golf, horse riding, sailing, croquet, tennis (from 1900¹).

Problems arose when athletes began to cheat to be of the opposite sex, especially from men to women, or in the cases of being intersex. In 1964 Polish sprinter Ewa Klobukowska, for example, won a bronze running the women's 100 meters distance. Practically, from 1966 in sports games the rule was established, that all athletes must be examined physically (also Ewa Klobukowska was forced to undergo the control and she was recognized as female). Later in 1967-2011 sport control institutions started using chromosome research (after that Ewa Klobukowska failed this testing and was banned from competing as female). From 2011 testosterone testing was established (was regulating from 10 to 5 nmol/L). But the case of the famous runner and winner of many championships, Caster Semenya from South Africa, shows that it could be more complicated (she is female, but she has a high level of testosterone). Some people also had doubts about her being transgender.

The participation of transgender people in competitive sports is related to such names as Renée Richards, Chris Mosier, Lia Thomas, Layshia Clarendon, Laurel

¹ For example the number of women participants in the Olympic Games grew from 2% till 48% (1900-2020 year). See International Olympic Committee, „Gender Equality & Inclusion Report 2021“, available: <https://stillmed.olympics.com/media/Documents/Beyond-the-Games/Gender-Equality-in-Sport/2021-IOC-Gender-Equality-Inclusion-Report.pdf>

Hubbard and others (See Morton, 2022). They are always subjects in the way of the protests, legal and scientific discussions.

Legal point of the view

Article 2 of Universal Declaration of Human Rights (UDHR) declares that “Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, color, sex, language, religion, political or other opinion, national or social origin, property, birth or other status”. According to the Committee on Economic, Social and Cultural Rights, “a flexible approach to the ground of “other status” is thus needed in order to capture other forms of differential treatment that cannot be reasonably and objectively justified and are of a comparable nature to the expressly recognized grounds in article 2, paragraph 2” (Born Free and Equal. Sexual Orientation and Gender Identity in International Human Rights Law, 2012, p. 40-41). Phrase “other status” should include people with different sexual orientations. In the Article 27 established that “Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits“. For example, the Article 10 (g) of the Convention on the Elimination of All Forms of Discrimination against Women (1979) emphasizes: “States Parties shall take all appropriate measures to eliminate discrimination against women in order to ensure to them equal rights with men in the field of education and in particular to ensure, on a basis of equality of men and women:” <...> “The same Opportunities to participate actively in sports and physical education”. These provisions prohibit discrimination based on gender in sports.

European Court of Human Rights stated, that “elements such as gender identity or identification, names, sexual orientation and sexual life fall within the personal sphere protected by Article 8 (X and Y v. the Netherlands, 1985; Van Kück v. Germany, 2003; Schlumpf v. Switzerland, 2009; Beizaras and Levickas v. Lithuania, 2020)”, “the Convention is a living instrument which is to be interpreted in the light of present-day conditions (E.B. v. France [GC], 2008, § 92; Christine Goodwin v. the United Kingdom [GC], 2002, §§ 74-75)”. Transgender rights should be protected also.

More issues are raised when transgenders got rights to participate in sports games. According Kerry O’ Halloran, “this omission has not prevented the emergence in recent years of a good deal of contention as to whether trans people have rights – based on equality and non-discrimination – to compete in sports in accordance with their gender identity, most contentious when that gender rests on self-identification. The debate raises allegations of unfair advantage, segregation,

discrimination and victimization, where physiological differences can be compounded by testosterone and hormonal treatment. There is clearly a balance to be struck between personal privacy and the protection of sport...” (O’ Halloran, 2021, 93).

On 28 October 2003, an ad-hoc committee convened by the IOC Medical Commission met in Stockholm to discuss and issue recommendations on the participation of individuals who have undergone sex reassignment (male to female and converse) in sport. The reasons for this meeting were connected with the lack of legal regulation in the cases of athletes who have competed under one gender and later undergone sex reassignment surgery. The increasing number of cases of sex reassignment affected sports also. This group of experts confirmed that “individuals undergoing sex reassignment from male to female after puberty (and the converse) be eligible for participation in female or male competitions, respectively, under the following conditions: surgical anatomical changes have been completed, including external genitalia changes and gonadectomy; legal recognition of their assigned sex has been conferred by the appropriate official authorities; hormonal therapy appropriate for the assigned sex has been administered in a verifiable manner and for a sufficient length of time to minimize gender-related advantages in sport competitions” (Statement of the Stockholm consensus on sex reassignment in sports, 2003). The first requirement has been criticized for changes in the external genitalia, as it is not a reasonable condition to prevent sports. But, according to some authors, it could be a stigma barrier – genitals which are characteristic of the opposite sex are visible (See Reynolds & Jahromi, 2021). In the commission’s opinion, eligibility should begin no sooner than two years after gonadectomy. Later the Executive Board of the International Olympic Committee (IOC) approved the consensus proposed by the IOC Medical Commission.

In 2015 was initiated another document, where “the IOC Consensus Meeting agreed the following guidelines to be taken into account by sports organizations when determining eligibility to compete in male and female competition: 1. Those who transition from female to male are eligible to compete in the male category without restriction. 2. Those who transition from male to female are eligible to compete in the female category under the following conditions:

2.1. The athlete has declared that her gender identity is female. The declaration cannot be changed, for sporting purposes, for a minimum of four years.

2.2. The athlete must demonstrate that her total testosterone level in serum has been below 10 nmol/L for at least 12 months prior to her first competition (with the requirement for any longer period to be based on a confidential case-by-case evaluation, considering whether or not 12 months is a sufficient length of time to minimize any advantage in women’s competition).

2.3. The athlete's total testosterone level in serum must remain below 10 nmol/L throughout the period of desired eligibility to compete in the female category.

2.4. Compliance with these conditions may be monitored by testing. In the event of non-compliance, the athlete's eligibility for female competition will be suspended for 12 months" (IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism November 2015).

So new rules allowed men to transition from female to male to participate in sports competitions without any restriction. But for the women (from male to female) conditions practically were made connecting them with some periods of keeping gender status and testosterone level stable. New rules have received many criticisms from scientific skeptics about the significance of other indicators in sports, such as muscle mass, explosive strength and similar. Many other factors could be significant depending on the type of sport. The requirement to lower testosterone level could be discussed from a bioethical point of view also.

From 2021 rules were changed because the IOC published a new framework on fairness, inclusion and non-discrimination based on gender identity and sex variations (International Olympic Committee, Framework on fairness, inclusion and non-discrimination on the basis of gender identity and sex variations, 2021). It includes such principles as prevention of harm, inclusion, non-discrimination, fairness, no presumption of advantage, evidence-based approach, primacy of health and bodily autonomy, stakeholder-centered approach, right to privacy, periodic reviews (Martowicz et al., 2023). All these principles call for sports organizations and research bodies to cooperation and for the new research in the field of equal and conscientious possibility to participate in sports. And it is necessary to ensure insofar as possible that transgenders are not excluded from the opportunity to participate in sporting competitions.

But still, there are many opinions about transgenders' possibilities to participate in sports competitions: to separate them as a different group; to employ an algorithm that includes all athletes and divides them into categories based on both physiological and social parameters; "open" category ("Male and female sports categories would still be included in this idea but adding an "open" category is more inclusive to all athletes who wish to participate" (Reynolds & Jahromi, 2021). The first opinion could be dangerous because separating them into different groups could raise more discrimination against them (transgender people have gender non-conformity by preferring to be the opposite sex but not the third gender). Also, it could be and recognized the danger to destroy the universally recognized binary sex system. The categorization by social parameters is difficult to measure. "Open" category could destroy fair competition and equality. Some authors mention possibility completing evidence-based research includes establishing control groups. But the same time they

state that “that being a transgender athlete does not automatically qualify an individual as a potential test subject. Most athletes are never enrolled in research studies, and transgender athletes should be afforded the same respect” (James, 2019)

Noteworthy that some international bodies made new rulings against trans athletes in cycling, swimming and rugby (IGLYO, 2022; Kliegman, 2022; De la Fuente, 2022).

So, we can feel that there is a considerable disunity of opinion between experts in sport, medicine and participants of sports competitions. And it is not surprising because different states have different legal regulations regarding transgender’s policies regarding their legal documents, right to private life, right to marriage, right to gender reassignment surgery etc.

For example, in Lithuania, the order control of sportswomen sex of the sports teams still requires physical sex control: “Performing gender control: 1. female athletes are examined gynecologically at the Vilnius Sports Medicine Center; 2. after a gynecological examination, female athletes are referred to the Human Genetics Center of the Vilnius University Hospital "Santariškių Klinikos" for determination of sex chromatin; 3. Athletes arrive at the Human Genetics Center with a referral from the Vilnius Sports Medicine Center and an identity document; 3.4. the result of the examination is recorded in the certificate of the Human Genetics Center of the Vilnius University Hospital "Santariškių Klinikos", which the athletes submit to the Vilnius Sports Medicine Center” (Dėl Lietuvos sporto rinktinių sportininkų lyties kontrolės tvarkos patvirtinimo, 1996). But there is not legal regulation of transgender’s reassignment surgeries in Lithuania.

Conclusions

Historically sport has been done only for males. But since 20th century women have got the right to participate also. In our days, the dividing of people into gender becomes complicated because it does not fit traditional standards. The development of science and the recognition of the rights of transgender people also affected sports competitions, where there recognized a transition from physical gender control, and later chromosome research to testosterone content requirements. And finally, from 2021, it was required to consider such principles as inclusion, prevention of harm, non-discrimination, fairness, no presumption of advantage, evidence-based approach, the primacy of health and bodily autonomy, right to privacy and others. These principles would seem positivist and liberal from a human rights point of view, but they create even more confusion in implementing transgender rights in sports competitions. It also allows each individual sports federation to evaluate its own conditions regarding opportunities for transgenders to participate in sports.

It should be noted that this is a long-term process during which the best options must be sought. According to the author, new scientific research may help to change this unclear and ambivalent position as well as, and established legal regulation and a unified policy of states in this area can help to solve such problems.

References

- Born Free and Equal. (2012). Sexual Orientation and Gender Identity in International Human Rights Law, p. 40-41. Retrieved from: <https://www.ohchr.org/sites/default/files/Documents/Publications/BornFreeAndEqualLowRes.pdf>
- Celebrating Worldwide Trans Athletes Following New Anti-Trans Rulings in Sports. (2022). *Iglyo*. Retrieved from: <https://www.iglyo.com/trans-athletes-2022/>
- Coffey, L. McC. (2022). Competitive Fairness or Inclusion: Balancing Governance and Human Rights Law. *Emerald Insight, Justice for Trans Athletes*. Retrieved from: <https://www.emerald.com/insight/content/doi/10.1108/978-1-80262-985-920221005/full/html?skipTracking=true>
- Convention on the Elimination of All Forms of Discrimination against Women. (1979). *United Nations*. Retrieved from: <https://www.ohchr.org/en/instruments-mechanisms/instruments/convention-elimination-all-forms-discrimination-against-women>
- De la Fuente, H. (2022). International Swimming Federation votes to restrict transgender athletes from competing in elite women's aquatics competitions. Retrieved from: <https://edition.cnn.com/2022/06/19/us/fina-vote-transgender-athletes/index.html>
- Ewa Klobukowska Biography. (n.d.). *Olympics*. Retrieved from: <https://olympics.com/en/athletes/ewa-klobukowska>
- Harper, J. (2022). Transgender Athletes and International Sports Policy. *Law and Contemporary Problems*. Retrieved from: <https://worldathletics.org/athletes/south-africa/caster-semenya-14330057>
<https://www.un.org/en/about-us/universal-declaration-of-human-rights>
- International Olympic Committee, Gender Equality & Inclusion Report. (2021). Retrieved from: <https://stillmed.olympics.com/media/Documents/Beyond-the-Games/Gender-Equality-in-Sport/2021-IOC-Gender-Equality-Inclusion-Report.pdf>
- IOC Consensus Meeting on Sex Reassignment and Hyperandrogenism November 2015. Retrieved from: https://stillmed.olympic.org/Documents/Commissions_PDFfiles/Medical_commission/2015-11_ioc_consensus_meeting_on_sex_reassignment_and_hyperandrogenism-en.pdf
- International Olympic Committee. Framework on fairness, inclusion and non-discrimination on the basis of gender identity and sex variations. (2021). Retrieved from: <https://stillmed.olympics.com/media/Documents/Beyond-the-Games/Human-Rights/IOC-Framework-Fairness-Inclusion-Non-discrimination-2021.pdf>
- James, I. B., & Lynn T. C. (2019) Transgender Policy in Sport, A Review of Current Policy and Commentary of the Challenges of Policy Creation. *Current Sports Medicine Reports*, 18(6), p. 239-247. Retrieved from: <https://journals.lww.com/acsm->

- csmr/Fulltext/2019/06000/Transgender_Policy_in_Sport,_A_Review_of_Current.10.aspx?fbclid=IwAR2AGlQBfbUmpZBRCLk9PLC0IqA2F7Uu9qkuXslpQrUt0ZxgEjd_etz0DXs
- Kliegman, J. (2022). Understanding the Different Rules and Policies for Transgender Athletes. *SI*. <https://www.si.com/more-sports/2022/07/06/transgender-athletes-bans-policies-ioc-ncaa>
- Lietuvos Respublikos sveikatos apsaugos ministerijos ir Kūno kultūros ir sporto departamento prie Lietuvos Respublikos Vyriausybės 1996 08 21 įsakymas Nr. 434/200 “Dėl Lietuvos sporto rinktinių sportininkų lyties kontrolės tvarkos patvirtinimo. *E Seimas*. Retrieved from: <https://e-seimas.lrs.lt/portal/legalAct/lt/TAD/TAIS.30938?jfwid=pyc44xclg>
- Liguori, M. (2016). Women in Sports: 100 Years Hurdles. *Linked in*. Retrieved from: <https://www.linkedin.com/pulse/women-sports-100-years-hurdles-maira-liguori>
- Martowicz, M. et al. (2023). Position statement: IOC framework on fairness, inclusion and nondiscrimination on the basis of gender identity and sex variations. Retrieved from: <https://bjsm.bmj.com/content/bjsports/57/1/26.full.pdf>
- Morton, C. (2022) 25 transgender athletes you should know. *CBS News*. Retrieved from: <https://www.cbsnews.com/pictures/25-transgender-athletes-you-should-know/10/>
- O’ Halloran, K. (2021). Sexual Orientation, Gender Identity and International Human Rights Law. *Routledge Taylor & Francis Group, London and New York*.
- Pigozzi, F. et al. (2022). Joint position statement of the International Federation of Sports Medicine (FIMS) and European Federation of Sports Medicine Associations (EFSMA) on the IOC framework on fairness, inclusion and non-discrimination based on gender identity and sex variations. *BMJ Open Sport & Exercise Medicine*, 8 (1). Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8739444/#R1>
- Reynolds, A. & Jahromi, A. H. (2021), Transgender Athletes in Sports Competitions: How Policy Measures Can Be More Inclusive and Fairer to All. *Frontiers in Sports and Active*. Retrieved from: <https://www.frontiersin.org/articles/10.3389/fspor.2021.704178/full>
- Safer, J. D. (2022). Fairness for Transgender People in Sport. *Journal of the Endocrine Society, Volume 6, Issue 5*. Retrieved from: <https://academic.oup.com/jes/article/6/5/bvac035/6550171?login=false>
- Statement of the Stockholm consensus on sex reassignment in sports. (2003). Retrieved from: https://stillmed.olympic.org/Documents/Reports/EN/en_report_905.pdf
- Torres, C. R., Frias F. J. L., & Patiño, M. J. M. (2022). Beyond Physiology: Embodied Experience, Embodied Advantage, and the Inclusion of Transgender Athletes in Competitive Sport. *Sport, Ethics and Philosophy, Volume 16*. Taylor & Francis Online, p. 33-49. Retrieved from: <https://www.tandfonline.com/doi/full/10.1080/17511321.2020.1856915>
- Women as spectators. (2012). Retrieved from: <http://ancientolympics.arts.kuleuven.be/eng/TD001eEN.html>

THE EFFECT OF FRACTIONATED RED BEETROOT JUICE ON PERFORMANCE AND OVERALL HEALTH OF A HIGH-PERFORMANCE ATHLETES

Jekaterina Neteča

Latvian Academy of Sport Education, Lavia

Inga Liepina

Latvian Academy of Sport Education, Lavia

Una Veseta

Riga Stradiņš University, Latvia

Dmitrijs Babarikins

Institute of Innovative Biomedical Technology, Latvia

Abstract. *Over the past 20 years, nitric oxide has become the turning point in athlete physiology and medical research. It has been observed in scientific studies that there are very different protocols for the use of nitrates (red beetroot juice) and different research methodology and results. The most effective solutions for improving the performance of athletes are still being sought. The purpose of this research is to investigate the performance and overall health of a high-performance athlete after consuming fractionated red beetroot juice. The investigation is a one-case study. The respondent is a high-class athlete - track and field (middle and long distance), 20 years old. Three tests were performed in laboratory conditions with an interval of one week. The first test was without the use of fractionated red beetroot juice, the second test after a single dose, and the third after 7 days of use. The research used an interview of the respondent, cardio pulmonary exercise testing measuring device "Vyntus CPX" with gas analysis on a bike ergometer and determination of blood lactate concentration. In the experiment, the athlete's VO₂max improved during each test, after one dose by 9%, and after 7 days of use by 13% from the first test. The physical overall health at the end of the test worsened each time, but in the previous tests, where fractionated red beetroot juice was used, a faster recovery of the athlete's working capacity after exercise was observed.*

Keywords: *endurance, nitric oxide, overall health, red beetroot juice.*

Introduction

In recent years, the trend among scientists is to study natural sports dietary supplements. A nutrient that has gained a lot of attention in recent years as a potentially performance-enhancing supplement for endurance in high-intensity athletes is dietary nitrate. According to the research data of the Anti-Doping

Bureau of Latvia (2019 a), it was concluded that 36% of those surveyed, use various nutritional supplements to improve sports results, but in the study of the Anti-Doping Bureau of Latvia (2019 b), elite athletes more than half of the respondents bought and used supplements to improve sports results in the last year. It is crucial that sports nutritional supplements are not only able to improve athletic results, but are also safe for health. In addition, the International Olympic Committee included nitrates (NO₃⁻) in the list of ergogenic agents for improving the performance of athletes (Maughan et al., 2018).

This explains the number of studies examining the effects of red beetroot juice during exercise on performance indicators (Mellentin, 2010; Larsen et al., 2011; Hoon et al., 2014; Jones, 2014; Thompson et al., 2015). In 2020, a systematic review was published on the effects of nitrate supplements on the performance of endurance sports. The study conducted a systematic literature review to investigate the use and effects of nitrate as a dietary supplement in endurance athletes who train in sports with repetitive movement. Although the systematic review analyzed a lot of data from published studies, researchers concluded that further research is needed to understand all the factors influencing the possible ergogenic effects of nitrates on the performance of endurance athletes (Calvo, Alarda-Capo, Pareja-Galeano, & Jimenez, 2020). Similar conclusions were reached by other researchers (Macuh & Knap, 2021), concluding that there is insufficient research on the effectiveness of nitrate supplementation in strength and high-intensity intermittent exercise.

In scientific studies, there are very different protocols for the use of nitrates, different research methodology and different results. The most effective solutions for improving the performance of athletes are still being sought. The ergogenic effect of red beetroot juice is associated not only with nitrates, but also with its other ingredients. To increase the specific efficiency of red beetroot juice, recently the original method of its fractionation on the basis of molecular mass by ultrafiltration was developed (Smirnova et al., 2022). The ergogenic effect of red beetroot juice is associated not only with nitrates, but also with its other ingredients. Fractionated red beetroot juice is a medium molecular fraction of juice obtained from a special variety of red beetroots. Its endurance-stimulating action is superior to native juice. It was concluded that the effect of a specific substance - fractionated red beetroot juice - on the performance of a high-achieving athlete after a single dose of 50ml and after a seven-day dose of 50ml, should be analysed.

One unique, high-class athlete - a track and field athlete (middle and long distances) was chosen as the basis of the study, for whom a full anamnesis was collected, including anthropometric data, health data, sports results, training and competition analysis. Tests were performed in laboratory conditions - ergometry with the cardiopulmonary measuring device "Vyntus CPX" with gas analysis on the exercise bike. After the laboratory experiment, data on the athlete's overall

health was collected, which supplements the statistical data of the study with the subjective opinion of the research participant.

The purpose of the analyse is to study the working capacity and overall health of a high-achieving athlete after consuming fractionated red beetroot juice.

Hypothesis: performance and overall health of a high-achieving athlete will improve after consuming fractionated red beetroot juice.

Previous Literature Reviews and Syntheses

Cyclic movements are often found both in human everyday life and in various sports. They can be characterized as actions performed that are constantly repeated and are directly related to the previous action in terms of their execution phases and structure. Cyclic movements are found in sports such as swimming, running, cycling, skiing and others. In cyclical sports, one of the main physical characteristics is endurance. High endurance scores are a prerequisite for achieving good results in all cyclical sports (Shave & Franco, 2006).

Some studies have found that after consuming an optimal dose of beetroot juice, both men and women (young and practically healthy) improved their performance by ~3%; ~6.2 mmol NO₃⁻. Improvements in performance are observed within 2-3 hours after acute administration of 5-9 mmol (310-560 mg) NO₃⁻ (Hoon et al., 2014). Prolonged periods of NO₃⁻ intake (> 3 days) have been shown to be effective (Thompson et al., 2015) and may be a positive strategy for high-level athletes (Jones, 2014).

Researchers Macuh and Knap concluded that nitrates are an effective ergogenic aid for improving performance when administered acutely or chronically in the range of ~5-16.8 mmol (~300-1041 mg) (Macuh & Knap, 2021); in another systematic review: about 6–12.4 mmol/day of nitrate (Calvo et al., 2020).

Researchers agree that the nitrate dose should be administered 2-3 hours before activity (Calvo et al., 2020; Macuh & Knap, 2021; Hoon et al., 2014; Thompson et al., 2015; Jones, 2014; Kerksick et al., 2018).

Beetroot juice reduces muscle fatigue associated with high-intensity exercise, although it is unknown whether this is achieved by reducing fatigue and muscle damage and/or promoting muscle recovery after exercise (Dominguez et al., 2018).

Methodology

This study is part of a larger study "Effect of beetroot juice on the performance of athletes", in which three high-achieving athletes - swimmers and one high-achieving athlete - track and field athletes have been tested so far. This publication will analyse one case, a high-achieving athlete - a track and field

athlete. The experiment was conducted in accordance with the Declaration of Helsinki on human experimentation and was approved by the Ethics Committee of the Latvian Academy of Sports Education (LASE). The subject was fully informed about the course of the study, the product, possible risks, and additional benefits from the study and gave written consent to participate. Before participating in the study, the athlete underwent echocardiography and a resting ECG recording, and a sports doctor's opinion was obtained for permission to participate in this type of study.

Research base: LASE sports science research laboratory. Duration from October 11 to October 27, 2022.

The experimental protocol consisted of three tests performed on a cardiopulmonary measuring device “Vyntus CPX” with gas analysis. There was one week between all three tests. The subject was asked to refrain from any intense physical exercise for 36 h before each test, but to continue daily activities.

Fractionated red beetroot juice consumption and testing protocol in high performance athletes.

Test procedure: warm-up for 15-20 min (individual) and maximum oxygen uptake (VO₂max) test on a bicycle ergometer until exhaustion. At the beginning of the test, there was a warm-up on the bicycle ergometer. The workload for the first five minutes was 24 Watt. Starting from the sixth minute, the workload was increased to 50 Watt and proportionally increased by 1 Watt every 10 seconds. Heart rate was continuously recorded during the test. During this session, VO₂max consumption, maximal aerobic velocity and maximal heart rate were individually determined.

The second test took place a week after the first test. Before the test, the participant was asked not to chew gum or use mouthwash with menthol, so as not to affect the function of the nitrates. Two hours before the test, the study participant drank 50 ml of fractionated red beetroot juice with ~6.2 mmol NO₃. Next, everything happened as in the first test: warm-up for 15-20 min (individually) and VO₂max test on a bicycle ergometer until exhaustion. All the same measurements are being recorded.

After the second test day, the study participant consumed 50 ml of fractionated red beet juice with ~6.2 mmol NO₃ every day and came to the test on the seventh day when he drank 50 ml of fractionated red beet juice with ~6.2 mmol NO₃ two hours before the test. The third test was exactly the same as the first two tests with the same measurements.

After the tests, a structured interview took place, during which the athlete described how he felt before the tests, using fractionated red beetroot juice, during the tests, and during the recovery period.

The method of descriptive statistics was used for data processing using the Microsoft Office Excel program.

Research results

The participant of the experimental laboratory study was a high-achieving athlete - a track and field athlete. The athlete's age is 20 years, weight is between 67 and 69 kg, height 190 cm. The research participant has been playing sports since the age of 9, but not regularly. The main sport has been athletics, but also has participated in floorball and volleyball. The basic sport is athletics, mostly middle and long distances.

At the moment, participation is about 15 times per year. The competition seasons are between January to February and May to September, with approximately 2 competitions per month during this time. The current best achievement in sports Latvian Championship for adults is 2nd place in 1500m and 3rd place in 5000m.

During the study, the amount of training was reduced. The last competition was held on the 17th of September and a 6-week rest period was started for the body to recover. The trainings still take place every day, but the mileage was smaller (around 80km) and most of the kilometers were run in aerobic mode, one training session per week was a tempo run and the rest were easy runs. In addition to running, there was one general physical fitness training, one special physical fitness training for legs. The training loads before all the tests were the same, the tests took place during the rest period.

Before the study, the state of the participants health was appropriate for participation in the study, but before that, he notes overload in 2020, from an excessive amount of anaerobic loads and sleep disorders (problems falling asleep, but sleeps tight, about 7-8h). Heart rate at rest about 50 beats per minute, blood pressure 120/80 mm/Hg.

During the study, the diet did not change: 3 full meals a day, 1-2 snacks during the day. In total, about 3000 kcal. Vitamins C and D were additionally taken before the first test and during all tests.

1. test results and research participant's overall health

Prior to the first test, the study participant rated his physical fitness as mediocre because he had a cold a week before the test. Had slept for about 4 hours, because there was an additional workload in activities not related to sports. Also, the last 3 days before the test, there were problems falling asleep, which are related to the overload of intellectual work during this time.

The research participant described how he felt during the test, stressing that the first 15 minutes were easy to perform, but after that fatigue began to accumulate relatively quickly, although he felt quite good at the end and it seemed that he could definitely perform the test even longer. My legs felt strange because I had never done this type of test on an exercise bike before, and my glutes hurt because the seat was uncomfortable.

In the first test, the VO_{2max} of the athlete was 54 mL min^{-1} kg, which according to the authors Ansley and Cangley is the level of prime performance (endurance) (Ansley & Cangley, 2009). The respiratory equivalent was 27 (VE/ VO_2), which is consistent with a high-performance athlete.

2. test results and research participant's overall health

Before the second test, the study participant rated his physical fitness as good. He had recovered, slept for 8 hours and had enough sleep several nights before the test.

Two hours before the test, the study participant drank 50 ml of fractionated red beetroot juice with ~6.2 mmol NO_3 .

Feeling during the test was similar to the 1st test. This time the first 20 min were very easy. The study participant noted that he felt much better than the first time, but this may be due to his health and sleep quality. After the test, he felt very tired, but it should be noted that the test lasted longer than the first time. His legs didn't hurt as much as after the first test and definitely recovered faster, because after the first test he still felt pain in the legs the next day.

In the second test, the VO_{2max} of the athlete was 60.1 mL min^{-1} kg, reaching the second level of performance (endurance) according to the authors Ansley and Cangley. The respiratory equivalent was 34.5 (VE/ VO_2), which is 7.5 more than in the first test.

3. test results and research participant's overall health

After the second test day, the study participant consumed 50 ml of fractionated red beetroot juice with ~6.2 mmol NO_3 every day and came to the test on the seventh day when he drank 50 ml of fractionated red beetroot juice with ~6.2 mmol NO_3 two hours before the test. Before the third test, the study participant rated his physical fitness and well-being as very good, he did not feel tired, he noted a little pain in his legs, but it was from daily training.

The research participant emphasized that he felt physically exhausted during the test and was very close to maximum exhaustion. Especially the last 5 minutes of the test were the most difficult: it was very difficult to breathe and I felt a burning sensation in my legs.

After the test, it felt a little better than after the 2nd test, although the legs felt heavier. The research participant noted that he recovered relatively quickly after the third test, felt good already in the evening and did not feel like he had been tested to exhaustion. The next morning there was no physical fatigue and no pain.

The VO_{2max} of the third test athlete was 62 mL min^{-1} kg, reaching the third level of performance (endurance) according to the authors Ansley and Cangley. The respiratory equivalent was 38.3 (VE/ VO_2), which is 11.3 more than in the

first test. The results show a high level of preparation of the athlete, but it is possible that the use of fractionated red beetroot juice improved this performance.

VO₂max improved during each test, after one dose by 9% and after 7 days by 13% from the first test. The physical well-being at the end of the test worsened each time, but in the previous tests, where fractionated red beetroot juice was used, a faster recovery of the athlete's working capacity after exercise was noted.

In the first test, which was carried out without the use of fractionated red beetroot juice, a load of 301 Watt was reached in 43 minutes. In the second test, after a single consumption of fractionated red beetroot juice, 2.5 hours before the test, a load of 335 Watt was reached in 48 minutes and 26 seconds. In the third test, after consuming fractionated red beetroot juice for one week, receiving one dose daily, a load of 355 Watt was achieved in 51 minutes and 35 seconds (see Fig. 1).

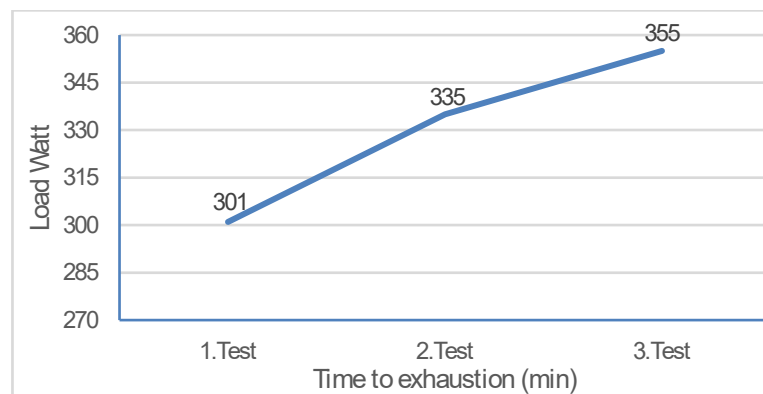


Figure 1 Time to reach maximum load (Watt) in each test (created by the authors)

The study participant concluded that when using fractionated red beetroot juice, he did not feel any difference in running training, but in physical training, especially in special training for the legs, he felt much better and did not feel tired the next day as he had before.

Conclusions

This study provides preliminary findings on the performance and overall health of a high-performance athlete after consuming fractionated red beetroot juice. It was concluded that a single dose of 50 ml of fractionated red beetroot juice with ~6.2 mmol NO₃ improves VO₂max by 9%, while using 50 ml of fractionated red beetroot juice with ~6.2 mmol NO₃ for seven days improves VO₂max by as much as 13%. The part of the hypothesis put forward by the authors, that the performance of a high-achieving athlete will improve after fractional consumption of red beetroot juice, has been confirmed. The findings show that fractionated red beetroot juice has a positive effect on the performance of high-performance athletes. How much of a role does the method of extracting

red beetroot juice play? Further research is needed to provide an accurate answer. Perhaps, the way of extracting red beetroot juice plays an important role in increasing the working capacity of athletes.

The second part of the hypothesis - the overall health of a high-achieving athlete will improve after fractional consumption of red beetroot juice is debatable. It was concluded that the athlete's overall health immediately after the maximum load test does not change significantly with or without the use of fractionated red beetroot juice. However, it is very important to note that after using fractionated red beetroot juice, the athlete states that he is able to recover faster, and his physical overall health returned faster. Using a fractional dose of red beetroot juice, a positive result was obtained in improving the athlete's performance, which provides the basis for further and wider research, increasing the number of respondents and obtaining statistically significant results.

References

- Ansley, L., & Cangley, P. (2009). Determinants of “optimal” cadence during cycling. *European Journal of Sport Science*, 9(2), 61–85. DOI: <https://doi.org/10.1080/17461390802684325>
- Anti-Doping Bureau of Latvia. (2019a). *Study performer: research centre SKDS. Public opinion in use of doping sports*. Retrieved from: http://petijumi.mk.gov.lv/sites/default/files/title_file/Sabiedr%C4%ABbas_viedoklis_par_dopinga_lietosanu_sporta_ataskaite_11.04.2019.pdf
- Anti-Doping Bureau of Latvia. (2019b). *Study performer: research centre SKDS. Athlete opinion in use of doping sports*. Retrieved from: http://petijumi.mk.gov.lv/sites/default/files/title_file/sportistu_viedoklis_par_dopinga_lietosanu_sporta.pdf
- Calvo, J. L., Alarda-Capo, F., Pareja-Galeano, H., & Jimenez, S. L. (2020). Influence of Nitrate Supplementation on Endurance Cyclic Sports Performance: A Systematic Review. *Nutrients* 2020, 12(6), 1796. DOI: <https://doi.org/10.3390/nu12061796>
- Dominguez, R., Mate-Munoz, J. L., Cuenca, E., Garcia-Fernandez, P., Mata-Ordóñez, F., Lozano-Estevan, M. C., ... Garnacho-Castano, M. V. (2018). Effects of beetroot juice supplementation on intermittent high-intensity exercise efforts. *Journal of the International Society of Sports Nutrition*, 15(1). DOI: 10.1186/s12970-017-0204-9
- Hoon, M. W., Hopkin, W. G., Jones, A. M., Martin, D. T., Halson, S. L., West, N. P., ... Burke, L. M. (2014). Nitrate supplementation and high-intensity performance in competitive cyclists. *Applied Physiology, Nutrition, and Metabolism*, 39(9), 1043-1049. DOI: 10.1139/apnm-2013-0574
- Jones, A. M. (2014). Dietary Nitrate Supplementation and Exercise Performance. *Sports Medicine*, 44(S1), 35–45. DOI: 10.1007/s40279-014-0149-y
- Kerksick, C. M., Wilborn, C. D., Roberts, M. D., Smith-Ryan, A., Kleiner, S. M., Jager, R., ... Kreider, R. B. (2018.) ISSN exercise & sports nutrition review update: Research & recommendations. *Journal of the International Society of Sports Nutrition*, 15(1). DOI: 10.1186/s12970-018-0242-y
- Larsen, F. J., Schiffer, T. A., Borniquel, S., Sahlin, K., Ekblom, B., Lundberg, J. O., & Weitzberg, E. (2011). Dietary inorganic nitrate improves mitochondrial efficiency in humans. *Cell Metabolism*, 13(2), 149-159. DOI: 10.1016/j.cmet.2011.01.004

- Macuh, M., & Knap, B. (2021). Effects of Nitrate Supplementation on Exercise Performance in Humans: A Narrative Review. *Nutrients*. DOI: 13.3183.10.3390/nu13093183
- Maughan, R. J., Burke, L. M., Dvorak, J., Larson-Meyer, D. E., Peeling, P., Phillips, S. M., ... Engebretsen, L. (2018). IOC consensus statement: dietary supplements and the high-performance athlete. *British Journal of Sports Medicine*, 52(7), 439–455. DOI: 10.1136/bjsports-2018-099027
- Mellentini, J. (2010). Science gives beetroot brand a superfood boost. *New Nutr Bus*, 16, 17-19.
- Shave, R., & Franco, A. (2006). The physiology of endurance training. In G. Whyte (Eds.), *The Physiology of Training* (pp. 61-84). UK: Churchill Livingstone, Elsevier.
- Smirnova, G., Tretjakovs, P., Fedotova, A., Simanis, R., Vasiljeva, S., Suhorukovs, O., ... & Babarykin, D. (2022). Red beetroot juice and stamina: An experimental study. *Journal of Biosciences and Medicines*, 10, 18-29. DOI: 10.4236/jbm.2022.109002
- Thompson, C., Wylie, L. J., Fulford, J., Kelly, J., Black, M. I., McDonagh, S. T., ... Jones, A. M. (2015). Dietary nitrate improves sprint performance and cognitive function during prolonged intermittent exercise. *European Journal of Applied Physiology*, 115(9), 1825–1834. DOI: 10.1007/s00421-015-3166-0

**PROSTATAS VĒŽA DIAGNOSTIKAS DINAMIKAS
ANALĪZE REĢIONĀLAJĀ SLIMNĪCĀ LAIKĀ
PERIODĀ NO 2018. LĪDZ 2022.GADAM**
*Analysis of the Dynamics of Prostate Cancer Diagnosis in the
Regional Hospital During the Period 2018 – 2022*

Alevtīna Leice

Latvijas Universitātes P. Stradiņa medicīnas koledža, Jūrmala, Latvija

Inesa Valpētere

Daugavpils Reģionālā Slimnīca, Latvija

Natālija Bricina

SIA "AURAMED", Rīga, Latvija

Iveta Strode

Latvijas Universitātes P. Stradiņa medicīnas koledža, Latvija

Abstract. Prostate cancer is a serious medical problem around the world. In many parts of the world, prostate cancer is the leading cause of morbidity and the second leading cause of death immediately after lung cancer. The largest proportion of cases of malignant prostate tumors is in men aged 60-80 years. The Latgale region has the highest proportion of seniors in the population (22.1%). The aim of this research was to evaluate the dynamics of primary diagnostic results over 5 years period in Daugavpils hospital patients. Objects of the study are 546 patients (men) aged from 47 to 88 years who had a PSA marker and prostate biopsy results (histological responses) collected in the period from 1 January 2018 until 1 July 2022. For quantitative evaluation of histological data, the Gleason score was used, as well as its derivative GRADE (degree of malignancy). To assess the dynamics of the quality of diagnostics of prostate cancer over 5 years, the correlation coefficient between the data on the Gleason score of newly diagnosed cancer and the 5 years period of the study was used. Relationships between PSA values, Gleason scores and patient age were also assessed. The SPSS data Statistics program was used for calculation. Difficulties in diagnosis in older patients were discussed.

Keywords: biopsy, Gleason score, prostate cancer, prostate-specific antigen

Ievads

Introduction

Prostatas vēzis - ir ļaundabīgs audzējs, kas attīstās priekšdziedzerī. Prostatas vēzis ir visbiežāk sastopamākā onkoloģiskā slimība vīriešiem Latvijā un otrais

izplatītākais vēzis vīriešiem visā pasaulē un piektais galvenais vēža mirstības cēlonis vīriešu dzimuma pacientiem. Tas ir nozīmīga sabiedrības veselības problēma, īpaši ekonomiski attīstītās valstīs, kur ir lielāks gados vecāku vīriešu īpatsvars vispārējā populācijā. Visā pasaulē tā sastopamības biežums ir atšķirīgs. Saslimstība ir visaugstākā Okeānijā, Ziemeļamerikā un Eiropā (85-112 gadījumi uz 100 000) un viszemākā Āzijas dienvidos un austrumos (4-11 gadījumi uz 100 000) (Waldron, Chowdhury, & McCahill, 2022). Saslimstība ar ļaundabīgiem audzējiem pieaug visā Eiropā un arī Latvijā. 2017.gada sākumā Latvijā dzīvoja 1,91 miljoni pastāvīgo iedzīvotāju, no tiem 895 683 vīrieši. Latgales reģionā ir vislielākais senioru īpatsvars populācijā (22,1%). Lielākais ļaundabīga prostatas audzēju gadījumu īpatsvars ir vīriešiem vecumā no 60 līdz 80 gadiem.

Sadalījumā pa reģioniem Latvijā ir vērojamas atšķirības mirstībā no ļaundabīgajiem audzējiem. Augstākais rādītājs vērojams Latgalē, ko varētu ietekmēt iedzīvotāju vecumstruktūra, tomēr, arī standartizējot pēc vecuma, redzams, ka Latgalē (342 uz 100 000 iedz.) ir būtiski augstāks rādītājs nekā citur Latvijā (vidēji valstī 309), kas saistīts ar (diagnostiku, ārstēšanas iespējām). 2019. gadā, līdzīgi kā iepriekšējos gados, ir augsta mirstība no priekšdziedzera vēža (428 uz 100 000 vīriešu).

Vidēji Latvijā 2017. gadā vīriešiem visbiežāk diagnosticēja priekšdziedzera ļaundabīgo audzēju (144 uz 100 000). Latgales reģiona diagnosticēja priekšdziedzera ļaundabīgo audzēju (177 uz 100 000). Turklāt saslimstība ar priekšdziedzera pēdējos gados ir pieaugusi, kas būtu skaidrojams arī ar pacientu vēršanos pie ārsta veselības pārbaudei un izmeklējumu, piemēram, PSA (prostatas specifiskais antigēns) analīzes veikšanu (Latvijas reģionu veselības profils 2010-2019, SPKC 2020).

Priekšdziedzera vēža cēloņi nav precīzi zināmi. Faktori, kas var palielināt risku: novecošana, rases piederība, priekšdziedzera vēzis ģimenes anamnēzē, liekais svars, garš augums, hormonu IGF līmenis (insulīnam līdzīgs augšanas faktors-1), priekšdziedzera iekaisums.

Darba mērķis: analizēt prostatas vēža diagnostikas rezultātu dinamiku laikā periodā no 2018. līdz 2022. gadam Latgalē.

Pētījuma metodoloģija *Methodology*

Pētījums veikts pamatojoties uz zinātnieku publikācijām un klīniskajām vadlīnijām. Pacientu (vīriešiem) lielākai daļai no simptomu rašanās līdz ārsta apmeklējumam pāriet ievērojami liels laika posms (no vairākiem mēnešiem līdz vairākiem gadiem). Tas skaidrojams ar to, kā vīrieši urinēšanas izmaiņas skaidro ar vecumu izmaiņām un ilgu laiku nav klīniskas pazīmes. Kad vīrieši griežas pie ģimenes ārsta ar sūdzībām par biežāku urinēšanu, apgrūtinātu urinēšanu, pēkšņo nepieciešamību urinēt, urīna noplūdi, erekcijas traucējumu, hematuriju, sāpēm,

tālāk ģimenes ārsts dot nosūtījumu uz bioķīmisko analīzi (t.sk. PSA noteikšanai) un urologa apmeklēšanai.

Urologs veic digitālo prostatas izmeklēšanu caur taisno zarnu, lai iztaustītu priekšdziedzeri un to pārbaudītu attiecībā uz novirzi no normas (PDI). Šī svarīgā uroloģiskā izmeklēšana ļauj novērtēt prostatas dziedzera lielumu un identificēt visus traucējumus. Urologs caur anālo atveri īsā laikā palpē iekšpusi taisnajā zarnā (Andersson, Lantz, & Aly, 2022).

Ja urologam ir aizdomas par prostatas vēzi pacientam ar paaugstinātu PSA koncentrāciju serumā, kā arī saskaņā ar transrektālās USG izmeklēšanas, jeb transrektālu ultrasonogrāfiski vadītu (TRUS) rezultātiem, ieteicams veikt prostatas transrektālās punkcijas multifokālo biopsiju ultraskaņas kontrolē. Pētījumā iekļauti 546 pacientu dati, kuriem bija noteikts PSA un veikta prostatas biopsija. Dati iegūti par 5 gadu laikā savāktiem izmeklējumu rezultātiem.

Lielākā analīžu daļa tika noteikta Daugavpils slimnīcas klīniski-diagnostiskajā laboratorijā, pārējās analīzes tika noteiktas Centrāla laboratorijā un Gulbja laboratorijā. Pacientiem ir paņemti venozo asiņu paraugi un no tiem atdalīts serums. Asins paraugu noņemšanu vēlams veikt no rīta, (atsevišķos gadījumos paraugu var ņemt jebkurā diennakts laikā), 12 stundas pēc ēšanas (lai izslēgtu hormonālo un citu rādītāju ietekmi). Var dzert ūdeni.

PSA ir noteikti, izmantojot klīnisko laboratoriju standarta metodes: ADVIA Centaur PSA analīze ar divu vietu divslāņu imūno analīzi, kurā izmanto tiešo hemiluminometrisko tehnoloģiju ar pastāvīgu divu antivielu daudzumu. Pirmā anti-PSA antivielas Lite reaģentā ar akridīna esteri iezīmēta kazas anti-PSA poliklonāla antivielas. Otrā anti-PSA antivielas cietajā fāzē ir peles anti-PSA monoklonāla antivielas, kas ir kovalenti sapārota ar paramagnētiskajām daļiņām (izmanto ADVA Centaur XPT analizators). Bioloģiskais references intervāls - 0.0 - 4.0 ng/ml. Vīriešiem, kuru PSA līmenis ir no 4,0 līdz 10, jāveic prostatas biopsija pat ar negatīvu PDI (Moul, 2017).

Parasti onkoloģijas diagnozes noteikšanai tiek izmantota procedūra, kas tiek saukta par TRUS biopsiju. Indikācijas priekšdziedzera primārajai biopsijai: kopējā PSA līmenis asins serumā virs 4,0 ng/ml, aizdomas par prostatas vēzi pēc PDI, un ultraskaņas skenēšanas datiem. Tā ietver priekšdziedzera audu paraugu paņemšanu un pārbaudi uz vēža šūnu klātbūtni. Pasaulē katru gadu tiek veikti vairāk nekā 2 miljoni prostatas biopsiju izmeklēšana. Medicīnas biedrība izvirza stingras prasības šai procedūrai. Pašlaik saskaņā ar Eiropas Uroloģijas asociācijas (EAU) vadlīnijām smalkas adatas 12 punktu ultraskaņas vadīta biopsija ir "zelta" standarts (Hara, Jo & Fujii, 2008).

Biopsiju antibakteriālās profilakses standarts ir perorāla antibiotiku lietošana. Sākt lietot antibakteriālus līdzekļus (ciprofloksacīns) piecas dienas pirms procedūras, lai novērstu prostatas iekaisumu. Optimālā deva un lietošanas ilgums atšķiras (Aron, Rajeev, & Gupta, 2000). Lai procedūra būtu pēc iespējas mazāk nepatīkama, taisnajā zarnā tiks injicēts lokālas anestēzijas līdzeklis.

Prostatas biopsiju veic, pacientam guļot uz kreisā sāna. Biopsijai lieto 18G adatu ar griezošu galu un automātisku materiāla noņemšanu.

Pētījumā tika izmantota atkārtoti lietojama automātiskās biopsijas sistēma Delta Cut, Pajung Vācija. Adatas gaitu kontrolē adatas fiksators, kas piestiprināts pie rektālā US detektora. Taisnajā zarnā tiek ievadīts neliels ultraskaņas skeneris, kas raida skaņas viļņus, lai izveidotu skaidru priekšdziedzera attēlu. Pēc tam ar tievu adatu tiek paņemti vismaz 10–12 priekšdziedzera audu paraugi. Biopsijas rezultātā iegūst plānus audu cilindrus. Parauga garums ir 1,7 cm, bet diametrs 1 mm, kuru procedūras laikā marķē atbilstoši parauga paņemšanas vietai un pēc tam sagatavo morfoloģiskai izmeklēšanai (Parker et al., 2015).

Audu paraugus nosūta uz laboratoriju histoloģiskai izmeklēšanai. Histoloģiskā izmeklējuma slēdzienu pēc biopsijas var saņemt aptuveni 14 dienas pēc biopsijas. Visbiežākais histoloģiski verificēta prostatas vēža veids ir adenokarcinoma.

Preparātu morfoloģiskā izmeklēšana. Morfoloģiskos izmeklējumus veica ārsts – patologs. Pēc preparāta 24 st. fiksācijas ar 10% formalīna buferšķīdumu. Fiksatora daudzums jāņem 20-100 reizes lielāks par fiksējamā materiāla gabala tilpumu. Ar punkcijas biopsiju no dažādām vietām iegūtie priekšdziedzera audu paraugi uz patoloģijas laboratoriju parasti tiek nosūtīti atsevišķās mēģenēs un jāapstrādā atsevišķās kasetēs (Iczkowski, Casella, & Seppala, 2002).

Pēc audu paraugu laboratoriskas apstrādes – papildu fiksācijas, dehidratācijas pieaugošā spirtu koncentrācijā, audu infiltrācijas ar parafīnu un materiāla ieguldīšanas parafīna kasetēs – izgatavoja histoloģiskos preparātus, kurus krāsoja ar hemotoksilīnu – eoziņu pēc vispārpieņemtas metodikas. Rezultātā šūnu kodoli nokrāsojas zili violetā krāsā, citoplazma – rozā krāsā. Ir noderīgi parasti montēt pārklājošos audu griezumus, ja papildus nepieciešama imūnhistoloģiska krāsošana.

Glīsona rādītājs (audzēja pakāpe). Histoloģiski izmeklējot preparātus, noteica audzēja histoloģisko veidu saskaņā ar *ISUP* (Starptautiskās Uroloģiskās Patoloģijas biedrības) prostatas vēža klasifikāciju pēc diagnostiskiem kritērijiem un malignitātes pakāpi pēc Glīsona. Katram perēklim individuāli tika noteikts minimālais un maksimālais Glīsona rādītājs.

Par katru biopsijas vietu jāziņo procentuālais to biopsijas audu paraugu daudzums, kuros ir karcinoma, un atbilstošā šūnu malignitātes pakāpe pēc *ISUP* 2005. gada Glīsona klasifikācijas (Epstein, Allsbrook, & Amin, 2005).

Pašreiz kā standarts CA ļaundabīguma pakāpes noteikšanai tiek izmantota Glīsona skala, kas izstrādāta 1967.gadā un atjaunināta 2014. Glīsona pakāpes tiek izmantotas, lai aprakstītu prostatas adenokarcinomas augšanas modeļus, un tie ir saistīti ar slimības smagumu. Saskaņā ar šo sistēmu prostatas vēzis tiek sadalīts piecās pakāpēs (*ISUP* pakāpes jeb klases), pamatojoties uz diferenciācijas dziedzera modeļiem. Tas svārstās no 1 (laba prognoze) līdz 5 (slikta prognoze). (Linkon, Labib, & Hasan, 2021).

Glīsona rādītājs ir viens no veidiem, kā noteikt prostatas vēža augšanas ātrumu, agresivitāti un smagumu. Palielinoties Glīsona skaitlim, šūnu diferenciācijas pakāpe samazinās. Prostatas vēzim ir raksturīga izteikti neviendabīga histoloģiskā uzbūve, un parasti tas satur šūnas ar dažādu malignizācijas pakāpi. Lai definētu kopējo malignitātes pakāpi, patologs nosaka un piešķir pirmo skaitli atbilstoši visizplatītākajām tumora malignajām šūnām, otro skaitli atbilstoši nākamajai pēc izplatības maligno šūnu grupai. Ja audzējs nav sadalāms vairākās daļās pēc izplatības pakāpes, tad otrs skaitlis tiek pielīdzināts un ir vienāds ar pirmo. Saskaitot minētos divus skaitļus, veidojas summa (*Gleason score*), kas raksturo tumora malignitātes pakāpi. Glīsona summa atrodas robežās no 2 līdz 10 (Pron G., 2015). Svarīga ir ne tikai summa, bet arī rādītāju secība. Summa Glīsona skalā dažādiem audzējiem var būt vienāda, taču to ļaundabīguma pakāpe būs atšķirīga, piemēram, $7=3+4$ un $7=4+3$. Otrais variants būs agresīvāks un bīstamāks. Pirmais cipars tiek uzskatīts par vissvarīgāko – tas norāda audzējā visbiežāk sastopamā šūnu tipa diferenciācijas pakāpi un ir galvenais slimības prognozes novērtēšanā. Otrā vērtība ir audzēja sastāvdaļa ar augstāko ļaundabīgo audzēju pakāpi, tā tiek iekļauta summā neatkarīgi no audzēja daudzuma.

Saskaņā ar *ISUP* novērtējumu (Grade klases noteikšana) Glīsona 3+3 vērtējums atbilst 1. Grade klasei; 3+4 ietilpst Grade 2.klasē; 4+3 Grade 3. klasē; 4+4, 3+5 un 5+3 Grade 4. klasē. Visbeidzot, 4+5, 5+4 un 5+5 ietilpst Grade 5.klasē (Ali Hasan et al., 2021).

No iegūtiem 5 gada perioda datiem, izveidota datu bāze, kur iekļauts datu iegūšanas gads, pacienta vecums, Glīsona rādītājs, Grade klase. Katram pacientam piešķirta diagnoze – LPH vai CA prostatas. Datus ierakstīja datorā programmas MS Excel tabulā, konvertēja firmas (ASV) PASW datorprogrammā SPSS Statistics 18.0 turpmākajai datu apstrādei. Statistiskai analīzei, datu salīdzināšanai izmanto vai neparametrisku statistisku testu *Mann-Whitney U* tests, kā arī dažu grupu salīdzinājumam izvēlēts *Kruskal Wallis* tests. Savstarpējo attiecību analīzei izmantots Pīrsona korelācijas aprēķins.

Rezultāti un diskusija

Results and Discussion

Darbā analizēti dati no pacientiem, kuri tika nosūtīti uz Daugavpils slimnīcu prostatas biopsijai, ar mērķi noteikt galīgo diagnozi un turpmāk izvēlēties ārstēšanas taktiku. Dati apkopoti par laika posmu no 2018. līdz 2022. gadam. Pacientu skaits un vecums, kas sadalīts pa izmeklējuma gadiem atspoguļo 1. tabula.

1.tabula. Pacientu skaits un vidējais pacientu vecums izmeklējuma periodā
(autoru veidots)

Table 1 Number of patients and their average age during the examination period
(created by the authors)

Gads	Pacientu skaits	Vidējais vecums ± SEM (gadi)	Minimālais vecums (gadi)	Maksimālais vecums (gadi)
2018	127	66,75±0,67	48	86
2019	128	67,95±0,72	49	88
2020	111	68,40±0,82	46	88
2021	100	70,44±0,86	50	88
2022	80	65,47±0,82	47	84

SEM – vidējo standartkļūda

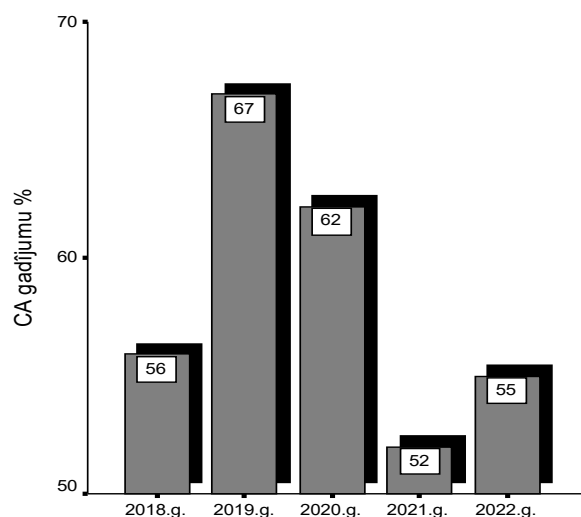
SEM – standart error of mean

Kopumā tika pārbaudīti 546 cilvēki, kuru vidējais vecums bija $67,8 \pm 0,35$ gadi. Pēģito gadu pacientu vecuma diapazons ir vienāds. Tas saistīts ar to, ka skrīningam tiek pakļauti pacienti vecumā no 45-50 gadiem.

Kā aprakstīts metodoloģijas sadaļā pēc veiktajām procedūrām, kas ietvēra asins PSA marķieru noteikšanu un biopsijas, ar paraugu (parasti no 8 līdz 10 audu paraugiem) histoloģiskai novērtēšanai, katrs pacients tika novērtēts pēc Glissona metodes. Turklāt Glissona rādītājs tika pārveidots par ISUP (Starptautiskās Uroloģiskās Patoloģijas biedrības) rādītāju (Grade vērtējums)

Šie dati tika iekļauti datu bāzē statistikas apstrādei. Pamatojoties uz histoloģisko atradi, visi pacienti tika iedalīti 2 grupās – LPH un prostatas vēzis (CA prostatas).

1. attēlā parādīts vēža gadījumu procentuālais sadalījums starp pārbaudītajiem pacientiem pa gadiem.



1.attēls. Prostatas ļaundabīgo izmaiņu gadījumu % laika periodā
no 2018. līdz 2022.g (autoru veidots)

Figure 1 The frequency of cases of malignant changes of the prostate in the period
from 2018 until 2022 (created by the authors)

Atšķirības gan konkrētajā gadā izmeklēto cilvēku skaitā, gan viņu vidējā vecumā, gan diagnosticēto vēža procentuālajā daļā ir skaidrojamas ar subjektīvu faktoru un objektīvu apstākļu kombināciju (piemēram, Covid-19 epidēmijas izraisītā pacientu izolācija, medicīniskās konsultācijas pieejamība, finansējuma iespējas valstī un reģionā utt.).

Prostatas vēža diagnozi pārliecinoši var noteikt, tikai pamatojoties uz biopsiju. Tomēr visus pacientus uz šo procedūru nosūtīt nav iespējams. Ārstam ir uzdevums, no vienas puses, savlaicīgi noteikt pareizu diagnozi, veicot prostatas audu histoloģisku analīzi, no otras puses, neveikt nepamatotas manipulācijas, kas var būt saistītas ar komplikācijām. Biopsijas sarežģījumi ir saskatāma (makro) hematūrija, hematospermija, asiņošana no taisnās zarnas, prostatīts, paaugstināta temperatūra > 38.5, urīna aizture (Middleton, Thompson, & Austenfeld, 1995).

Lēmums par nosūtīšanu uz biopsiju tiek pieņemts, ņemot vērā fizikālo, instrumentālo izmeklējumu rezultātus un PSA biomarkiera vērtību. Pēdējo vērtību interpretācija nav viennozīmīga. No vienas puses, audzēja attīstība vairumā gadījumu ir saistīta ar PSA vērtību palielināšanos virs pieņemtajiem atsaucē intervāliem. Pētījumā 2. tabulā parādīts LPH un vēža vidējas PSA vērtības.

2.tabula **PSA rādītāji grupās ar LPH un CA prostatas** (autoru veidots)

Table 2 **PSA values in patients with prostate hyperplasia and CA**

(created by the authors)

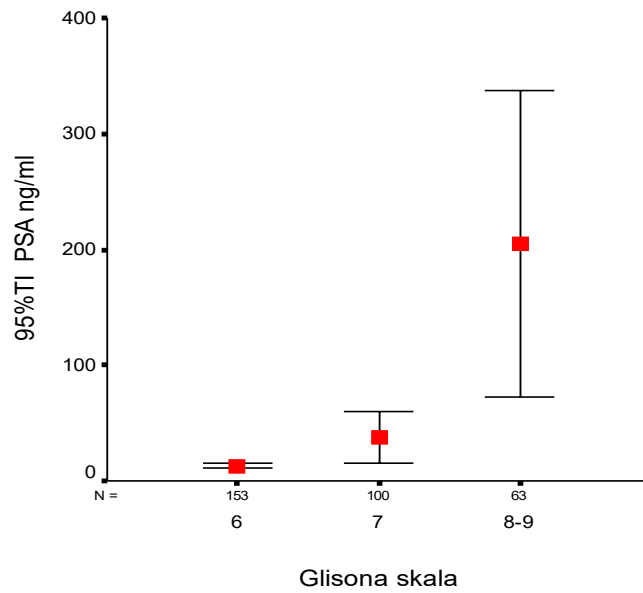
Pacientu grupa	Pacientu skaits	Vidējais PSA ± SEM (ng/ml)	Minimālais PSA (ng/ml)	Maksimālais PSA (ng/ml)
LPH	223	11,06±1,13	1	229
CA	320	61,04±14,26	0	3122

SEM – vidējo standartkļūda

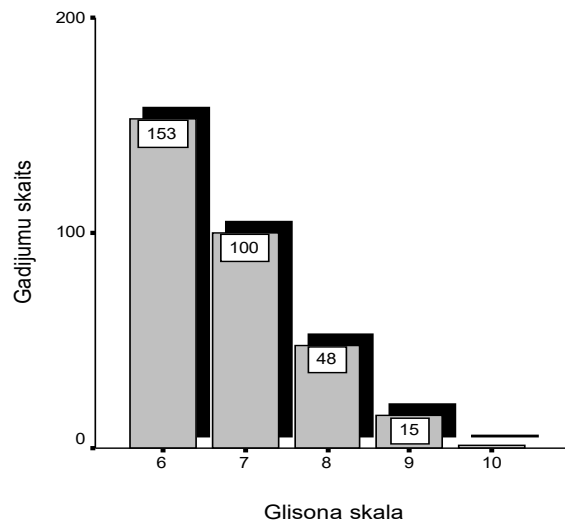
SEM – standart error of mean

Vidējais PSA līmenis ļaundabīga audzēja gadījumā ir 5,5 reizes augstāks nekā labdabīgas prostatas hiperplāzijas gadījumā. Salīdzinājums ar *Mann-Whitney U* testu parāda lielu PSA atšķirību starp abām grupām. Parametrs $z = -5,78$ ar $p < 0,0001$ nozīmīguma līmenī.

Turklāt, jo ļaundabīgāks veidojums, jo augstāks PSA līmenis. Statistiskai salīdzināšanai tika atlasītas trīs grupas pēc Glīsona rādītājiem, kuras pārstāvēja lielākais pacientu skaits. 2. attēlā parādītas vidējās PSA vērtības pacientu grupās ar audzēju rādītājiem 6, 7 un 8-9 pēc Glīsona. Atšķirību apstiprina statistiskā rādītāja $\chi^2 = 67,46$ aprēķins pēc *Kruskal-Wallis* metodes ar salīdzināšanas grupu atšķirības nozīmīgumu $p < 0,0001$.



2. attēls. Vidējās PSA vērtības pacientiem ar dažādiem Glīsona rādītājiem (autoru veidots)
Figure 2 Mean PSA values in patients with different Gleason scores (created by the authors)



3. attēls. Dažādu vēža pakāpju gadījumu skaita sadalījums (autoru veidots)
Figure 3 Distribution of the number of cases of different grades of cancer (created by the authors)

Ja izskatīt, kā pēc biežuma sadalās pacientu grupas ar dažādu ļaundabīgo procesu pakāpi, tad atklājas, ka biežāk sastopami pacienti ar mazāk ļaundabīgiem audzējiem, un, palielinoties ļaundabīgo audzēju pakāpei, to skaits samazinās. Tas parādīts 3. attēlā, kur x ass parāda ļaundabīgo audzēju pakāpes pēc Glīsona skalas.

Līdzīgi varam parādīt Grade klases sadalījumu. Parasti praktizējošie ārsti

izmanto šo kritēriju klīniskajam novērtējumam. 3. tabulā parādīts šī rādītāja biežuma sadalījums pētījuma izlasē.

3. tabula. **PSA rādītāji grupās ar LPH un CA prostatas (autoru veidots)**
Table 3 PSA values in patients with prostate hyperplasia and CA
(created by the authors)

Grade klase	Gadījumu skaits	Gadījumu % visā izlasē	% starp CA	Kumulatīvais %
1	151	27,7	47,9	47,9
2	62	11,4	19,7	67,6
3	40	7,3	12,7	80,3
4	49	9,0	15,6	95,9
5	13	2,4	4,1	100,0
Kopā	315	57,7	100,0	
Trūkstošas vērtības	231	42,3		
Pavisām kopā	546	100,0		

Darbā tika analizēta vecuma un pētīto rādītāju attiecība. Salīdzinājumam tika izmantota korelācijas analīze ar Pīrsona korelācijas koeficienta aprēķinu. Rezultāts ir parādīts 4. tabulā.

Redzams, ka gan Glīsona vērtējums, gan Grade klase pozitīvi un būtiski korelē ar pacientu vecumu, kas nozīmē, kā gados vecākiem pacientiem biežāk sastopamas ļaundabīgās prostatas vēža formas.

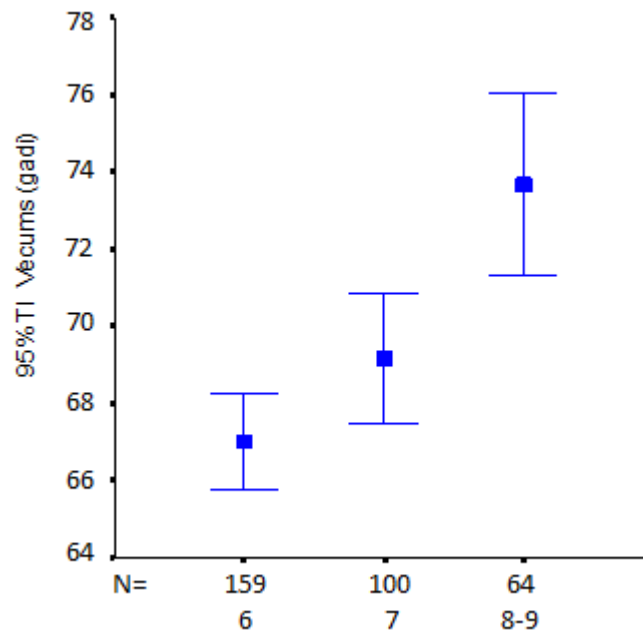
4. tabula. **Pīrsona korelācija starp vecumu un prostatas histoloģijas novērtējumu pēc Glīsona, kā arī Grade klases (autoru veidots)**
Table 4 Pearson Correlation between patients age and Gleason values and Grade values (created by the authors)

		Glīsona vērtējums	Grade klase
Vecums	<i>Pīrsona korelācija</i>	0,268(**)	0,290(**)
	<i>p-vērtība</i>	0,000	0,000
	N	318	315

** Korelācija būtiska 0.01 līmenī (abpusēji)

** Correlation is significant at the 0.01 level (2-tailed)

To demonstrē arī 4. attēls, kurā parādīts vidējais vecums pacientu grupās ar dažādiem Glīsona ļaundabīgo audzēju rādītājiem iepriekš minētajās salīdzinājumam atlasītajās grupās (6, 7 un 8-9 rādītājiem pēc Glīsona). Statistiskais salīdzinājums pēc *Kruskal-Wallis* metodes ar indeksa $\chi^2 = 24,504$ aprēķinu apstiprināja lielu atšķirību starp grupām pie p -vērtības $< 0,0001$.



4. attēls. Vidējais vecums pacientiem dažādās CA grupās pēc Glīsona vērtējuma (autoru veidots)

Figure 4 Average age of patients in different CA groups according to Gleason score (created by the authors)

Tādējādi gados vecākiem cilvēkiem pirmo reizi vēzis tiek atklāts ļaundabīgākā formā nekā jaunākiem. Šie dati atbilst literatūrā aprakstītajiem pētījumiem. Matt McMillen (2022) uzskata, ka pacientiem, kas vecāki par 70 gadiem, risks saslimt ar ļaundabīgāku formu ir 4 reizes lielāks un vēža gaita ir agresīvāka

Ārstam, lemjot par pacienta nosūtīšanu uz biopsiju, jānovērtē slimības simptomi, PSA dati, pacienta individuālie riski (blakusslimības, punkcijas komplikāciju risks, psiholoģiskais stāvoklis utt.). Kā zināms no prakses un apstiprināts arī šajā pētījumā gados vecākiem cilvēkiem prostatas vēzis var attīstīties uz labdabīgas hiperplāzijas fona, ko, savukārt, pavada PSA palielināšanās.

Šajā pētījumā 41,3% pacientu ar paaugstinātu PSA pēc audzēja histoloģiskās izmeklēšanas tika diagnosticēta LPH (Glīsona rādītājs zem 5). Savukārt 52,4% pacientu ar ļaundabīgām izmaiņām audu paraugos bija normālas PSA vērtības. Tas viss apgrūtina pacienta vadīšanas taktikas izvēli. Kā redzams, ļaundabīgākās formas rodas gados vecākiem pacientiem, kuriem biopsijas metožu izmantošana ir visproblemātiskākā.

Tiek analizēta pētāmās slimības diagnozes uzstādīšanas dinamika 5 gadu laikā. Šim nolūkam var piemērot tādu statistisko kritēriju kā Glīsona skalas rādītāju korelācija ar piecu gadu pētījuma secību, jo diagnostikas mērķis ir samazināt pirmreizēji diagnosticētu smagu vēža gadījumu skaitu. Pīrsona korelācijas koeficientu vērtības parādītas 5. tabulā. Abos aprēķinos bija nozīmīga

un negatīva korelācijas koeficientu vērtība ar $p < 0,01$. Tas nozīmē, ka laika posmā no 2018. līdz 2022. gadam Glīsona indeksa augstāko vērtību īpatsvars samazinājās, kas liecina par savlaicīgāku vēža diagnostiku.

5.tabula. Pīrsona korelācija starp Glīsona un Grade rādītājiem ar 5 gadu laika posmu (autoru veidots)

Table 5 Pearson correlation between Gleason scores and Grade scores and 5-year period (created by the authors)

Gads	Gads un Glīsona	Gads un Grade
ρ	-0,153(**)	-0,164(**)
p -vērtība	<0,006	<0,004
N	318	318

** Korelācija būtiskā $p < 0.01$ līmenī

** Correlation is significant at the 0.01 level

Darbā ir konstatētas grūtības, īpaši attiecībā uz pacientu vecuma kategoriju. Šīs problēmas risinājums būs jaunāko laboratoriskās diagnostikas metožu, piemēram, PCA3 marķieru noteikšanas plašāka ieviešana.

PCA3 gēna noteikšana pēcmasāžas urīnā ir viens no vismodernākajiem jaunākiem molekulārajiem prostatas vēža pārbaudēm. PCA3 ir nekodējoša RNS, kas raksturīga prostatai. Tests atklāj prostatas vēža biomarķieri (PCA3 gēnu) urīnā. Ja šis gēns ir "pārmērīgi izteikts" (tas ir konstatēta augsta gēna aktivitāte), tad ārsts pieņem augstu prostatas vēža risku. Tiek uzskatīts, ka ar augstu gpc3 gēna aktivitāti prostatas vēzis tiks diagnosticēts 80% gadījumu. Pētījuma metode ir polimerāzes ķēdes reakcija (PĶR). PCA3 references intervāls ir > 25. Mērvienības: mcg/l (mikrogrami litrā). Izpildes laiks: 12 dienas.

Jaunākie pētījumi rāda, ka kompjūtertomoģrafijas (CT) un magnētiskās rezonanses (MRI) iespējas ir ierobežotas un nepieciešams veikt pozitronu emisijas tomogrāfijas/kompjūtertomoģrafijas (PET/CT) izmeklējumu.

Secinājumi

Conclusions

- 1) Saskaņā ar pētījumu, kurā piedalījās 546 vīrieši ar vidējo vecumu $67,8 \pm 0,35$ gadi, 320 gadījumos tika diagnosticēts prostatas vēzis. Pārējiem tiek diagnosticēts LPH (labdabīga prostatas hipertrofija). Diagnozi apstiprināja prostatas biopsijas histoloģiska izmeklēšana.
- 2) Konstatēts, ka izmanto Glīsona rādītāju (vērtējums piecu punktu skalā) lai kvantitatīvi noteiktu audzēja ļaundabīguma pakāpi.
- 3) Pierādīts, ka, jo augstāks šis rādītājs (ļaundabīgāks audzējs), jo retāk tas pirmo reizi tika diagnosticēts.
- 4) Noteikts, ka ļaundabīgo audzēju pakāpe korelē ar vecumu - vidējais vecums pacientiem ar ļaundabīgo audzēju 6. pakāpē pēc Glīsona skalas bija zemāks nekā pacientiem ar 7. pakāpi, savukārt, vēl zemāks tas bija pacientiem ar 8-

9. pakāpi. To statistiski apstiprina *Kruskala-Volisa* metode starpības nozīmīguma līmenī $p < 0,0001$. Tas tiek parādīts kā statistiski nozīmīga pozitīva Glīsona punktu korelācija ar vecumu.
- 5) Noteikta vidējā PSA vērtība LPH grupā ir $11,06 \pm 1,13$ ng/ml, bet grupā ar CA $61,04 \pm 14,26$ ng/ml, kas ir 5,5 reizes lielāks (atšķirības nozīmīguma līmenis $p < 0,0001$).
 - 6) Konstatēts, ka Glīsona rādītājs un PSA vērtības pozitīvi un statistiski nozīmīgi ($p < 0,0001$) korelēja: jo augstāks ir Glīsona rādītājs, jo augstāka ir vidējā PSA vērtība.
 - 7) Noteikts, ka pieaugot pacienta vecumam, palielinās gan audzēja ļaundabīguma pakāpe, gan PSA rādītāji. Tāpēc gados vecākiem pacientiem, lai diagnosticētu patoloģiju, ir jāizmanto papildu izmeklēšanas metodes, kas ir ģenētiskā analīze ar PCF3 gēna noteikšanu urīnā un pozitronu emisijas datortomogrāfija (PET/CT).
 - 8) Novērtējot diagnostiska procesa dinamiku (5 gadu laikā), tiek izmantota Glīsona punktu korelācija un rezultātā tiek iegūtā negatīvā un būtiskā korelācija, kas liecina, ka smagākas vēža formas īpatsvars laika gaitā ir samazinājies un tā ir pozitīva tendence diagnostikā.

Kopsavilkums

Summary

In a study of 546 men with a mean age of 67.8 ± 0.35 years, 320 cases were diagnosed with prostate-cancer. The rest have BPH (benign prostatic hypertrophy). The diagnosis was confirmed by histological examination of the prostate biopsy. To quantify the degree of malignancy of the tumor, the Gleason score and its derivative Grade (score on a five-point scale) were used. It is shown that the higher this score was (the more malignant the tumor), the less often it was first diagnosed. On the other hand, it was shown that the degree of malignancy correlates with age - the average age of patients with a grade of malignancy of 6 on the Gleason scale was lower than in patients with a grade of 7, which, in turn, was lower than in patients with a grade of 8-9. This is statistically confirmed by the Kruskal-Wallis method at the level of significance of the difference $p < 0.0001$. It is shown as a statistically significant positive correlation of Gleason scores (as well as grade grades) with age. Pearson's correlation coefficient in the first case $r = +0.268$, in the second case $r = +0.290$ and $p < 0.001$. In these patients, PSA was determined too. Mean PSA values in the BPH group were 11.06 ± 1.13 ng/ml. And in the group with CA 61.04 ± 14.26 ng/ml, which is 5.5 times higher (significance level of difference $p < 0.0001$). Gleason score and PSA values positively and statistically significantly ($p < 0.0001$) correlated: the higher the Gleason score, the higher the mean PSA value. Thus, with an increase of the age of the patient, both the degree of malignancy of the tumor and PSA values increase. Therefore, in

older patients, in order not to miss the disease, it is necessary to use additional diagnostic methods, such as genetic analysis with the detection of PCF3 gene in urine, positron emission computed tomography (PET/CT). To assess the dynamics of the diagnostic process for 5 years, statistical criteria such as the correlation of Gleason scores with the five-year study sequence can be applied. The resulting negative and significant correlation indicates that the proportion of more severe forms of cancer has decreased over time, which is a positive trend in diagnosis.

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Literatūra **References**

- Aron, M., Rajeev, T., & Gupta, N. (2000). Antibiotic prophylaxis for transrectal needle biopsy of the prostate: a randomized controlled study. *BJ*, 85(6), 682-5, 10759665.
- Epstein, J., Allsbrook, W., Amin M. et al. (2005). The 2005 International Society of Urologic Pathology (ISUP) Consensus Conference on Gleason grading of Prostatic Carcinoma. *Am J Surg Pathol*, 29(9), 1228-42, 16096414.
- European Association of Urologists. (2022). Prostate cancer. Retrieved from: <https://uroweb.org/guideline/prostate-cancer>
- Hara, R., Jo, Y., Fujii, T., et al. (2008). Optimal approach for prostate cancer detection as initial biopsy: prospective randomized study comparing transperineal versus transrectal systematic 12-core biopsy. *Urology*, 71(2), 191-5, 18308081.
- Iczkowski, K., Casella, G., Seppala, R. et al. (2002). Needle core length in sextant biopsy influences prostate cancer detection rate. *Urology*, 59(5), 698-703, 11992843.
- Joel, A., Lantz, A. & Aly, M. (2022). Digital Rectal Examination in Stockholm3 Biomarker-based Prostate Cancer Screening, *European Urology Open Science*, 44, 69-75, S2666168322008771.
- Latvijas Slimību profilakses un kontroles centrs. (2017). Pirmreizēji reģistrēto gadījumu skaits ar ļaundabīga audzēja diagnozi 2010.-2017. gadā. Pieejams: <https://www.spkc.gov.lv/lv/search?q=prostata&page=1>
- Latvijas Slimību profilakses un kontroles centrs. (2020). Latvijas reģionu veselības profils 2010-2019. Pieejams: <https://www.spkc.gov.lv/lv/media/5071/download?attachment>
- Latvijas Slimību profilakses un kontroles centrs. (2020). Veselības aprūpes pakalpojumu onkoloģijas jomā uzlabošanas plāna 2017.–2020. gadam izpilde. Pieejams: <https://www.spkc.gov.lv/lv/veselibas-sistemas-darbibas-snieguma-novertejums>
- Lietotāja rokasgrāmata ADVIA Centaur® XPT Immunoassay System, Siemens, (REF. 10816701 Rev. A, 2014-09).
- Linkon, A. H. M., Labib, M. M., Hasan, T., & Hossain, M. (2021). Deep learning in prostate cancer diagnosis and Gleason grading in histopathology images: An extensive study. *Informatics in Medicine Unlocked*, 24, 100582.
- McMillen, M. (2022). Prostate Cancer in Older People. Retrieved from

Leice et al., 2023. Prostatas vēža diagnostikas dinamikas analīze reģionālajā slimnīcā laikā periodā no 2018. līdz 2022.gadam

- <https://www.webmd.com/prostate-cancer/prostate-cancer-late-in-life-diagnosis>.
- Middleton, R., Thompson, I., Austenfeld, M. et al. (1995). Prostate Cancer Clinical Guidelines Panel Summary report on the management of clinically localized prostate cancer. *The American Urological Association*, 154(6), 2144-8, 7500479.
- Moul, J. (2017). Comparison of DRE and PSA in the Detection of Prostate Cancer. *The Journal of Urology*. 197, 2, S208-S20, j.juro.2016.11.031.
- Parker, C., Gillessen, S., Heidenreich, A., & Horwich, A. (2015). Cancer of the prostate: ESMO Clinical Practice Guidelines for diagnosis, treatment and follow-up. *Annals of Oncology*, 26, v69-v77.
- Pron, G. (2015). Prostate-Specific Antigen (PSA)–Based Population Screening for Prostate Cancer: An Evidence-Based Analysis. *Ont Health Technol Assess Ser*, 5(10), 1–64, PMC4561549.
- Waldron, N., Chowdhury, S., & McCahill, C. (2023). Prostate cancer. *Medicine*, 48-52, j.mpmed.2022.10.013.

PERFORMANCE AND TRAINING PROGRAM CHARACTERISTICS IN ELITE JUNIOR FEMALE ROLLER SKIER FROM 2021 SEASON: A CASE REPORT

Marcis Jakovics

Latvian Academy of Sports Education, Latvia

Inese Pontaga

Latvian Academy of Sports Education, Latvia

Abstract. *The purpose was to evaluate the training program, body mass composition, aerobic performance laboratory and field test results, blood hormone concentration in elite junior female roller skier in successful competition season. Methods. Totally 206 training sessions (278 training hours) were analysed during six months (from April till September). Athlete weight and body fat changes were monitored, laboratory tests on a treadmill and field tests were performed and concentration of hormones in the blood was detected. Results. A polarised training intensity distribution was observed. The highest volume of training workloads (70 training hours per month) was achieved in the last month before start of World cup season, this change correlated with change in blood testosterone levels. Heart rate decreased by 7.51% at the anaerobic threshold load intensity and by 10.1% at lower intensity loads. Peak oxygen uptake (VO_{2max}) of 49 ml/kg/min was reached in laboratory test. Increase of lean body mass by 2.4 kg was observed. The progress in 3000m running race time was detected from 14:30 minutes in the beginning of April to 13:16 minutes in June. Conclusion. VO_{2max} in junior elite female roller skier is low in comparison with cross-country skiers, but the training workload intensity and volume are comparable with skiers. This research shows insight in top junior level female roller-skiers physiology and training, but specific values determining the success of this athlete are still to be determined if compared to traditional cross-country skier.*

Keywords: *aerobic power, heart rate, roller-skiing, training program, workload's intensity, and volume*

Introduction

Well-trained female cross-country skiers have high maximal oxygen uptake (VO_{2max}) values: more than 70 ml/kg/min (Ingjer, 1991; Sandbakk, 2012), roller skier's average values for both genders of the elite athletes VO_{2max} values varied from 61.5 to 65.9 ml/kg/min in dependence on laboratory or field test conditions (Starczewski et al., 2019). A skating style and high VO_{2max} values have not being reached during roller skiing competitions (Losnegard & Hallén, 2014). Due to short 200m sprints and mass start races included in the roller skiing World cup

ability of the athletes in production of high anaerobic power is crucial to achieve superior results (Sandbakk et al., 2011). There is a lack of information in scientific literature concerning the sport - specific physiological demands to the World cup female cross-country skiers and the factors that differentiate between competitors with different rankings (Sandbakk et al., 2011). Even less about female Junior roller-skiers.

There is sufficient evidence to argue that it is important to train aerobic endurance by fixturing low and high intensity workloads in the endurance athletes (Seiler & Kjerland, 2006). However, specific information about training programmes of adult or junior female roller skiers is not available in the literature.

Deeper understanding of the top-level roller skiers' performance requires analysis of training patterns and performance characteristics in such athletes.

The purpose of the study was to evaluate the training program, body mass composition, aerobic performance laboratory and field test results, hormonal concentration in the blood in elite junior female roller skier in successful competition season.

Methodology

Participant was a 19-year-old female. She was the season's overall World cup winner in junior roller skiing and bronze medallist in World championship in 2021. Written consent to participate in this study was obtained from the participant. The research was performed according to the declaration of Helsinki.

Design. The study consisted of two parts:

- 1) analysis of data from training sessions obtained from April to September - till end of the season.
- 2) Physiological, laboratory test and blood test analysis corresponding to the training regime.

Training monitoring. Totally, 206 training sessions (more than 278 training hours) were analysed which were performed during six months (from 1st of April till 30th of September 2021).

Heart rate was obtained from Polar Flow training database and exported for using in the study. Heart rate data of all training session were recorded on Polar M400 heart rate monitor using polar H10 chest strap (Polar, Kempele, Finland). Using a file, all heart rate data were divided in five load's intensity zones: zone 1 – heart rate (HR) was lower than 120 beats per minute (bpm), zone 2 – HR was from 120 to 140 bpm, zone 3 – HR was 140-160 bpm, Zone 4 - HR was 160-180 bpm and zone 5 – HR was higher than 180 bpm. These zones corresponded to the results obtained in a laboratory testing, where aerobic and anaerobic thresholds were determined.

Laboratory testing. Tests were performed in Latvian Olympic Team laboratory using a standardised testing protocol for Nordic walking with poles. A

treadmill used was H/p Cosmos Saturn 300 (HaB International Ltd., Southam, UK). A gas analysis was performed using Cortex Metalyzer 3B (Cortex Biophysik GmbH, Leipzig, Germany), heart rate was measured using Polar CS400 and H7 chest strap (Polar, Kempele, Finland).

Body weight and composition was measured using Tanita Multi Frequency Segmental Body Composition Analyzer MC-980U (Tanita, Korea).

Protocol. Warm-up: Nordic walking speed was 5.5 km/h, slope of the treadmill's surface was 2,5%, duration was 20 minutes. Test: started at Nordic walking speed 6.0 km/h and treadmill' slope 2.5, %; the slope increased by 0.5% each minute till the ninth minute, then Nordic walking speed also increased till reached 7.0 km/h at the slope of 17.8% at the end of the test.

Field tests. Regular control training sessions for 60m, 400m and 3000m races running were performed in Latvian Academy of Sports Education stadium in Riga, Brivibas 333.

Competition results. Individual results and overall World cup results were obtained from FIS data bases.

Blood analyses (hormones). Testosterone and cortisol concentration changes in venous blood samples were monitored regularly every month during all the period of observation.

Results

Training sessions. In this research 206 training sessions where analysed, from 1st of April till 30th of September 2021, which include 18 competitions. More than 278 training hours, the distribution of training hours in five training zones can be seen in Figure 1.

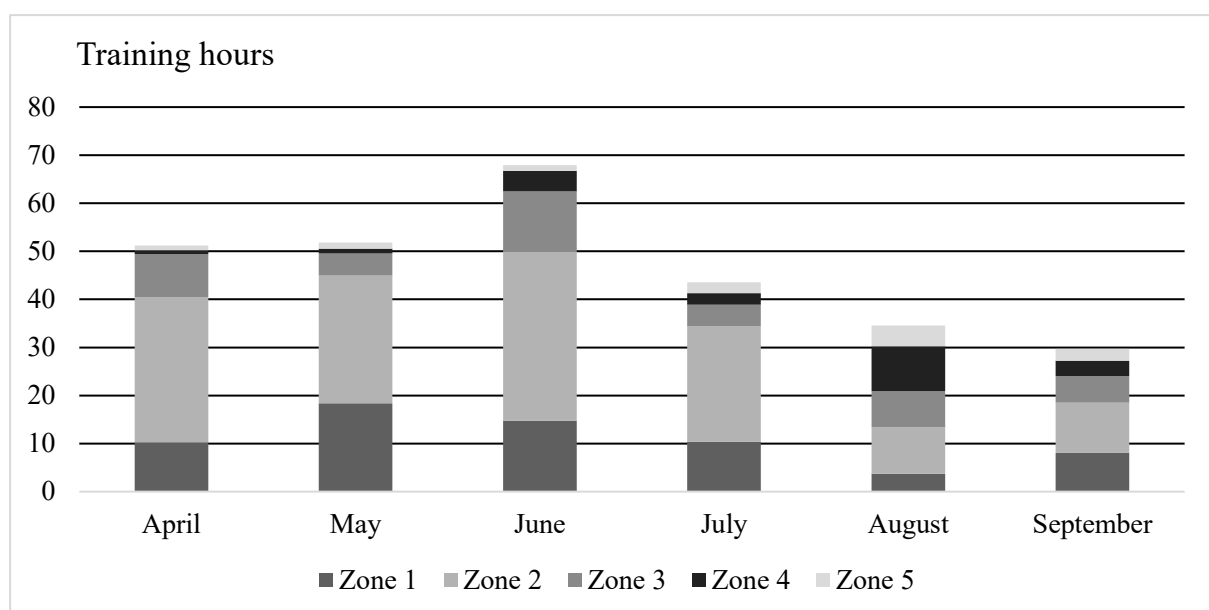


Figure 1 Distribution of training hours in five training zones in each month of the examined training period (created by the authors)

Total training volume was increasing in time from April, where it was 51 hours to June which had the highest volume of 67 training hours. In July, August, and September the training hours gradually decreased. These data corresponded with the start of World cup season on 23rd of July.

Success in competition. During the 2021 season the podium was reached six times in total in junior world cup (five times it was the second place and once - the third place) and one bronze medal was won in World championship. This result was sufficient to win the Overall World cup with 683 points, with the margin of 61 points. Most podiums (four) were reached in sprint competition, and one in World championship, other two where mass starts, none was reached in individual distance races.

Training cycles in different weeks from April to September. As a training process progressed, accumulative goals changed from week to week.

Workloads' intensity was lower and duration longer during training sessions in April, training sessions involved more resistance and sprint training exercises in May and June, starting from July training sessions included mostly interval training with growing duration of each session. Typical training week's plans in each of six months of April, May, June, July, August, and September were presented in Table 1 and Table 2.

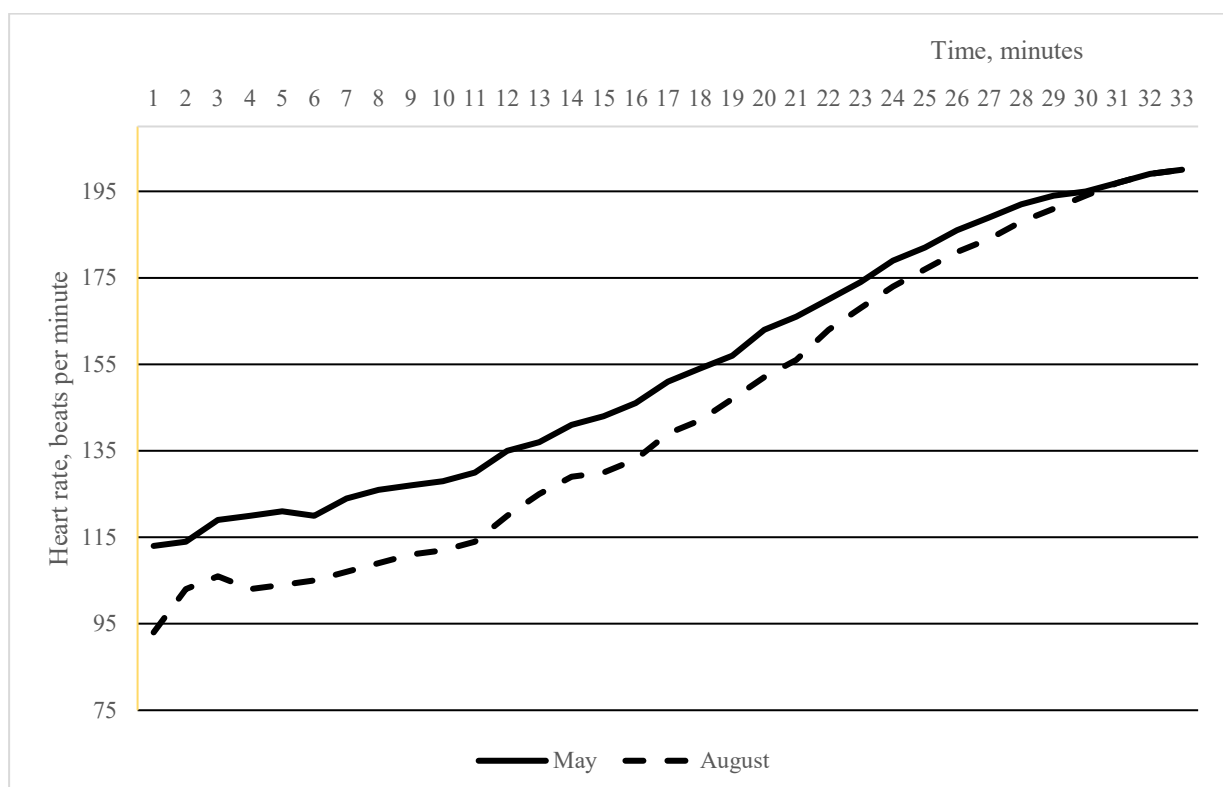


Figure 2 *The relationship between the workload's intensity in different minutes of the Nordic walking test on the treadmill and the heart rate in May and August (created by the authors)*

Laboratory testing. The athlete visited a sports laboratory and completed the Nordic walking stress test on a treadmill to an exhaustion twice: 1) in May when her body mass was 61.5 kg and body fat percent 18.6% and 2) in August when her body mass was 64.3 kg and body fat percent 18.3%. The relative peak oxygen uptake (relative VO_{2max}) was the same both times: 49 ml/kg/min. This means that her aerobic power increased because body mass was larger due to skeletal muscles' mass growth. This was proved by increase of the lean body mass for 2.4 kg from May to August.

Considerable changes were observed in a heart rate between both tests at the same workload up to anaerobic threshold load's intensity.

The heart rate during the laboratory test was lower in August in comparison with May: it decreased by 7.51% at the anaerobic threshold load intensity and even more in lower intensity loads – by 10.1%, Figure 2.

Table 1 Typical examples of workloads performed in each month during the period of three months (April, May, and June 2021) (created by the authors)

Day of the week	Training sessions 1.and 2.per day		
	April	May	June
Monday	2.30 min easy run	1. Control 60m, 400m, 3000m	1. Cycling 2h Z1-2 2.Gym strength exercises 2h
Tuesday	1.Running + walking easy intermittent 2h Z1-2 2.Roller skiing classic technique 1h 20min Z2-3	1.Cycling 1h 30min Z1-2 2.Gym strength exercises 2h	1.Roller skiing double poling 2h Z1-2 2.Roller skiing skating 4 sessions 5x15s
Wednesday	1.Cycling 1h 20 min Z1-2 2.Gym strength exercises 2h	1.Rollerskiing skate 1h 20min + 2 sessions 5x15s sprints	1. Intermittent running/walking 2h Z1-2 2.Gym strength exercises 2 h
Thursday	1.20 min warm up + 3 sessions 5x15s sprint running	1.Cycling 1h 30min Z1-2 2.Gym strength exercises 2h	1.4 sessions 5x15s sprints double poling 2.30 min recovery run
Friday	-	1.30 min light cycling	1.Gym strength exercises 2h 2. 2 sessions 5x15s sprints roller skis skate
Saturday	1.Control 60m, 400m, 3000m 2.Cycling 1h 30min Z1-2	1.Gym strength exercises 2h 2.4 sessions 5x15s sprints running	1.Training race roller skiing sprint C1
Sunday	1.Imitation running/walking 3h 30min Z1-2 2.Cycling 2 h Z1-2	1.Imitation 3h 30min Z1-2 2.Cycling 2h Z1-2	1.Training race roller skiing sprint F

Field control. As the part of the training process, some maximum 60m, 400m and 3000m running tests were performed in stadium during the pre-racing phase.

Clear progress in 3000m running race results was observed from 14:30 minutes in the beginning of April to 13:16 minutes in June. Using the relative peak oxygen uptake (relative VO_{2max}) calculator, the result was 42.6 ml/kg/min, which is close to the laboratory testing, considering that the laboratory test was done as Nordic walking. It is considered that the peak oxygen uptake was smaller during running than during roller skiing or Nordic walking tests due to using of arm muscles in roller skiing or Nordic walking. This gave additionally 5 - 10 ml/kg/min to the relative VO_{2max} .

Table 2 Typical examples of workloads performed in each month during the period of three months (July, August, and September 2021) (created by the authors)

Day of the week	Training sessions 1.and 2.per day		
	July	August	September
Monday	1.Control 60m, 400m, 3000m 2. Gym strength exercises 2 h	1. Laboratory testing 2.Roller skiing 2h Z1-2	1. Gym strength exercises 2 h
Tuesday	1.Roller skiing double poling 2h 30min Z1-2 2.Cycling 3h Z1	1.Gym strength exercises 2 h 2.4x4min Roller skiing skate intervals	1.Gym strength exercises 2 h 2.4 sessions 5x15s sprints roller skies skate
Wednesday	1.Gym strength exercises 2 h 2. 6 sessions 3x15s roller skiing skate	1.Gym strength exercises 2 h 2. 4x4min Roller skiing skate intervals	1.Gym strength exercises 2 h 2. 4x4min imitation jumping intervals
Thursday	1.Gym strength exercises 2 h 2.3 sessions 5x40 uphill cycling sprints	1.Gym strength exercises 2 h 2. 4x4min Roller skiing skate intervals	1.4x4min Roller skiing skate intervals 2. Gym strength exercises 1h 40min
Friday	1.30 min recovery run 2. 30 min recovery run	1.30 min recovery run 2. 30 min recovery run	-
Saturday	1.Gym strength exercises 2 h 2.5 sessions 5x15s imitation jumps	1. Roller skiing 2h Z1-2 2.Running 2h Z2-3	1.Gym strength exercises 1h 40min 2.5x4min imitation jumping intervals
Sunday	1.Roller skiing Classic technique 3h Z1-2 2.Cycling 2h Z1-2	1.Roller skiing control race 10km 2.Easy 30 min recovery	1.6x4min Roller skiing skate intervals 2. 4x8min imitation jumping intervals

Blood analyses (hormones). The testosterone concentration in the venous blood corresponded negatively to changes in training volume: the lowest testosterone concentration of 0.23 ng/mL was measured at the end of July, when

the highest volume of training workloads was achieved. Due to decrease of total training workloads' volume in competition season, the concentration of testosterone in the blood increased to 0.51 ng/mL at the end of roller skiing season at the last week of September. The concentration of cortisol in venous blood was 490 nmol/L in the beginning of April, it increased to 638 nmol/L in July, and dropped back to the initial concentration - to 472 nmol/L by at the end of September.

Discussion

Training sessions. Analysing of the distribution of high and low intensity training workloads, it was seen the dependence on the training period. This corresponds to findings of Seller & Kjerland (2006). Larger volume of low intensity workloads and smaller volume of higher intensity work – polarised distribution was performed in the pre-season training sessions (Seller & Kjerland, 2006). The amount of monthly training hours lowered as the competition season started. The highest volume of training workloads (more than 70 training hours per month) was achieved in the last month before starting of World cup season. During the competition season the training workloads' volume dropped to less than 30 hours in September.

Laboratory and field testing. Laboratory and field testing proved an aerobic performance improvement in the athlete during pre-season training period: the heart rate was lower for 7.5 – 10.0% in dependence of the intensity of Nordic walking on the treadmill in June in comparison with May, and 3000m running race time was smaller in June (13:16 minutes) than in April (14:30 minutes). So, these results confirmed aerobic capacity improvement during pre-season training program execution of the elite athlete which led to high achievements in the roller skiing competitions in the examined season. The importance of heart rate monitoring in establishment of the intensity of training workloads was confirmed by Starczewski et al. (2019) who determined that the anaerobic threshold heart rate values obtained in roller skiing tests performed using the classical or skating techniques interchangeably are useful to determine roller skiing training loads.

Hoff et al. (2002) proved that maximal strength training with emphasis on neural adaptations effectively enhanced muscle strength, particularly rate of force development, and improved also aerobic endurance performance by improved work economy in male cross-country skiers. We determined the lean body mass increase in our elite roller skier by 2.4 kg in the time from May to August (for four months). This gave an evidence that strength training played significant role in high results achievement in competitions in our athlete. Borge et al. (2017) determined that six weeks of upper body muscular strength endurance training increased not only muscular endurance and one repetition maximum (maximal strength) but also improved performance in double poling on a roller-skiing

treadmill. Therefore, upper body muscles strength training should be a promising training model to optimize performance in well-trained cross-country skiers. This should be useful in roller skiing performance improvement.

The important role of aerobic performance to achieve high results in roller ski skating was confirmed by Seeberg et al. (2021) who determined that the most significant performance-determining variables of simulated mass-start performance in males were VO_{2max} (correlation coefficient $r = 0.68$) and gross efficiency ($r = 0.70$), enabling lower relative intensity and less accumulation of fatigue before entering the final all-out sprint. We did not investigate gross efficiency of roller skiing in the present study.

Limitations of the study: training program, aerobic and performance characteristics were investigated in only one elite participant.

Further direction of the research: larger number of qualified roller skiers training programs and performance characteristics should be investigated.

Anaerobic performance characteristics and proper roller skiing technique of movements were especially important to achieve superior results in the roller skiing, especially in short distances of 200m. This is in good agreement with the data obtained by Talsnes et al. (2021) who proved that both laboratory performance indices and field-based performance tests provided valid predictions of cross-country skiing and roller-skiing performance in a heterogeneous group of male cross-country skiers, with test values obtained in running tending to be more strongly correlated with cross-country skiing performance than those found for technique-specific modalities on roller skis. However, more sophisticated, and sport-specific testing might be required. Sandbakk et al. (2013) determined that the better ranked elite male and female cross-country and roller skiers skied more efficiently (using less metabolic energy in comparison with lower-level athletes). Therefore, further research is necessary to evaluate anaerobic performance and sport-specific technique of movements in roller skiers.

Conclusion

The relative peak oxygen uptake of 49 ml/kg/min in junior elite female roller skier is low in comparison with the female endurance athletes trained in cross-country skiing (Sandbakk, 2016). Nevertheless, the training workloads intensity and volume are comparable with skiers (Myakinchenko, 2020). The lean body mass of the participant increased by 2.4 kg in the period of four months, this should be explained with growth of muscles mass, strength, and strength endurance. Overall, improvement of aerobic performance was determined during six months of the observations which proved the role of aerobic performance and muscle strength to achieve the high results in competitions of roller skiing. Current state of scientific literature shows clear predominance of cross-country skiing research over roller-skiing research and factors determining roller-skiing

results are a lot less clear comparing to cross-country skiing. This research shows insight in top junior level female roller-skiers physiology and training, but specific values determining the success of this athlete are still to be determined.

References

- Hoff, J., Gran, A., & Helgerud, J. (2002). Maximal strength training improves aerobic endurance performance. *Scandinavian Journal of Medicine & Science in Sport*, 12(5), 288-295. DOI: <https://doi.org/10.1034/j.1600-0838.2002.01140.x>
- Ingjer, F. (1991). Maximal oxygen uptake as a predictor of performance ability in women and men elite cross-country skiers. *Scandinavian Journal of Medicine & Science in Sports*, 1(1), 25-30.
- Losnegard, T., & Hallén, J. (2014). Elite cross-country skiers do not reach their running VO₂max during roller ski skating. *The Journal of Sports Medicine and Physical Fitness*, 54(4), 389–393.
- Myakinchenko, E. B., Kriuchkov, A. S., Adodin, N. V., & Feofilaktov, V. (2020). The Annual Periodization of Training Volumes of International-Level Cross-Country Skiers and Biathletes. *International Journal of Sports Physiology and Performance*, 15(8), 1181-1188.
- Sandbakk, Ø., Ettema, G. and Holmberg, H.-C. (2014), Contribution from poling on gender differences. *Scandinavian Journal of Medicine & Science in Sports*, 24, 28-33. DOI: <https://doi.org/10.1111/j.1600-0838.2012.01482.x>
- Sandbakk, Ø., Hegge, A. M., Ettema, G. (2013). The role of incline, performance level, and gender on the gross mechanical efficiency of roller ski skating. *Frontiers in Physiology*, 4, article 293. Retrieved from: <https://www.frontiersin.org/articles/10.3389/fphys.2013.00293/full>
- Sandbakk, Ø., Hegge, A. M., Losnegard, T., Skattebo, Ø., Tønnessen, E., & Holmberg, H. C. (2016). The Physiological Capacity of the World's Highest Ranked Female Cross-country Skiers. *Medicine & Science in Sports & Exercise*, 48(6), 1091–1100. DOI: <https://doi.org/10.1249/MSS.0000000000000862>
- Sandbakk, Ø., Holmberg, H. C., Leirdal, S., & Ettema, G. (2011). The physiology of world-class sprint skiers. *Scandinavian Journal of Medicine & Science in Sports*, 21(6), e9–e16. DOI: <https://doi.org/10.1111/j.1600-0838.2010.01117.x>
- Seeberg, T.M., Danielsen, J., Noordhof, D.A., Skovereng, K., Haugnes, P., Tjønnås, J., Sandbakk, Ø. (2021). Physiological and biomechanical determinants of sprint ability following variable intensity exercise when roller ski skating. *Frontiers in Physiology*, 12, article 638499. Retrieved from: <https://www.frontiersin.org/articles/10.3389/fphys.2021.638499/full>
- Seiler, K. S., & Kjerland, G. Ø. (2006). Quantifying training intensity distribution in elite endurance athletes: is there evidence for an "optimal" distribution? *Scandinavian Journal of Medicine & Science in Sports*, 16(1), 49–56. DOI: <https://doi.org/10.1111/j.1600-0838.2004.00418.x>
- Starzewski, M., Żmijewski P., Witek, K., Klusiewicz A. (2019). Physiological aspects of different roller skiing techniques in field conditions. *Journal of Human Kinetics*, 66, 111-120. Retrieved from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6458566/>
- Talsnes, R.K., Solli, G.S., Kocbach, J., Torvik, P. Ø., Sandbakk, Ø. (2021). Laboratory- and field-based performance predictions in cross-country skiing and roller-skiing. *Plos One*, 16(8), 17 p., e0256662. DOI: <https://doi.org/10.1371/journal.pone.0256662>

HORSE AND RIDER FACTORS OF PERFORMANCE IN SHOW - JUMPING DISCIPLINE

Svetlana Rudmieze

Latvian Academy of Sport Education, Latvia

Andra Fernate

Latvian Academy of Sport Education, Latvia

Abstract. Success in each sport is made up of certain factors. Therefore, it is necessary to be acutely aware of the factors and criteria that influence performance in a particular sport. Horse riding is a very unique sport as it is a sport where two different organisms cooperate in terms of mass, size, thinking, and physical, psychological, tactical abilities and skills, as well as characteristics. It is a sport where there is practically no age limit, and where women compete alongside men. Therefore, it is difficult to find literature where several authors come to an agreement. There are often several different opinions, including on the performance-enhancing factors in the equestrian show-jumping discipline. It is quite important to evaluate the possible factors and reach a consensus in order to crystallize a possible unified system. The aim of the research is to determine the factors contributing to the performance of the rider and the horse in the show jumping discipline in different age groups. Research methods: Scientific literature review and analysis. Main results and conclusions. By theoretically researching and analysing the literature, it should be concluded that there are no concrete factors contributing to the attributed performance in the specific age stages, which can basically create uncertainty as well as consensus of opinions in future studies due to the influence of the generalization of these factors. From the context of the studied materials, it should be concluded that there is an insufficient theoretical basis, which is evidenced by a relatively narrow spectrum of topical issues. Therefore, the obtained theoretical information allows to create a basis for further practical research, thus expanding the theoretical base in the context of the current issue.

Keywords: Equestrian sport, factors of performance, show-jumping discipline

Introduction

The International Equestrian Federation recognizes show-jumping as the most popular discipline among all other equestrian disciplines (FEI, 2017; Gorecka-Bruzda et al. 2013). Show-jumping is also recognized as the most popular among equestrian disciplines among athletes and spectators. In this discipline, men and women competed against each other in one category. National regulations are usually regulated by national institutions adapting them according to national requirements and needs, based on developed international regulations. (FEI from the French *Fédération Équestre Internationale*, 2017). It is recognized that there is a paucity of research that focuses on performance analysis (Williams,

2013; Murphy, 2009). Performance factors are essential in top level sport, but they are not very well known in equestrian sports. However it rapidly becomes apparent that physical, technical, tactical, mental, social factors and « luck » are all a part of the mix contributing to success (Galloux, 2018). The choice of training and competition strategy is influenced by various factors affecting horse and rider performance (Marlin & Williams, 2020). The research will help provide concreteness by creating answers to the questions that arose after evaluating and analysing the theoretical basis in a specific context. It will create a correlation of factors and a consensus in the expression of opinions of coaches and athletes, which will help to theoretically create a holistic system in a specific age group. The results of the existing study will serve as a basis for the research of future stages.

The aim of the research is to determine the factors contributing to the performance of the rider and the horse in the show jumping discipline in different age groups.

Research methods: literature review and analysis (scientific literature, international regulations of equestrian sport).

Research Methodology

The aim of the article is to provide an idea of possible specific factors that contribute to performance in the show-jumping discipline, by *theoretically* studying the scientific articles of various authors, which mention the factors contributing to the performance in the show-jumping discipline.

In the course of the research, the author analysed and collected information from 99 literature sources, including scientific literature, publications on the specific topic that can be found in scientific research databases (ScienceDirect, Google Scholar), also examined the international competitions of equestrian sports of a specific time period regulations and requirements. The literature selected for the analysis is mostly in the period from 2000 to 2022.

Research Results on Factors Influencing Equestrian Performance

At the turn of many years, equestrian sport is as it is seen today, considering the potential of horse and rider. Psychological and physiological aspects in many other sports are recognized among coaches, psychologists, athletes as the most important in the success of sports performance. Paradoxically, there is relatively little information about riders and equestrian sport in the literature, which indicates a certain theoretical underdevelopment. For example, in studies on motivation (Huitt, 2011; Weiner, 1974; Ryan & Deci, 2000), the coach-athlete relationship (Jowet & Poczwardowski, 2007) physical training and mental robustness (Wolframm, Shearman, & Micklewright. 2010; Von Borstel, 2007), self-efficacy (Bandura, 1977, 1982, 1997; Feltz, Short, Sullivan & Short, 2007)

are cited as dominant. Performance depends not only on human abilities and skills. It is also influenced by the skills of the horse as well as the quality of mutual integration between the two athletes (McGreevy, 2002; McGreevy, 2007). A sports result is a specific and integral product of the entire training system and the competitive activity of an athlete (Kuramshin, 2002; Dvejrina, 2003).

According to Fédération Equestre Internationale (2011) data, show-jumping riders and horses (26,692 and 30,870, respectively) currently outnumber participation levels even in the ubiquitous dressage (e.g., 6,425 dressage competitors and 3,633 dressage horses) (*Fédération Equestre Internationale*, 2011).

Equestrian sport are often compared to motor sports (Bompa & Haff, 2009), because driving a horse requires relatively complex motor movements (strength, balance, quick reaction times and endurance), their skills, as well as fast proprioceptive processing. Equestrian sport has a very fast, variable metabolism, but it is difficult to quantify it due to the physiological demands of both bodies (Douglas, 2015). Relatively little attention has been paid to real competition situations within the framework of physiological research. Until now, studies of this nature have a simulative nature (Douglas et al., 2012). In progressively increasing gaits, heart rate and oxygen consumption increase, indicating the aerobic nature of this sport. Good isometric muscle contraction, especially back and abdominal muscle contractions, is necessary to demonstrate good balance. (Douglas et al., 2012; Lovett et al., 2005; Terada et al., 2004). Jumping seat position (Roberts et al., 2009), increased metabolism and blood lactate levels are required, hence anaerobic demand (Guterrez Rincon et al., 1992; Roberts et al., 2009; Trowbridge et al., 1995). During jumping, the metabolism is increased, which is not simply riding around the field, so riders also need discipline-specific training (Douglas et al., 2012). Physical fitness affects a rider's balance and overall strength. Therefore, it is important to be aware of physical fitness and metabolic processes. A rider's poor fitness can affect strength, stability and balance (Douglas, 2015), which can interfere with overall performance, leading to injury to rider and the horse.

The effective interaction between the rider and the horse mostly affects the competition performance and the training process. The different thinking of the rider and the horse creates difficulties in their mutual cooperation (Pretty & Bridgeman, 2006; Wolframm & Micklewright, 2011). But at the same time athlete and horse are an interdependent union. The success of one depends on the success of the other. Thus, the preparation of a sports couple should include (*Specializirovannaja podgotovka loshadej i vsadnikov*, 2012):

- formation and improvement of physical capabilities and sports skills of an athlete;
- formation and improvement of physical capabilities and sports skills of the horse;

- improvement of mutual interaction between horse and rider (Shcherbinina, Levchenko, 2019).

During the course, the rider and the horse have to overcome a course of obstacles from different combinations of obstacles, with different types of obstacles, performing a course without penalty points or with a lower amount of penalty points within a certain time limit (Polackova, 2018). In high-class competitions, a show-jumping horse must overcome obstacles 1.60 m high and 2.00 - 2.20 m wide, a water ditch is overcome with a jump of about 4.50 and wider, which indicates that in order to achieve high performance the horse must also have excellent physical condition (FEI, 2017). Horses of this class must also have the appropriate temperament (Visser et al., 2003), their physical fitness helps to provide the physiological demands required in competition (Williams, 2015). In most sports, tactics are the decisive attribute in the performance of the result (Rein & Memmert, 2016), in show-jumping, riders must be able to manipulate speed and trajectories. Therefore, an effective strategy selection is necessary to be able to achieve optimal performance (Williams, 2013; Sampaio & Macas, 2012).

In show-jumping, the rider has to overcome about 14 obstacles, so the activity of the rider is oriented to the activity of balance and control. The jump phase is usually divided into 4 stages: approach, take-off, jump and landing (Clayton et al. 1989). During a jump, the horse must transfer its own weight and the rider's weight over the obstacle, so it is important to synchronize the movement of both bodies, it is a question of a correctly chosen angle during the jump, the speed of movement according to the height and the type of obstacles, all this affects the chain reaction of several components (Muslt, 1991). The level of preparation of the horse is also influenced by the duration of the training, so that the necessary parameters of overcoming the obstacle of the horse are in the best condition. Often these parameters are also decisive in choosing a show-jumping horse (Wejer, Lendo, & Lewczuk, 2013). Often, riders and trainers identify the types of obstacles and their location on the field as the main factors causing errors. (Duthie, Pyne, & Hooper, 2003). By slightly changing the placement of the obstacle, the height, width, type of obstacle, it is possible to achieve error-causing or, on the contrary, facilitating the overcoming of these obstacles, which in general affects the performance in the competition.

A change in tactics during the course can successively contribute to an increase in errors. Often falls from the horse or with the horse are directly related to the change of speed (Williams et al., 2013a, b; Pinchbeck et al., 2001). But speed is also not the most decisive factor causing errors, for example, exceeding the optimal allowed time norm, it is not said that the rider is making a mistake, he is simply riding slower than is determined within a certain course. Slower speed often indicate control problems (Marlin & Williams, 2020). The number of faults

at a particular obstacle depended on the obstacle-type, height, colour and arrangement (Stachurska, Pięta, & Nesteruk, 2002).

The most experienced riders are more oriented towards specific goals, taking into account the capabilities of the horse, the specifics of the discipline, the level of competition and the result to be achieved in them. The coach's input and self-reflection play a big role in this stage, which affects the riding process as a whole in the tandem of rider and horse. The performance of horses depends on the interaction of external and internal factors in a given time frame (Hughes & Bartlett, 2002; McGarry, 2009; Williams, 2013). The progress of both athletes is, on the one hand, individual, and on the other, combined, which tends to be long-term, although the development of the sports couple is evaluated in the short-term and long-term process (Parkin & Rossdale, 2006; Williams, 2013). Decision-making, the rider's riding ability, the horse's performance are mostly influenced by the rider's experience. Coordinated cooperation between the two athletes can create a positive partnership based primarily on the experience and individual characteristics of both. Riding is influenced by the rider's physical fitness, which affects both the horse's performance and the development of its physical abilities.

Psychological factors between rider and horse also change the type of effect. Therefore, it is important for the rider to be well prepared, both physically and psychologically (Williams & Tabor, 2017). There are relatively few studies on the influence of psychological factors on equestrian performance (Manteca & Deag, 1993). The tools of psychology can be used to organize useful intellectual resources, eliminate complexes, and also form goals. All this can radically improve riding skills (Morrison, 2005). The practical significance of the study lies in the development of methods to improve the efficiency of training athletes in equestrian sports. Often the decisive success factor is the psychological readiness of the athlete (Il'in, 2008). Psychological factors often include temperament, emotional response, and mood. These factors are interrelated, but at the same time also divided into separate levels (Goldsmith, 1994). Temperament is formed both by the existing genotype of the individual and also by his experiences in the early years (Manteca & Deag, 1993).

The show jumping discipline is specific in that it requires good technical skills as well as physical fitness (Kirch et al., 2022). The requirements that are in show-jumping are mostly based on the horse's technical skills, appropriate speed, strength, power endurance, therefore it can be said that the discipline is more complicated than, for example, the discipline of horse racing. Jumping horses must create explosive force at the moment of take-off according to the type, width, height of the obstacle. At the same time, they must have a good ability to recover because they have to jump several courses a day (FEI Jumping Rules, 2021).

It is noted that there is relatively little research on exercise assessment during competition (Art et al., 1990; Lekeux et al., 1991; Barrey & Valette, 1993; Bazzano et al., 2016). Therefore, there is a lack of scientific justification in the

process of driving and training a horse (Lönnell et al., 2014). Professional riders note that success is largely influenced by the horse's physical fitness and level of psychological state (Wipper, 2000).

In general, the result is influenced not only by the rider's physical skills, but also by technical, tactical and psychological skills, but the basis of everything is the mutual interaction between them (Polackova, 2018). The personalities of the two athletes and their relationship with each other influence the cumulative success (Hemsworth et al., 2015; Williams, 2013). The relationship between horse and rider has been shown to be the most important factor contributing to success, which also affects injury rates (Keeling, Blomberg, & Ladewig, 1999). With increasing level of the equestrian sport, demands on the effective rider-horse communication and cooperation become more challenging and demanding for a good motor control and a better differentiation between different types of aids (Wolframm & Micklewright, 2009). When riding at the highest level, the rider must be able to use the aids of control correctly to get the appropriate response from the horse back (Polackova, 2018).

To achieve a high sports result, it is important to take into account the individual differences of riders, adjust the training program for each individual athlete, and develop a training strategy. In addition, an important aspect is the psychological field in which the rider is located, and also ability of the coach to notice and take into account changes in his condition, not only physical, but also psychological (Goloveshkin, Krumpel', & Ereemeeva, 2018). An athlete must possess not only certain physical, but also personal and volitional qualities (Jeze, 1983). A symmetric position is traditionally regarded as highly important for good riding skills and postural efficiency in riders (Byström, 2019).

Another group of factor which may influence the results concerns the horse's age, experience, breed, size, the rider's experience, as well as all general conditions, such as the class of a competition, the weather and the arena surface, etc. All these effects are relevant to a whole round or a whole competition and not to the obstacles (Stachurska, Pięta, & Nesteruk, 2002). Horses taking part in competitions are exposed to different stressors: difficulty of the round, transportation (Schmidt et al., 2010; Fazio, Medica, Cravana, & Ferlazzo, 2008, 2013; Fazio, Medica, Aronica, Grasso, & Ferlazzo, 2008; Medica, Giacoppo, Fazio, Aveni, Pellizzotto, & Ferlazzo, 2010), veterinary examinations, and forced proximity to unknown conspecifics (McGreevy, McLean, Warren-Smith, Waran, & Goodwin, 2005; Hall, Huws, White, Taylor, Owen & McGreevy, 2013). Physical and psychological pressure deriving from these stressors (Fazio, Medica, Cravana & Ferlazzo, 2008; Fazio, Medica, Aronica, Grasso, & Ferlazzo, 2008) may have an impact on the performance and welfare of horse (Covalesky, Russoniello, & Malinowski, 1992; Cayado et al., 2006). As it was mentioned before, the emphasis is on physical and psychological condition to ensure optimal individual performance in any of the riding disciplines (McBride & Mills, 2012).

Professional riders acknowledge that these two factors are equally important and that without both, success is unlikely e.g (Wipper, 2000). The process of training a horse is unthinkable without psychological and physical commitment. During the training process, it is necessary to develop the cardiovascular, muscular and skeletal system. Also, it is often mentioned that psychological factors such as intelligence should be developed in the training process (Nicol, 2002) and motivation (Kilpatrick, 2003; Kim, Chang, & Gu, 2003).

As an individual, the rider must have such personality traits as discipline (conscious and disciplined approach), time management (effective), if the rider directly wants to achieve high results, Also, the rider must be aware of the goals, solve situations constructively (successful, unsuccessful), be able to work under pressure, be able to solve problems of various nature (Allen et al., 2014; Hardcastle et al., 2015; Wilson & Dishman, 2015). Athletes must be trained at the appropriate level according to the specific requirements of the sports discipline (Santamaría, Bobbert, Back, Barneveld, & van Weeren, 2005), for example, brain, physical lateralization with training may be ignored as corresponding behavioral tendencies (Stachurska, Pięta, & Nesteruk, 2002).

In a given environment and horse, the rider's balance and coordination, as well as reaction time to the appropriate stimuli, will be affected by the rider's physiological abilities, which can affect overall riding quality. Therefore, the rider must take care of his athletic and physiological preparation according to the requirements of the competition or the activities in which the rider plans to participate (Douglas, 2015). There is correspondingly little research on how fit a rider is for a particular sport, a particular deficit of data collection during competition, training or leisure (Douglas et al., 2012).

The physical impact of the rider on the horse creates additional complexity in equestrian sports. Realizing a good performance requires a good and correct seating position (Winfield, J., personal communication). Good riding skills creates process efficiency and improves overall performance, in addition to reducing injuries and falls. The rider must be able to move harmoniously following the horse's movements (Terada et al., 2004), movement is influenced by the movements of the horse's spine, which are different for each horse and this creates a certain challenge for the rider (Licka et al., 2004a, 2004b, 2009; Johnson & Moore-Colyer, 2009; Byström et al., 2009, 2010).

Notwithstanding the inherited genetic potential of these purpose bred equine athletes, actual performance in sport is also influenced by the use of different training techniques and equipment. As stated by Murphy and Arkins (2007) in their report, using a negative reinforcement strategy achieves the desired training response. Horsemanship also includes gradual preparation of the horse, based on giving correct signals, taking into account the physical and mental progress of the horse during the training process (McLean & McGreevy, 2010a).

The combination of horse and rider is one of the most difficult challenges in the whole process. Horses in nature respond to very subtle non-verbal communication signals that help them survive in the wild (McGreevy, 2004). This can explain the horse's ability to react very quickly and sharply to irritations, they react to the slightest changes in body position, muscle tension, to human heartbeat, breathing (Wolframm & Micklewright, 2009). In addition, the relationship between a horse and its rider has been shown to be the most important factor when determining the risk of injury whilst riding (Keeling, Blomberg, & Ladewig, 1999). Of course, there is a mutual relationship between the success of the performance and the state of human health, but the lack of research on psychological aspects in horse riding must be acknowledged again. Psychological factors exist at three inter-related but separate levels: temperament, mood and emotional reaction (Goldsmith; 1994). Precisely the understanding of the psychological dynamics between the two athletes is still poorly understood (Williams & Tabor, 2017).

As can be seen, the analysed literature shows many different factors and criteria that affect performance in equestrian sports. Many authors agree, but each gives their own priority.

Discussion and Conclusions

The results of the analysed literature determine that the most frequently mentioned factors that would influence a good performance in competitions are the following – physical, technical, tactical, mental, social factors (Galloux, 2018); physical, personal volitional qualities (Jeze, 1983); rider-horse interactions (Pretty & Bridgeman, 2006; Wolframm & Micklewright, 2011); rider-horse technical, tactical, physical, psychological skills, working partnership (Polackova, 2018); horse's age, experience, breed, size, the rider's experience, general conditions, class of a competition, weather, arena surface, etc. (Stachurska, Pieta, & Nesteruk, 2002); physical fitness, psychological state (Wipper, 2000); experience, rider fitness, psychological influences, and preparedness (Williams & Tabor, 2017); physical, technical, tactical, mental, social factors (Galloux, 2018).

Equestrian sport is complicated, because two different organisms participate, with their own abilities, characteristics, and to create one whole, while at the same time aiming for a result is far from easy. During competitions and training, there are many influencing factors that are related to each other - psychological, physical, tactical of the rider, the horse; obstacle types, colors, distances, placement, coverage and others.

In various literary sources (Hanin, 2000, 2003, 2007), human experience is described as an expression of dynamic functioning in the environment. It is formed by the interaction of environment and personality. Each person has his

own resources with which he manoeuvres in the specific environment (Hanin, 2007). In equestrian sports, everything depends on two living organisms that must interact with each other. Each of them has differences in anatomy, physiology, movements and accumulated experience. According to the Federation Equestre Internationale (FEI), harmonious interactions between two athletes must be maintained in order to reach their level of training. (Dressage rules 26th edition, 2019; Jumping Rules, 26th edition, 2019). There are several factors that affect performance, in show-jumping the most decisive are the horse's desire and the horse's ability to overcome a certain obstacle (Viklund, Thore'n Hellsten, Na'sholm, Strandberg, & Philipsson, 2008).

In general, it should be concluded that all the above-mentioned factors are related to each other and can be attributed to the promotion of performance. In the context of the theory, the division of some factors into separate categories and applicability to the specific age stage is rare. Most often, the contributing factors found in the theory review can be attributed to a specific level of preparation (beginner, intermediate, advanced), as we already understand, the relevant level of preparation is possible at any age, thus also emphasizing the presence of other factors - physiological, mental, etc. for the given age. Therefore, it must be concluded that the reviewed literature generally has a generalized review of factors, in rare cases factors are highlighted according to the level of preparation, but a specific division according to age stage is not found. The theoretical review focuses mainly on the psychological factor, the physical, tactical, technical, as well as the interaction between the rider and the horse. Therefore, we conclude that the existing factors are the basis for the classification of factors in general, but their priority for the specific age period remains the goal of further research. The reviewed and analysed theoretical overview allows to become the basis for further practical research and a theoretically justified addition to the existing theoretical base.

References

- Allen, M. S., Greenlees, I., & Jones, M. V. (2014). Personality, counterfactual thinking, and negative emotional reactivity. *Psychology of Sport and Exercise, 15*(2), 147-154.
- Art, T., Amory, H., Desmecht, D., & Lekeux, P. (1990). Effect of show jumping on heart rate, blood lactate and other plasma biochemical values. *Equine Veterinary Journal, 22*(S9), 78-82. DOI: 10.1111/j.2042-3306.1990.tb04740.x
- Bandura, A. (1977). Self-Efficacy: Toward A Unifying Theory of Behavioural Change', *Psychological Review, 84*(2), 191-215. DOI: <https://doi.org/10.1037/0033-295X.84.2.191>
- Bandura, A. (1982). The Assessment and Predictive Generality of Self-Percepts of Efficacy. *Journal of Behavior Therapy and Experimental Psychiatry, 13*, 195-199.
- Bandura, A. (1997). Self-Efficacy and Health Behaviour. In A. Baum, S. Newman, J. Wienman, R. West, & C. McManus (Eds.), *Cambridge Handbook of Psychology, Health and Medicine*, 160-162. Cambridge: Cambridge University Press.

- Barrey, E., & Valette, J. P. (1993). Exercise-related parameters of horses competing in show jumping events ranging from a regional to an international level. *Ann. Zootech*, 42, 89–98. DOI: 10.1051/animres: 19930110
- Bazzano, M., Giudice, E., Rizzo M., Congiu, F., Zumbo, A., Arfuso, F., et al. (2016). Application of a combined global positioning and heart rate monitoring system in jumper horses during an official competition - a preliminary study. *Acta Vet. Hung.* 64, 189–200. DOI: 10.1556/004.2016.019
- Bompa, T., & Haff, G. (2009). *Periodization: Theory and Methodology of Training*, 5th ed. Human Kinetics, Illinois.
- Byström, A. (2019). *The movement pattern of horse and rider in different degrees of collection. Acta Universitatis Agriculturae Sueciae*, (32).
- Byström, A., Rhodin, M., Peinen, K. V., Weishaupt, M. A., & Roepstorff, L. (2009). Basic kinematics of the saddle and rider in high-level dressage horses trotting on a treadmill. *Equine Vet. J.* 41(3), 280–284.
- Byström, A., Rhodin, M., Von Peinen, K., Weishaupt, M.A., & Roepstorff, L. (2010). Kinematics of saddle and rider in high-level dressage horses performing collected walk on a treadmill. *Equine Vet. J.* 42(4), 340–345.
- Cayado, P., Muñoz-Escassi, B., Domínguez, C., Manley, W., Olabarri, B., Muela, M.S., et al. (2006) Hormone response to training and competition in athletic horses. *Equine Vet J Suppl.* 36, 274–8.
- Clayton, H.M. and et al. (1989). The Effect of fence height and width on the limb placements of show jumping horses. *Equine veterinary science*, 9(4), 179-185.
- Covalesky, M.E., Russoniello, C.R., Malinowski, K. (1992). Effects of show-jumping performance stress on Plasma-cortisol and Lactate concentrations and heart-rate and behavior in horses. *J Equine Vet Sci.* 12, 244–51.
- Douglas, J.-L. (2015). Chapter 4: Rider performance. In: Williams, J. M., Evans, D. (Eds.), *Training for Equestrian Performance*. Wageningen Press, Netherlands, pp. 60–85.
- Douglas, J.-L., Price, M., Peters, D. M. (2012). A systematic review of physiological fitness and biomechanical performance in equestrian athletes. *Comp. Exerc. Physiol.* 8(3), 53–62.
- Dressage Rules 25th edition, effective 1st January 2014*. Including updates effective 1st January 2019. Retrieved from: https://inside.fei.org/system/files/FEI_Dressage_Rules_2019_Clean_Version_6.9.19.pdf
- Duthie, G., Pyne, D., & Hooper S. (2003). The reliability of video-based time motion analysis. *Journal of Human Movement Studies* 44, 259-271.
- Dvejrina, O. A. (2003). *Teorija sporta: konspekty lekcij, voprosy dlja samoproverki i zadanija po UIRS: uchebno-metodicheskoe posobie* / O. A. Dvejrina; Sankt-Peterburgskaja gosudarstvennaja akademija fizicheskoj kul'tury im. P. F. Lesgafta. – Sankt-Peterburg : [b. i.], 119 s.
- Fazio, E., Medica, P., Aronica, V., Grasso, L., & Ferlazzo, A. (2008). Circulating β -endorphin, adrenocorticotrophic hormone and cortisol levels of stallions before and after short road transport: stress effect of different distances. *Acta Veterinaria Scandinavica*, 50(1), 1-7.
- Fazio, E., Medica, P., Cravana, C., & Ferlazzo, A. (2013). Cortisol response to road transport stress in calm and nervous stallions. *Journal of Veterinary Behavior*, 8(4), 231-237.
- Fazio, E., Medica, P., Cravana, C., Ferlazzo. (2008). A. Effects of competition experience and transportation on the adrenocortical and thyroid responses of horses. *Vet Rec.* 163, 713–6.
- Fédération Equestre Internationale. (2017). *FEI Jumping Rules - 26th edition, effective 1 January 2018*. Switzerland: Fédération Equestre Internationale.

- Fédération Equestre Internationale. (n.d.). Retrieved from: <http://www.fei.org/>
- FEI Jumping Rules. (2021). Retrieved from: <http://inside.fei.org>
- Feltz, D., Short, S., Sullivan, P., & Short, R. A. (2007). *Self - Efficacy in Sport*. Leeds: Human Kinetics Publishers.
- Galloux, P., Bessat, G., Mull, Ph. Translated from french by: Karen DUFFY - 16.01.2018. Retrieved from: <https://equipedia.ifce.fr/en/equipedia-the-universe-of-the-horse-ifce/riding/olympic-disciplines/training-and-training-schedules/factors-of-performance-technique#auteurs>
- Goldsmith, H. H. (1994). Parsing the emotional domain from a developmental perspective. *The nature of emotion: Fundamental questions*, 68-73.
- Goloveshkin, I. D., Krumpel', I. V., & Eremeeva, Ju.V. (2018). *Psichologicheskie faktory uspešnosti sportivnoj dejatel'nosti v konnom sporte. Psichologija XXI veka: psichologija kak nauka, iskusstvo i prizvanie*. Sbornik nauchnyh trudov uchastnikov mezhdunarodnoj nauchnoj konferencii molodyh uchenyh: v 2-h tt.— t. 2— SPb.: Izd-vo VVM. 587 s.
- Górecka-Bruzda, A., Jastrzębska, E., Muszyńska, A., Jędrzejewska, E., Jaworski, Z., Jezierski, T., & Murphy, J. (2013). To jump or not to jump? Strategies employed by leisure and sport horses. *Journal of Veterinary Behavior*, 8(4), 253-260.
- Hall, C., Huws, N., White, C., Taylor, E., Owen, H., & McGreevy, P. (2013). Assessment of ridden horse behavior. *Journal of Veterinary Behavior*, 8(2), 62-73.
- Hanin, Y. L. (2000). *Emotions in sport*. Champaign, IL: Human Kinetics.
- Hanin, Y. L. (2003). Performance related emotional states in sport: A qualitative analysis. In *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 4 (1).
- Hanin, Y. L. (2007). *Emotions in sport: Current issues and perspectives*. In G. Tenenbaum & R. C. Eklund. Retrieved from: <https://doi.org/10.1002/9781118270011.ch2>
- Hardcastle, S. J., Tye, M., Glassey, R., & Hagger, M. S. (2015). Exploring the perceived effectiveness of a life skills development program for high-performance athletes. *Psychology of Sport and Exercise*, 16, 139-149.
- Hemsworth, L. M., Jongman, E., & Coleman, G. J. (2015). Recreational horse welfare: the relationships between recreational horse owner attributes and recreational horse welfare. *Appl. Anim. Behav. Sci.* 165, 1–6.
- Hughes, M. D., & Bartlett, R. M. (2002). The use of performance indicators in performance analysis. *Journal of sports sciences*, 20(10), 739-754.
- Huitt, W. (2011). *Motivation to learn: An overview*. Educational Psychology Interactive. Valdosta, GA: Valdosta State University. Retrieved from: www.edpsycinteractive.org/topics/motivation/motivate.html
- Il'in, E. P. (2008). *Psichologija sporta*. — SPb.: Piter. 352 s, (c. 5).
- Jeze, Je. (1983). *Konnyj sport (posobie dlja trenerov, prepodavatelej, konevodov i sportsmenov)*. Fizkul'tura i sport. 256 s, (c. 37).
- Johnson, J. L., & Moore-Colyer, M. (2009). The relationship between range of motion of lumbosacral flexion-extension and canter velocity of horses on a treadmill. *Equine Vet. J.* 41(3), 301–303.
- Jowett, S., & Poczwardowski, A. (2007). *Understanding the Coach-Athlete Relationship Jumping Rules 26th edition, effective 1 January 2018* Updates effective 1 January 2019, Retrieved from: https://inside.fei.org/system/files/Jump_Rules_26thEd_2019_clean_correx_Art-261.4.4.pdf
- Keeling, L. J. (1999). Horse-riding accidents: when the human-animal relationship goes wrong!. In *The 33rd International Congress of the International Society for Applied Ethology*, Lillehammer, Norway, 1999.

- Kilpatrick, M., Hebert, E., & Bartholomew, J. (2003). Motivation for physical activity: differentiating motives for sport and exercise participation. *Journal of Sport & Exercise Psychology*, 25, S80-S81.
- Kim, M.S., Chang, D.S., & Gu, H. (2003). Difference in skill levels and gender in achievement goals, perceptions of motivational atmosphere, and motivation in sport. *J Sport Exerc Psychol*. 25, S81–S81.
- Kirsch, K., Fercher, C., Horstmann, S., von Reitzenstein, C., Augustin, J., & Lagershausen H. (2022) *Monitoring Performance in Show Jumping Horses: Validity of Non-specific and Discipline-specific Field Exercise Tests for a Practicable Assessment of Aerobic Performance*. *Front. Physiol.* 12:818381. DOI: 10.3389/fphys.2021.818381
- Kuramshin, Ju. F. (2002). *Akmeologija sportivnyh dostizhenij (teorija i prikladnye aspekty)*. Dissertacija doktora ped. nauk. Sankt Peterburg.
- Lekeux, P., Art, T., Linden, A., Desmecht, D., & Amory, H. (1991). “Heart rate, hemtaological and serum biochemical responses to show jumping,” in *Equine Exercise Physiology 3*, eds S. G. B. Persson, A. Lindholm, and L. B. Jeffcott (ICEEP Publications), 385–390.
- Licka, T., Frey, A., & Peham, C. (2004a). Electromyographic activity of the longissimus dorsi muscles in horses when walking on a treadmill. *Vet. J.* 180(1), 71–76.
- Licka, T., Frey, A., & Peham, C. (2009). Electromyographic activity of the longissimus dorsi muscles in horses when walking on a treadmill. *Vet. J.* 180(1), 71–76.
- Licka, T. F., Peham, C., & Frey, A. (2004b). Electromyographic activity of the longissimus dorsi muscles in horses during trotting on a treadmill. *Am. J. Vet. Res.* 65(2), 155–158.
- Lönnell, A. C., Bröjer, J., Nostell, K., Hernlund, E., Roepstorff, L., Tranquille, C. A., et al. (2014). Variation in training regimens in professional showjumping yards. *Equine Vet. J.* 46, 233–238. DOI: 10.1111/evj.12126.
- Lovett, T., Hodson-Tole, E., & Nankervis, K. (2005). *A preliminary investigation of rider position during walk, trot and canter*. *Equin Comp. Exerc. Physiol.* 2(2), 71–76.
- Manteca, X., & Deag, J. M. (1993). Individual differences in temperament of domestic animals: a review of methodology. *Animal Welfare*, 2(3), 247-268.
- Marlin, D., & Williams, J. (2020). *Faults in International Show-jumping are not random*. *Comparative Exercise Physiology*, 16(3), 235-241. DOI: <https://doi.org/10.3920/CEP190069>
- McBride, S. D., & Mills, D. S. (2012). Psychological factors affecting equine performance. *BMC veterinary research*, 8(1), 1-11.
- McGarry, T. (2009). Applied and theoretical perspectives of performance analysis in sport: Scientific issues and challenges. *International Journal of Performance Analysis in Sport*, 9(1), 128-140.
- McGreevy, P. (2004). *Equine Behavior: A Guide for Veterinarians and Equine Scientist*. Edinburg, UK: Saunders.
- McGreevy, P. D. (2002). *Development and Resolution of Behavioural Problems in The Ridden Horse*. Havemeyer Workshop on Horse Behaviour and Welfare, Holar, Iceland, 13, 110–115.
- McGreevy, P. D. (2007). The Advent of Equitation Science. *The Veterinary Journal* 174(3), 492-500. DOI: <https://doi.org/10.1016/j.tvjl.2006.09.008>
- McGreevy, P. D., McLean, A. N., Warren-Smith, A. K., Waran, N., & Goodwin, D. (2005). *Defining the terms and processes associated with equitation*. In: *Proceedings of the 1st International Equitation science Symposium, 26–27 July 2005, Sydney University Press, Melbourne, Australia*, pp. 10–43.

- McLean, A. N., & McGreevy, P. D. (2010). Horse-training techniques that may defy the principles of learning theory and compromise welfare. *Journal of Veterinary Behavior*, 5(4), 187-195.
- Medica, P., Giacoppo, E., Fazio, E., Aveni, F., Pellizzotto, R., & Ferlazzo, A. (2010). Cortisol and haematochemical variables of horses during a two day trekking event: effects of preliminary transport. *Equine Veterinary Journal*, 42, 167-170.
- Morrison, L. (2005). *Verhovaja ezda: prostye shagi k uspehu* / Per. A.V. Bankrashkova. M: Astrel'. 140 s., (c. 4).
- Msult, S. H., (1991). *Biomechanics*. Baghdad: Dar al-Hikma Press Printing and Publishing.
- Murphy, J. (2009). Weighted boots influence performance in show-jumping horses. *The Veterinary Journal*, 181(1), 74-76.
- Murphy, J., & Arkins, S. (2007). Equine learning behaviour. *Behavioural processes*, 76(1), 1–13. DOI: <https://doi.org/10.1016/j.beproc.2006.06.009>
- Nicol, C. J. (2002). Equine learning: progress and suggestions for future research. *Applied Animal Behaviour Science*, 78(2-4), 193-208.
- Parkin, T. D. H., & Rosedale, P. D. (2006). Epidemiology of equine performance wastage: importance of analysing facts and implementing their message in management. *Equine Vet. J.* 38(2), 98–100.
- Pinchbeck, G. L., Clegg, P. D., Proudman, C. J., Morgan, K. L., Wood, J. L. N., & French, N. P. (2002). Risk factors and sources of variation in horse falls in steeplechase racing in the UK. *Preventive Veterinary Medicine*, 55(3), 179-192.
- Polackova, A. (2018). *Competitive Performance Experiences of Show Jumping Riders, Rider-horse Interaction, and Temporal Dynamics of Riders' Psychobiosocial States*. Master's Thesis in Sport and Exercise Psychology. Faculty of Sport and Health Sciences. University of Jyväskylä. 65 p.
- Portocarrero Sarmiento, R., & Costa, V. (2019). Confirmatory Factor Analysis--A Case study. *arXiv e-prints*, arXiv-1905.
- Pretty, G., & Bridgeman, D. (2006). *Of Two Minds: Consulting with the Horse-and-Rider team in Dressage, Showjumping and Polo*. In J. Dosil (Ed.), *The Sport Psychologist's Handbook: A Guide to Sport-Specific Performance Enhancement* (pp. 568-585). John Wiley & Sons, Ltd.
- Rein, R., & Memmert, D. (2016). Big data and tactical analysis in elite soccer: future challenges and opportunities for sports science. *SpringerPlus*, 5(1), 1-13.
- Rincón, J. G., Turco, J. V., Martínez, I. M., & Vaqué, I. C. (1992). A comparative study of the metabolic effort expended by horse riders during a jumping competition. *British Journal of Sports Medicine*, 26(1), 33-35.
- Roberts, M., Shearman, J., & Marlin, D. (2009). A comparison of the metabolic cost of the three phases of the one-day event in female collegiate riders. *Comparative Exercise Physiology*, 6(3), 129-135.
- Ryan, R. M., Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, 55(1), 68.
- Sampaio, J., & Maças, V. (2012). Measuring tactical behaviour in football. *International journal of sports medicine*, 33(05), 395-401.
- Santamaría, S., Bobbert, M. F., Back, W., Barneveld, A. B., & van Weeren, P. R. (2005). Effect of early training on the jumping technique of horses. *American journal of veterinary research*, 66(3), 418-424.
- Schmidt, A., Aurich, J., Möstl, E., Müller, J., & Aurich, C. (2010). Changes in cortisol release and heart rate and heart rate variability during the initial training of 3-year-old sport

- horses. *Hormones and behavior*, 58(4), 628–636. DOI: <https://doi.org/10.1016/j.yhbeh.2010.06.011>
- Shcherbinina, Yu. V., & Levchenko A. V. (2019) *Features of the training process of the candidates in master of sport in show-jumping*. *Specializirovannaja podgotovka loshadej i vsadnikov: perevod s nemeckogo rukovodstva po konnomu sportu* (2012). / FKSR. – M.
- Stachurska, A., Pięta, M., & Nesteruk, E. (2002). Which obstacles are most problematic for jumping horses. *Applied Animal Behaviour Science*, 77, 197-207. DOI: [https://doi.org/10.1016/S0168-1591\(02\)00042-4](https://doi.org/10.1016/S0168-1591(02)00042-4)
- Terada, K., Mullineaux, Lanovaz, J.L., Kato, K., & Clayton, H.M. (2004). Electromyographic analysis of the rider's muscles at trot. *Equine and Comparative Exercise Physiology*, 1, 193-198.
- Trowbridge, E.A., Cotterill, J.C., Crofts, C.E. (1995). The physiological demands of riding in national hunt races. *Eur. J. Appl. Physiol.* 70, 66–69.
- Viklund, A., Thorén Hellsten, E., Näsholm, A., Strandberg, E., & Philipsson, J. (2008). Genetic parameters for traits evaluated at field tests of 3- and 4-year-old Swedish Warmblood horses. *Animal: an international journal of animal bioscience*, 2(12), 1832–1841. DOI: <https://doi.org/10.1017/S1751731108003030>
- Visser, E. K., Van Reenen, C. G., Engel, B., Schilder, M. B. H., Barneveld, A., & Blokhuis, H. J. (2003). The association between performance in show jumping and personality traits earlier in life. *Applied Animal Behaviour Science* 82, 279-295.
- Von Borstel, U. (2007). *Fear In Horses And How It Is Affected By The Rider, Training, and Genetics*. Faculty of Graduate Studies, University of Guelph, Guelph, 136.
- Weiner, B. (1974). *Achievement Motivation and Attribution Theory*. Morristown, N.J.: General Learning Press.
- Wejer, J., Lendo, I., & Lewczuk, D. The Effect of Training on the Jumping Parameters of Inexperienced Warmblood Horses in Free Jumping. *Journal of Equine Veterinary Science*. 2013; 33. DOI: <https://doi.org/10.1016/j.jevs.2012.07.009>.
- Williams, J. (2013). Performance analysis in equestrian sport. *Comparative Exercise Physiology*, 9(2), 339. 67-77.
- Williams, J. M., Marlin, D. M., Parkin, T. D. M., Langley, N. & Randle, H. (2013). The Grand National: a review of factors associated with non-completion and horse-falls, 1990-2012. *Comparative Exercise Physiology*, 9, 131-146.
- Williams, J., & Tabor, G. (2017). Rider impacts on equitation. *Applied Animal Behaviour Science*, 190(May), 28-42. DOI: <https://doi.org/10.1016/j.applanim.2017.02.019>
- Williams, J. M. (2015). *Defining performance and measuring success*. In: Williams, J.M. and Evans, D. (eds.) *Training for equestrian performance*. Wageningen Academic Publishers, Wageningen, the Netherlands, pp. 25-35.
- Wilson, K. E., & Dishman, R. K. (2015). Personality and physical activity: A systematic review and meta-analysis. *Personality and individual differences*, 72, 230-242.
- Wipper, A. (2000). The partnership: The horse-rider relationship in eventing. *Symbolic interaction*, 23(1), 47-70.
- Wolframm, I. A., & Micklewright, D. (2010). Effects of trait anxiety and direction of pre-competitive arousal on performance in the equestrian disciplines of dressage, showjumping and eventing. *Comparative Exercise Physiology*, 7(4), 185-191.
- Wolframm, I. A., Shearman, J., & Micklewright, D. (2010). A preliminary investigation into pre-competitive mood states of advanced and novice equestrian dressage riders. *Journal of Applied Sport Psychology*, 22(3), 333-342. DOI: <https://doi.org/10.1080/10413200.2010.485544>

COMPARISON OF COMPETITIVE ACTIVITY INDICATORS AT 100 M DISTANCES OF LATVIAN AND EUROPEAN SWIMMERS

Germans Jakubovskis

Latvian Academy of Sport Education, Latvia

Jelena Solovjova

Latvian Academy of Sport Education, Latvia

Anna Zusa

Latvian Academy of Sport Education, Latvia

Abstract. *The research aimed to study the performance characteristics of male and female finalists at a 100m distance when swimming at the Latvian swimming championships in a period from 2018 to 2020 (in the 50m pool). 262 final heats got analyzed. The results of the 3 best Latvian swimmers, males=36, and females-36, at each 100m distance (freestyle, breaststroke, backstroke, and butterfly) at championships in 2018, 2019, and 2020 have been analysed. The parameters for overcoming competitive distance: competitive result in the 100-meter distance; the start reaction time; time for the 15 meters mark; speed to the 15 meters mark; the time of the turn 5 meters up to the wall and 15 meters after the turn; underwater distance and time after the start and after turning; time of “clear” swimming. The obtained results were compared to the characteristics of overcoming the same competitive distance by the finalists of the European Championship 2016. As a result of comparative analysis, statistically, significant differences were found in such parameters of competitive activity as the overall result, overcoming of starting and turning parts, and the distance covered under water after the turn and start. Statistically significant differences were not found in the reaction time to the start signal and in the speed of “clear” swimming. The comparative analysis of the performance characteristics of the European Championships finalists showed possibilities for further improvements of Latvian swimmers. The aim: is to determine the performance parameters of the Latvian best swimmers and compare them with the same parameters of the finalists of the European Championship 2016.*

Keywords: *competitive analysis 100m, sport swimming, underwater part in swimming,*

Introduction

Competition analysis is to provide the coach and swimmer with a clear and concise summary of each event in a swimming meet. The analysis is designed to identify where, why, and how some swimmers perform better than others. The primary reason that coaches of elite swimmers use competition analysis is to

develop, and then progressively refine, a competition model for a swimmer. This can be done most successfully using the information provided from the competition analysis at important meets where a swimmer is providing an effort of 100%. Competition analysis is also used to identify relative weaknesses in a swimmer's performance, so that any competitive weaknesses may be eradicated. Swimming performance is highly dependent on the underwater phase, which begins with the start and turn, consisting of gliding and kicking during the first 15 m of the distance (Arellano, Brown, Cappaert & Nelson, 1994; Veiga & Roig 2017; Cossor & Mason, 2001; Smith, et al. 2002).

It is accepted to distinguish the following parameters of the distance of the competition: reaction to the start signal, then jump from the start in elevated swimming in breaststroke, breaststroke, and the butterfly or start from water swimming on the back. After taking off the feet from the starting elevation, the flight phase begins, which ends when the athlete touches the water's surface. After full body submersion, the underwater part says the water. According to international rules, underwater wave-like movements of the legs are allowed in the first 15 meters after the start, except for breaststroke swimming, where athletes use the "long stroke". After the athlete appears on the surface of the water, the segment of "clean swimming" is said, when the swimmer performs cyclic movements with the arm and legs according to the selected type of swimming, if the underwater part is used perfectly, the distance in the segment of "clean swimming" is 30 meters (50 meters in the pool). Turn - five meters to the wall of the pool, turn and 15 meters after pushing off from the wall of the pool, where the use of underwater movements of the legs is allowed. After the athlete appears on the surface of the water, says the second segment of "pure swimming", the frequency of movements and the length of the stroke depend on the type of swimming and the individual characteristics of the swimmer. The last five meters of the distance is considered the finish segment (Kennedy et al., 1990; Arellano et al., 1994; Cossor & Mason, 2001; Blanksby et al., 2001; Smith et al., 2002). When swimming in a 25-meter pool, both the number of turns and the segments of "clean" swimming increase to three.

The aim of the research is to determine the performance parameters of the Latvian best swimmers in 100m distance, swimming freestyle, backstroke, breaststroke, and butterfly and compare them with the same parameters of the finalists of the European Championship 2016.

The organization and methods of the research

The best three swimmers from every final heat of 100m distance are both male and female (36 men and 36 women) swimming every swimming stroke

(butterfly, backstroke, breaststroke, freestyle). The data was collected from the Latvian open swimming championships 94th-2018, 95th-2019, and 95 th-2020.

The results were collected for 3 years, from June 2018 until March 2020 in the Latvian open swimming championships. Latvian 94th open swimming championships were held on the 19th-21st of June 2018. Latvian 95th open swimming championship was held on the 1st-3rd of March 2019. The Latvian 96th open swimming championship was held from the 28th of February – the 1st of March 2020. The final heats of the Latvian championship were recorded by the stationary camera “PANASONIC 4K” (f=60fps).

Analyzing the results of the Latvian open swimming championships for a period of three years (starting from 94th- 2018 and to 96th- 2020) 262 final heats got analyzed (72 heats from the 94th Latvian championships, 83 heats – from the 95th Latvian championships, 107 heats – from the 96th Latvian championships) for both males and females. For further processing and analysis, 100m heats were selected (24 heats from the 94th Latvian championships, 24 heats from the 95th Latvian championships, and 24 heats from the 96th Latvian championships) for both males and females. Those included: the start and turn sections. The best 3 results of Latvian swimmers from every final heat were selected for the additional analysis.

The selected parameters of competitive performance are accepted in sports swimming as the components of competitive distance (Craig & Pendergast, 1979; Tourny-Chollet, Chollet, Hogie, & Papadopoulos, 2002; Hubert, Silveira, Freitas, Pereira, & Roesler, 2006; Ruschel, Araujo, Pereira, & Roesler, 2007; Veiga & Roig, 2017).

The following parameters were applied to each finalist:

1. 100-m performance (competitive result in the 100-meter distance in seconds).
2. The reaction time (time lag between the start signal and the moment a swimmer's feet leave the starting block).
3. Time is taken to the 15 meters mark (from the start signal till the moment when a swimmer's head crosses the 15 meters mark).
4. Speed to the 15 meters mark (from the start signal till the moment when a swimmer's head crosses the 15 meters mark).
5. The time of the turn (Total turning time, 5 meters up to the wall and 15 meters after the turn).
6. Underwater distance (distance swimmer spends underwater after start and pushing back from the wall after turning)
7. Underwater time after the start and the turn (time swimmer spends underwater after start and pushing back from the wall after turning)
8. Time of “clear” swimming (time a swimmer spends on the water surface while swimming.)

The special program “Videoanalyzer 50p fp” processed all the collected video materials. All the data received were compared to the European elite swimmers’ performance results from the European swimming championships that were held in London in 2016, (Morais, Marinho, Arellano, & Barbosa, 2018).

Results of the research

The parameters of swimmers during Latvian open swimming championships, 94th-2018, 95th-2019, 96th-2020 are presented in Table 1. When swimming 100 m distance, both genders were faster in freestyle, followed by butterfly, backstroke, and breaststroke. The largest difference in results was found between freestyle and breaststroke in both male and female heats (male: $\Delta=11.44s$, female: $\Delta=16.54s$). The smallest difference in results was found in between butterfly and backstroke heats, for both genders (male: $\Delta=0.67s$, female: $\Delta=2.33s$). The fastest times for the first 15 meters were recorded for men in freestyle (6.8 ± 0.04 s) and for women in freestyle (6.96 ± 0.06 s). The slowest times were recorded in the breaststroke in both male and female heats. (Male: 7.14 ± 0.04 s, female: 8.44 ± 0.11 s). The highest swimming speed m/s for the first 15 meters was in men’s freestyle (2.38 ± 0.2 m/s) and women’s freestyle (2.17 ± 0.04 m/s).

Table 1 The performance parameters of the best Latvian swimmers on 100m distances (created by the authors)

Latvia		Males n=36				Females n=36			
		free	Back stroke	Breast stroke	fly	free	Back stroke	Breast stroke	fly
100 m (s)	\bar{x}	52.62± 0.3	57.32± 1.47	64.06± 0.32	57.99± 2.04	57.2± 0.72	62.47± 1.10	73.74± 1.45	64.8± 7.6
Start									
Reaction time (s)	\bar{x}	0.65± 0.01	0.65± 0.06	0.67± 0.02	0.71± 0.01	0.69± 0.01	0.71 ±0.01	0.7± 0.01	0.72± 0.03
15-m time (s)	\bar{x}	6.28± 0.04	7.11± 0.21	7.14± 0.04	6.56± 0.29	6.96± 0.06	7.94± 0.23	8.44± 0.11	7.88± 0.16
15-m speed (m/s)	\bar{x}	1.88± 0.02	1.73± 0.06	1.56± 0.01	1.73± 0.06	1.75± 0.02	1.6± 0.02	1.35± 0.03	1.45± 0.04
Turn									
Total turn (s)	\bar{x}	10.72± 0.09	11.46± 0.59	12.94± 0.12	11.59± 0.12	11.58± 0.01	12.2± 0.25	14.98± 0.2	14.22± 0.33
Start + Turn time (s)	\bar{x}	17.02± 0.15	18.57± 0.8	20.07± 0.16	18.51± 0.69	18.54± 0.07	20.14± 0.48	23.38± 0.02	22.13± 0.47
Underwater start and turn (m)	\bar{x}	15.91± 1.16	18.56± 1.08	21.5± 1.01	18.58± 1.18	13.67± 0.61	21.16± 0.86	16.44± 0.41	17.86± 1.96
Clean swim speed (m/s)	\bar{x}	1.81± 0.03	1.67± 0.04	1.48± 0.01	1.67± 0.03	1.69± 0.03	1.54± 0.01	1.32± 0.04	1.41± 0.03

The slowest swimming speed for men was in backstroke ($2.07 \pm 0.1 \text{ m/s}$) and for women in breaststroke ($1.80 \pm 0.1 \text{ m/s}$). Regarding the distance a swimmer spends underwater, the highest result was recorded in women's backstroke ($12.83 \pm 1.04 \text{ m}$) and men's breaststroke ($12.44 \pm 1.35 \text{ m}$), the shortest distance was recorded in freestyle for both men ($9.72 \pm 1.18 \text{ m}$) and women ($9.06 \pm 0.82 \text{ m}$). When making a turn (5 meters up to the wall and 15 meters after pushing back from it) the highest speed was for men and women in freestyle (men: $10.72 \pm 0.09 \text{ s}$, women $11.58 \pm 0.01 \text{ s}$).

Combining the first 15 meters and the turning time the best results were shown by the freestyle representatives (men: $18.48 \pm 0.12 \text{ s}$; women: $18.48 \pm 0.12 \text{ s}$). The athletes spent ~30% of the distance time at the start and turn part combined, this applies to all four swimming strokes. The research results prove that the start and the turn sections greatly influence the overall results. Distance after the turn: the best results were achieved by men in breaststroke at $9.06 \pm 0.34 \text{ m}$ and by women in the backstroke at $8.33 \pm 0.76 \text{ m}$. The shortest were in freestyle for men ($6.19 \pm 1.3 \text{ m}$) and women $4.61 \pm 0.35 \text{ m}$.

Swimming speeds of the different parts of the distance

Interesting data was collected while making the comparing analysis of swimming speeds. The highest swimming speed was reached at the first 15 meters after the start – 2.14 m/s , the average turning speed was 1.71 m/s , and the “clean” swimming speed turned out to be the slowest at 1.64 m/s (Figure 1).

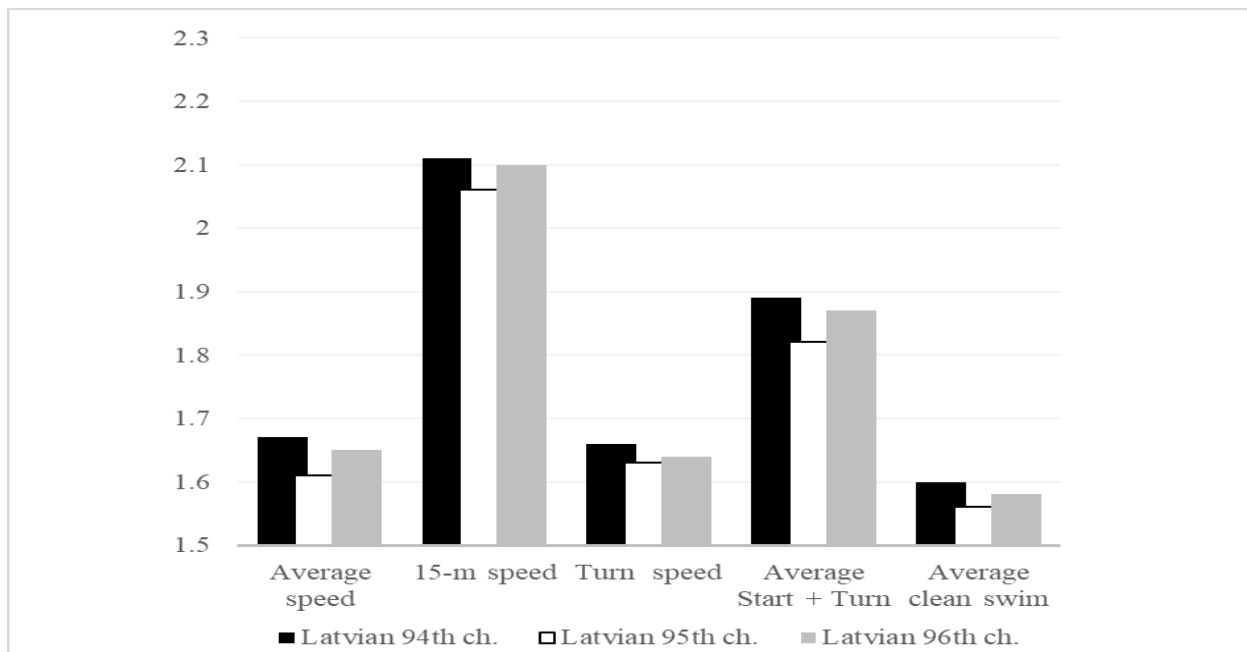


Figure 1 The speed in distance parameters of the Latvian championships, (average results from 2018-94th, 2019-95th, and 2020- 96th Latvian championships) (created by the authors)

Comparison of competitive activity indicators

To compare the parameters of the swimmers of the Latvian national team with the European elite swimmers' results, the performance parameters of the finalists of the 100m heats of the European Championship 2016 were studied (Table 2). The heats of all 64 (32 males and 32 females) finalists of 100m distance at the LEN European Championship 2016, (long course), were analyzed; 8 finalists in every swimming stroke: freestyle, backstroke, breaststroke, butterfly, men, and women. The organizers of the championships provided all the competition.

Records in high-quality (HD) video ($f = 50$ Hz). The system delivered real-time records from multiple angles. A set of 10 „pan-tilt-zoom” cameras tracked the swimmers. One camera was covering one lane (ass v5915, Lund, Sweden). Each swimmer during the heat was followed by a camera. Two fixed cameras (AXIS q1635, Lund, Sweden) recorded both ends of the pool, giving the opportunity to analyze the start and the turn.

European Champ.		Males n=32				Females n=32			
		Free style	Back stroke	Breast stroke	fly	Free style	Back stroke	Breast stroke	fly
100 m time (s)	\bar{x}	48.55 ±0.22	54.20 ±0.24	60.33±0.96	51.84±0.64	54.40±1.19	60.04±0.92	67.43±0.71	57.70±1.15
Start									
Reaction time (s)	\bar{x}	0.70±0.03	0.63±0.03	0.69±0.06	0.69±0.03	0.72±0.05	0.63±0.04	0.69±0.06	0.70±0.04
15-m time (s)	\bar{x}	5.82±0.13	6.38±0.11	6.78±0.26	5.71±0.14	6.68±0.28	7.39±0.26	7.81±0.26	6.75±0.25
15-m speed (m/s)	\bar{x}	2.58±0.06	2.35±0.04	2.21±0.08	2.48±0.06	2.25±0.09	2.03±0.07	1.92±0.07	2.22±0.08
Turn									
Total turn (s)	\bar{x}	9.55±0.13	10.43 ±0.16	12.04±0.23	10.53±0.31	10.78±0.28	11.47±0.23	13.51±0.25	11.71±0.20
Start + Turn time (s)	\bar{x}	15.40 ±0.20	16.81 ±0.23	18.82±0.39	17.16±1.27	17.45±0.54	18.85±0.44	21.33±0.49	18.46±0.41
Under water start+turn (m)	\bar{x}	19,19 ±1.56	23.36 ±1.18	22.76±0.68	23.32±1.57	17.35±1.8	23.46±1.69	19.59±1.15	20.00±1.06
Clean swim									
speed (m/s)	\bar{x}	1.96±0.02	1.67±0.02	1.56±0.04	1.87±0.04	1.76±0.04	1.57±0.03	1.47±0.03	1.65±0.05

Table 2 Descriptive statistics about the 100m distances of finalists at the European Swimming Championships 2016 (created by the authors)

Both gender representatives were faster in freestyle than in butterfly, backstroke, and breaststroke. The largest difference between freestyle and breaststroke was found for both male and female swimmers (male: $d = 11.71$ s, female: $d = 13.02$ s). The smallest difference in results was found for both gender swimmers in between backstroke and butterfly (male $d=2.35$ s, female $d=2.15$ s).

The fastest times for the first 15 meters were recorded for men in the butterfly (5.71 ± 0.14 s) and in Freestyle for women (6.68 ± 0.28 s). The slowest times for the first 15 meters were recorded in breaststroke for both genders (males:

6.78 ± 0.25 s, females: 7.81 ± 0.27 s). The highest swimming speed was m/s for the first 15 meters in men`s butterflies (2.63 ± 0.7 m/s) and in women's freestyle (2.25 ± 0.09 m/s). The slowest swimming speed for both genders was in the breaststroke (males: 2.21 ± 0.8 m/s, females: 1.92 ± 0.07 m/s).

According to the distance spent underwater, the longest result was recorded for men in the breaststroke (13.02 ± 0.99 m) and for women in backstroke (12.86 ± 1.22 m). The shortest distance was in freestyle for both genders (males: 11.43 ± 1.17 m, females: 10.74 ± 1.05 m).

During the turn (5 meters up to the wall and 15 meters after pushing off it) the highest speeds are recorded for men and women in freestyle (males: 9.56 ± 0.13 s, females: 10.78 ± 0.28 s).

Combining the first 15 meters and the turning time, the freestyle representatives showed the best results (males: 15.41 ± 0.21 s, females: 17.46 ± 0.54 s). The athletes spent 30% of the distance time at the start and turn part combined, this applies to all four swimming strokes. The research results prove that the start and the turn sections greatly influence the overall results.

Distance after the turn: the best results were shown by men and women in backstroke (males: 11.02 ± 1.29 m, females: 10.62 ± 2.02 m). The shortest distance was in freestyle, male swimmers: 7.77 ± 1.85 m, female swimmers: 6.62 ± 0.76 m).

Comparative analysis

Recent research (Veiga & Roig 2017), on an effective swimming technique, indicates that more and more athletes are trying to lengthen (within the rules of competitions) the underwater part. The study of indicators of competitive activity at a distance of 100 m is presented in figures 3 and 4.

The distance that swimmers spent underwater after the start, the longest results were recorded for the European elites' swimmers: men in breaststroke – 13.02 ± 1.01 m and women in backstroke – 12.85 ± 1.24 m. The shortest distance was both for men and women in freestyle (males: 10.74 ± 1.07 m, females: 11.43 ± 1.20 m). After the turn, the best results were for men's and women's backstroke (males: 11.02 ± 1.31 m, females: 10.61 ± 2.05 m). The results in freestyle for both genders: males at 7.76 ± 1.88 m, and females at 6.61 ± 0.77 m).

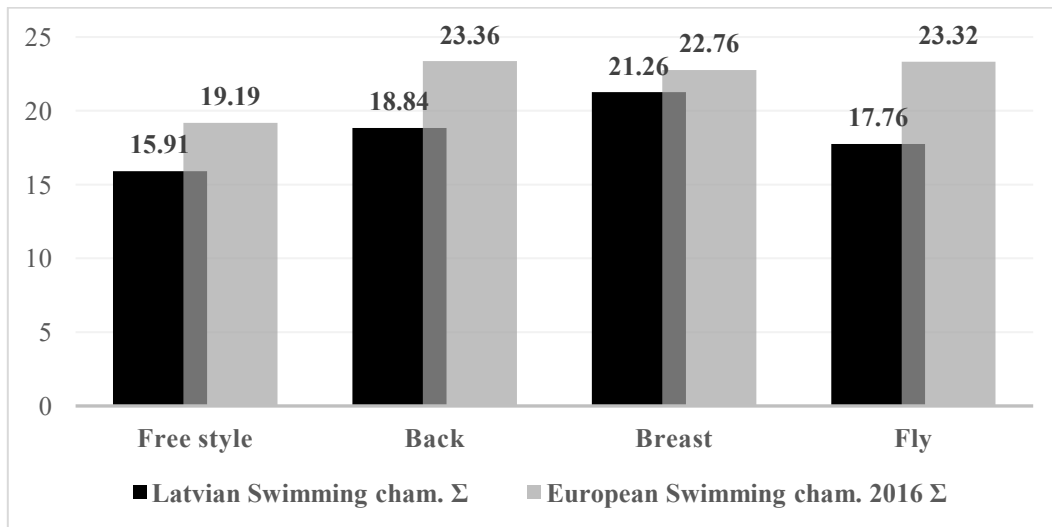


Figure 3 The average distances spent underwater, (m) at the Latvian Swimming championships and the European Swimming Championships 2016 (males) (created by the authors)

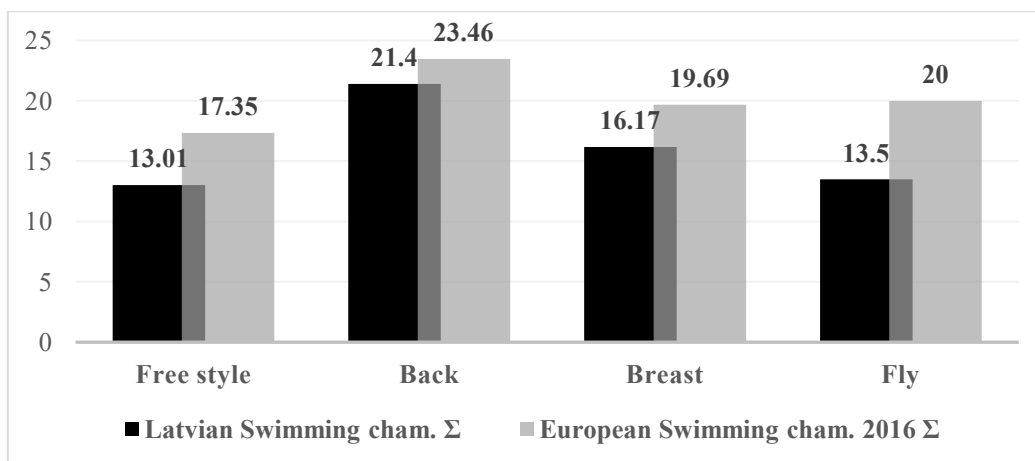


Figure 4 The average distances spent underwater at the Latvian Swimming championships and the European Swimming Championships 2016, (females) (created by the authors)

Conclusion and discussion

The collected results proved the assumption that the fastest swimming section in a distance is the first 15 meters after the dive; this applies to all swimming strokes for both men and women. Especially for the high-level swimmers, who can develop higher speeds than in other sections of competition distance, which is 2.58 ± 0.06 m/s in men's freestyle, compared to the 2.39 ± 0.01 m/s of the fastest Latvian swimmers. The speed that athletes performed while turning (5 meters up to the wall and 15 meters after the turn) swimming between $2.09 \pm 0.08 - 1.66 \pm 0.21$ m/s for the European elite swimmers and between

1.86 ± 0.02 and 1.55 ± 0.02 m/s for Latvian swimmers. Compared to the start and turn section of the distance, the “clean” swimming section is the slowest. European elite male swimmers achieved an average speed of 1.96 ± 0.23 m/s in freestyle and 1.56 ± 0.09 m/s in breaststroke. Among the female swimmers, the speed is from no 1.87 ± 0.09m/s in freestyle and to 1.41 ± 0.07 m/s in breaststroke. Latvian male swimmers achieved an average speed of 1.81 ± 0.03 m/s in freestyle and 1.48 ± 0.01 m/s in breaststroke. Meanwhile, Latvian female swimmers achieved 1.69 ± 0.03 m/s in freestyle and 1.32 ± 0.04 m/s in breaststroke.

The speed distribution in a distance described above is relatively simple to explain and justify. The high speed in the first 15 meters after the start signal and after every turn swimmer is mostly provided by maintaining the high speed which is reached after the start dive (about 6±0,56 m/s) and after pushing away from the wall during the turn (about 2,4±0,23 m/s).

The assumption refers to the best Latvian and European swimmer's results, regardless of swimming stroke, length of the distance, a swimmer's age, training level (Cossor & Mason, 2001; Veiga, Cala, Mallo, & Navarro, 2013) and also in this research.

Depending on the distance European Championship's swimmers spend underwater after the start dive and after the turn, male swimmers, about 23.36 ± 1.03m in backstroke and about 17.35 ± 0.92m in freestyle. For female swimmers, the distance is about 23.47 ± 1.64 m in backstroke and 17.35 ± 0.92 m in freestyle. The results of Latvian swimmers are remarkably lower. For male swimmers, the distance is about 18.84 ± 0.99m in backstroke and 15.91 ± 1.15 m in freestyle. For female swimmers, the result is 21.5 ± 1.06 m in backstroke and about 13.01 ± 0.12 m in freestyle.

The results of the research showed that there are opportunities for improvement in the underwater phase for Latvian swimmers. According to the regulations of the International Swimming Federation (FINA SW 5.3), after the dive, and after every turn, the swimmer is allowed to swim no more than 15 meters underwater, using underwater wave kicks. The maximum permitted distance when swimming, then in a 100 meters event, a swimmer is allowed to swim 30 meters underwater. The average distance spent underwater during a 100 m race for the European elite swimmers is about 21.13 ± 2.38 m which is 70.43 % of the permitted distance and for Latvian swimmers, it is 17.66 ± 2.84 m which is 58.87% of the permitted distance.

A comparison of the obtained data showed that there are differences in the parameters of competitive performance demonstrated by the European championship finalists and the best Latvian swimmers. No, statistically significant differences were found between competition performance: reaction time, where the result of the 2016 European Championships finalists was 0.68±0.03 s and the Latvian swimmers had the result of 0.69 ± 0.03 s (P - 0.9419), and in 'clean' swimming, where the result of the European Championships finalists

was 1.68 ± 0.18 m/s and the Latvian swimmers had the result of 1.57 ± 0.16 m/s ($P = 0.1158$).

In all other components of competitive swimming: the speed of the first 15 meters ($P = 0.0101$), turning speed ($P = 0.0091$), underwater distance after the start and turn ($P = 0.0099$), as well as the race general result (0.0375), Latvian swimmers are losing to the European Championships finalists. There were statistically significant differences found in the studied results.

The collected results allowed for getting data about the performance characteristics of Latvian swimmers. The comparative analysis of the performance characteristics of the European Championships finalists showed opportunities for further improvements of Latvian swimmers.

References

- Arellano, R., Brown, P., Cappaert, J., & Nelson, R. (1994). Analysis of 50, 100, and 200 m freestyle swimmers at the 1992 Olympic Games. *Journal of Applied Biomechanics*, *10*, 189–199. DOI: <https://doi.org/10.1123/jab.10.2.189>
- Blanksby, B. A., Nicholson, L., & Elliott, B.C. (2002). Biomechanical analysis of the grab, track and handle swimming starts: An intervention study. *Sport Biomechanics* *1*(1), 11–24. DOI: [10.1080/14763140208522784](https://doi.org/10.1080/14763140208522784)
- Craig, A. B., & Pendergast, D. R. (1979). Relationships of stroke rate, distance per stroke, and velocity in competitive swimming. *Medicine and Science in Sports*, *11*, 278–283.
- Cossor, J. M., & Mason, B. R. (2001). Swim start performances at the Sydney 2000 Olympic Games. In J. Blackwell, & R.H. Sanders (eds.), *Proceedings of swim sessions: XIX international symposium on biomechanics in sports* (pp. 70–74). San Francisco, CA: International Society of Biomechanics in Sports.
- Hubert, M., Silveira, G.A., Freitas, E., Pereira, S., & Roesler, H. (2006). Speed variation analysis before and after the stroke in swimming starts. *Biomechanics and Medicine in Swimming*, *X*, 6. 44–45.
- Kennedy, P., Brown, P., Chengalur, S. N., & Nelson, R. C. (1990). Analysis of male and female Olympic swimmers in the 100-meter events. *Journal of Applied Biomechanics*, *Volume 6, Issue 2*, 187–197. DOI: <https://doi.org/10.1123/ijsb.6.2.187>
- Morais, J. E., Marinho, D. A., Arellano, R., & Barbosa, T. M. (2018). Start and turn performances of elite sprinters at the 2016 European Championships in swimming. *Article in Sports Biomechanics*, p. 100 - 114, DOI: <https://doi.org/10.1080/14763141.2018.1435713>
- Ruschel, C., Araujo, L., Pereira, S., & Roesler, H. (2007). Kinematical analysis of the swimming start: block, flight, and underwater phases. *International Society of Biomechanics in Swimming Conference Proceedings*, 385–388.
- Skyriene, V. V. (2016). Analysis of possibility of competition distances' combinations, realized by elite swimmers on the base of individual indicators of technical-tactic actions. *"Pedagogy of Physical Culture and Sports" Vol 20, No 2* (e-ISSN 2664-9837). DOI: <https://doi.org/10.15561/18189172.2016.0208>
- Smith, D. J., Esau, S., Norris, S. R., & Bidrmann, J. (2002). A case study of swimming Competition analysis and training leading to an Olympic A final. *Medicine & Science in*

Sports & Exercise. Issue: Volume 34(5) Supplement 1, p.76. DOI: <https://www.researchgate.net/publication/232141674>

Tourny-Chollet, C., Chollet, D., Hogie, S., & Papadopoulos, C. (2002). Kinematic analysis of butterfly turns of international and national swimmers. *Journal of Sports Sciences, 20*, 383–390. DOI: <https://doi.org/10.1080/026404102317366636>

Veiga, S., & Roig, A. (2017). Effect of the starting and turning performances on the subsequent swimming parameters of elite swimmers. *Sports Biomechanics, 16*, 34–44. DOI: <https://doi:10.1080/14763141.2016.1179782>

A QUALITATIVE ASSESSMENT OF THE LABELING INFORMATION OF COLLAGEN-CONTAINING FOOD SUPPLEMENTS

Baiba Īle-Jokste

RSU Red Cross Medical College, Latvia

Renāte Šukele

RSU Red Cross Medical College, Latvia
Rīga Stradiņš university, Latvia

Abstract. *The use of collagen dietary supplements (CDS) has increased dramatically, creating a large market for these products. With so many options available, it is important for consumers and medical professionals to be well-informed about the composition of these supplements. The aim of this study was to compare the information provided on the labels of CDS with science-based literature. The study conducted an electronic search of randomized, double-blind, control, and pilot studies, which all evaluated the use of oral native or hydrolyzed CDS. All studies were searched in PubMed, and had to be published in English between 2009-2022, August in PubMed. After the initial search, 33 were used for analysis. These studies were then compared to 147 CDS labels registered with the Food Veterinary Service (FVS) in Latvia. The results showed that while studies confirm the benefits of CDS for health, the labels registered in FVS often lack important information about the collagen source, dosage, and duration of use. This results in a significant frequency of errors and potential misuse compared to current scientific knowledge. This makes it challenging for consumers and medical professionals to make informed decisions when purchasing and using collagen supplements.*

Keywords: *collagen, collagen peptides, hair, information quality, joints, skin.*

Introduction

There is a growing interest in collagen nutritional supplements among consumers who believe they may provide health benefits (Albornoz et al., 2020; Grebow, 2020; Grandviewresearch, 2022). Consumers are under the impression that dietary supplements may provide health benefits (Ronan, 2021; Lordan & Rando, 2021). People choose food supplements (FS) because it is simple and time-saving, so it is important to understand which collagen-containing FS is effective.

Manufacturers of collagen-containing food supplements estimate a significant increase in market share within six years (Market Data Forecast, 2022). Therefore, it is important that health professionals provide quality advice to patients and recommend health promotion products that are evidence-based.

Unfortunately, studies have found that evidence-based sources of information are not always used by pharmacy students and practicing pharmacists (Abahussain et al., 2007; Bukic et al., 2021; Axon et al., 2017).

Nonetheless, the quality of supplement labelling is also vital for informed decision-making. As of 05.08.2022, 147 collagen-containing food supplements are registered on the FVS website. Consumers and medical practitioners need to understand label information to make informed choices (Farmācijas Likums, 1997; Pārtikas un veterinārais dienests, 2015; Pārtikas un veterinārais dienests, n.d.). The **purpose** of this study is to compare the quality of information mentioned in the labels of collagen-containing nutritional supplements registered by FVS with science-based literature.

Research Methodology

We used two protocols for this study, firstly clinical studies were reviewed, and then FS labels were compared to findings.

1. The study included 147 collagen-containing FS objects registered in FVS until June 16, 2022. We followed a protocol and selection process shown in Figure 2 to reach our goal. Three FVS food supplements were excluded for not having enough collagen, being meant for children, or having collagen as an auxiliary substance. A comparison of the research results to these nutritional supplements determined whether these products could potentially affect the health of nails, hair, skin, joints, and connective tissues. The existing selection criteria for Protocol I, in the end resulted in 63 (44.1%) FVS-compliant objects.
2. To study CS registered by FVS, we look at their dose range, extraction source, added active ingredients, and registered selection (Protocol I and Figure 1).
3. *Protocol II* involved the analysis of studies on collagen nutritional supplements and their effects on hair, nails, joints, connective tissue, and skin, published in PubMed in English from 2009 - August 2022. The search was performed using keywords such as "collagen" OR "collagen supplement" AND "nail" OR "nails" OR "skin" OR "joint" OR "bones" OR "hair" and "randomized trial OR pilot study OR clinical trial". The key findings were analyzed using a self-created *Google Docs Spreadsheet* table. A total of 311 data were obtained and further selection was made based on pre-set criteria, as detailed in Figure 1.2. The author followed the PRISMA 2020 flow diagram for new reviews. (Page et al., 2017).

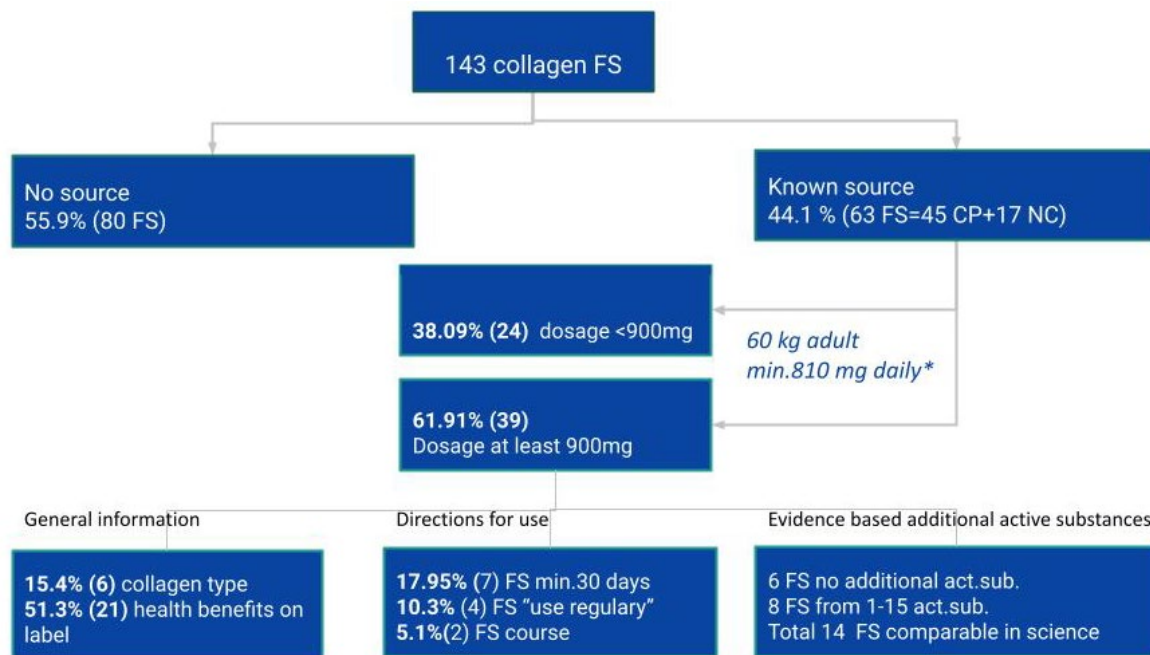


Figure 1 Evaluation of the Collagen containing supplements

*(Kim et al., 2018) CP-collagen peptides, NC - native collagen, AI-active components.

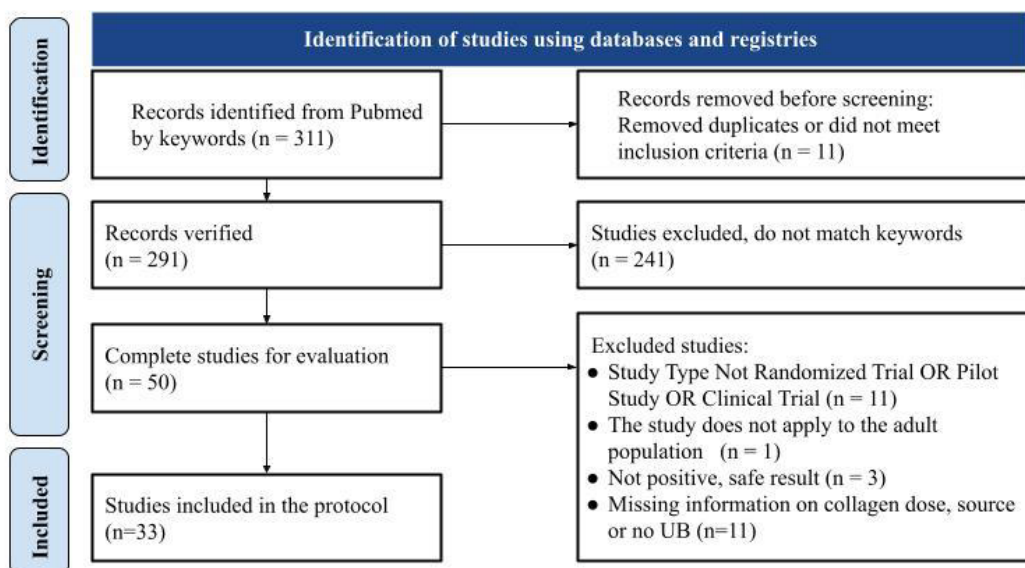


Figure 2 PRISMA diagram with modifications (Page et al., 2017)

4. A self-created *Google Docs Spreadsheet* table included the relevant criteria for each nutritional supplement, including the source of extraction, duration of use, the recommended dose for adults, and any additional active substances included. After applying the criteria, a total of 33 studies about nutritional supplements with collagen support were nominated, of which 31 contained collagen peptides and 2 contained native collagen.

Data analysis: hydrolyzed and native collagen dietary supplement labels were compared to published studies. The results are presented in tables, showing absolute and relative frequency for nominal and category data. We did not consider any existing or potential health complaints of the science-based study audience during data evaluation.

Results of Literature review

Only 33 randomized, double-blind, controlled studies and pilot studies were included in the evaluation.

Collagen is a vital protein in the mammalian body. The human body contains several types of collagen, each with unique functions and properties (Dasong Liu et al., 2015; Ricard, 2011) see Table 1.

Table 1 Collagen types (created by the authors)

Collagen type 1	The most abundant type is found in blood vessels, skin, tendons, bones, and other tissues. It is responsible for the strength and resilience of these tissues.	(Naomi et al., 2021), (Wang, 2021).
Collagen type 2	is important in the development of the eye and is involved in several skeletal disorders, including rheumatoid arthritis and osteoarthritis.	(Honvo et al., 2020), (Walter, K. et al., 2007), (Soh et al., 2022).
Collagen type 3	is found in various organs, including the liver, lungs, and intestines, and plays an important role in wound healing.	(Kuivaniemi & Tromp, 2019).
Collagen type 5	is essential for the fibrillation of collagen types 1 and 3 and is found in the bone and interstitial matrix, corneal stroma, and other organs.	(Leeming, D.J., & Karsdal, M.A., 2019), (Chen et al., 2020).
Type 1&3	is 95% in the structure of the skin. Responsible for the properties of the skin (strength, turgor, elasticity).	(Chen et al., 2020).

Understanding the specific functions and properties of each collagen type is crucial for developing effective treatments for various diseases and disorders. Furthermore, collagen is also a valuable food source, and its consumption has been linked to several health benefits, including improved skin health and joint pain relief.

The most common sources of collagen supplements (CS) in the FVS are shown in Table 2. Some manufacturers mention only patent information and not

the source of collagen production. The FDA can only remove unsafe products and lacks the authority to assess product quality in advance. There is minimal FDA oversight until harm is reported, and various issues like microbial contamination and fraud have been identified. To address these risks, clinicians should support legislative change, recommend products tested by external labs, and educate patients (White, 2020).

Table 2 Evidence-Based information of Collagen Supplement (created by the authors)

Source of collagen	Description	References
Cattle, English bovine, cows, goats, sheep, bison, buffalo.	Cows skin is processed to obtain collagen protein, with "grass-fed cattle" label indicating good quality. Type 1 and 3 collagen are mainly obtained. May cause immune responses in 2-4% of people. There are benefits for joint, ligament, skin, and bone health.	(Bruyere et al., 2012), (Gallo et al., 2020) (Benito-Ruiz et al., 2009), (Konig et al., 2018), (Bolke et al., 2019), (Oesser et al., 2013);
Porcine collagen	Skin and bone provide type 1 and type 3 collagen, which is easier to absorb and less likely to cause an immune reaction than bovine collagen. Studies indicate improved joint, ligament, nail, and skin health, with reductions in atopic dermatitis, cellulite.	(Parenteau-Bareil et al., 2011); (Oesser et al., 2013), (Hakuta et al., 2017), (Schunck et al., 2015), (Hexsel et al., 2017), (Zdzieblik et al., 2021)
Eggshells	mostly contain type 1 and type 5 collagen-like material	(Du et al., 2001)
Chicken	improves joints, skin, and osteoarthritis. 4 studies confirm	(Mohammed, & He, 2021), (Schauss et al., 2012), (Schwartz et al., 2019), (Lopez et al. , 2015)
Marine collagen	Algae and fish collagen (from cod, pangasius, or tilapia skins) are absorbable and improve joint health, skin condition, and aid weight loss. They contain types 1, 2, and 5 collagen with low risk of disease transmission and inflammation.	(Astre et al.,2018),(Corppola et al., 2020), (Carvalho et al., 2018), (Dasong Liu et al., 2015), (Jafari et al., 2020), (Wang et al., 2015), (Nurilmala et al., 2020), (Czajka et al., 2018), (Tak et al., 2019).

Peroral collagen research includes additional active substances such as vitamins, minerals, microelements, bioflavonoids, plant extracts (Lin et al., 2020; Borumand & Sibilla, 2014; Sibilla et al., 2017; Czajka et al., 2018; De Luca et al., 2016; Kanzaki et al., 2016; Schauss et al., 2012; Schwartz et al., 2019; Konig

et al., 2018; Bolke et al., 2019; Bruyere et al., 2012). It's important to check the label for scientific evidence of the benefits of these ingredients before purchasing.

Researchers found the ideal daily collagen dose for a 60 kg adult is between 810-1620 mg/day (Kim et al., 2018). Use duration depends on the collagen source: 8 weeks for pig and beef, 4 weeks for fish, and 6 weeks for chicken. This information is important to include on the label for individuals using collagen.

Research Findings and their Discussion

Eighty (55.9%) out of all FVS collagen and collagen peptide-containing food supplements (refer to Figure 1.), lack information about the source of origin on the label. This poses a potential danger to consumers who have allergies to fish, shellfish, or cattle products (Sharp & Lopata 2014; Porcaro et al., 2019; Luckock et al., 2021; Charen & Harbord, 2020; Kennedy, 2018; Washington (DC): National Academies Press (US), 2005). Additionally, one of the nutritional supplements is targeted at children's health, while two FS labels do not specify the dosage. Lastly, despite searching for the term "collagen" on the FVS website, one nutritional supplement did not contain collagen as an active ingredient.

Hence, there are 63 dietary supplements listed (see Figure 1) in the FVS for further label assessment, out of which 45 supplements contain CP and 17 - contain native collagen (NC).

Based on a literature review, a recommended daily dose for an adult weighing 60 kg is between 810 mg to 1620 mg (Kim et al., 2018). The author also considered the manufacturer's recommendation of at least 810 mg/day, which is based on healthy individuals. Among the 63 supplements, 24 (38.09%) have a lower recommended daily dose, while 39 supplements (61.91%) recommend a dosage ranging from 900 mg to 10,600 mg per day.

Of the 39 supplements registered in the FVS six (15.4%) of food additives mentioned the collagen type on their labels (reg. no. FVS. Native collagen: 8443; collagen peptides: 11339, 13037, 11558, 11631, 11718, 10402), while the remaining 84.6% did not specify the type of collagen used.

Out of 39 FVS CS, 18 (48.7 %) do not specify their intended health benefits, but their source can provide some indication. Seven (17.95%) out of 39 collagen-containing dietary supplements are indicated for a minimum duration of 30 days. Four (10.3%) supplements indicate "use regularly" and two (5.1%) suggest repeating the course several times a year, which is not specific information.

Out of the 143 available dietary supplements, 18 supplements are recommended for at least 1 month and 5 for long-term use. Based on a clinical trial, the duration of use of collagen supplements can range from 2 (Ruff et al., 2018) to 52 weeks (Konig et al., 2018) depending on the type of collagen (collagen peptides or native collagen) and the source of extraction. The arithmetic

mean of 33 studies submitted is 14 weeks. The authors recommend that such information be included on the label of all food supplements containing collagen.

A total of 133 different active substances are listed for all 143 supplement labels, but only 30 have a basis in research. While some supplements provide explanations about the effects of vitamins, references regarding the benefits of collagen use are not always included, potentially limiting consumer understanding. Additional studies indicate discrepancies in the claims made on supplement labels (Avery et al., 2017).

To summarize, out of the 39 available peroral collagen dietary supplements (Figure 1) for which the dose is at least 900mg, only 14 contain active substances with a scientific background. These include porcine source CP with reg. no. 13037, bovine CP with reg. no. 11830, 11832, 12205, and 12304, and fish CP with reg. no. 12732, 10402, 8443, 10228, 11339, 8978, 13266, 9689, 12086. Marine collagen 13718. However, the duration of administration for these nutritional supplements has not been specified.

Further research is needed to address important questions on collagen supplements, such as dose differences for healthy and sick people, the impact of ethnicity and diet, and the effect of other active substances on collagen's bioavailability.

The dietary supplements database provided in the Food and Veterinary Service is often incomplete and generalized, necessitating further labelling of the product. On other hand, the labels can be improved are needed in the database to provide comprehensive information for researchers and consumers (Dwyer et al., 2018, Pereira et al., 2017).

Variable product composition due to a lack of quality control calls for analytical methods to characterize supplement composition (Ambrosio et al, 2020).

Conclusions

A majority (55.9%) of collagen supplements registered in Latvia do not disclose the source of collagen production, making it difficult for consumers to avoid potential allergies and intolerance risks. However, only 19.05% mentioned the type of collagen on the label, allowing consumers to make informed decisions.

Nutritional supplement users should carefully evaluate additional active substances to prevent overdose risks.

Only 11 of the 39 collagen supplements (with a dose at least 900 mg) provided information on the duration of use. Further research is necessary to determine the impact of supplement form, dose, and duration of use. Collagen supplement use duration varies by type and source, as per clinical trial. The authors suggest adding this info to all collagen supplement labels. Drawing upon scientific research data, it can be surmised that out of the 143 collagen-based

nutritional supplements currently available from the Food Veterinary Service. There is sufficient information and a dose of at least 900 mg available for fourteen nutritional supplements, although it may not be comprehensive.

In order to further investigate the scientific validity of the effectiveness of dietary supplements containing collagen, the author plans to conduct an extended study in Latvia. This study will explore the effects of collagen on hair, nails, skin, joints, and bones, and will provide additional data to support the safe and effective use of CS.

References

- Abahussain, N. A., Abahussain, E. A., & Al-Oumi, F. M. (2007). Pharmacists' attitudes and awareness towards the use and safety of herbs in Kuwait. *Pharmacy practice*, *5*(3), 125–129. DOI: <https://doi.org/10.4321/s1886-36552007000300005>
- Albornoz, C. A., Shah, S., Murgia, R. D., Wang, J. V., & Saedi, N. (2021). Understanding aesthetic interest in oral collagen peptides: A 5-year national assessment. *Journal of Cosmetic Dermatology*, *20*(2), 566–568. DOI: <https://doi.org/10.1111/jocd.13555>
- Ambrosio, G., Wirth, D., Joseph, J. F., Mazzarino, M., de la Torre, X., Botrè, F., & Parr, M. K. (2020). How reliable is dietary supplement labelling?—Experiences from the analysis of ecdysterone supplements. *Journal of Pharmaceutical and Biomedical Analysis*, *177*, 112877. DOI: <https://doi.org/10.1016/j.jpba.2019.112877>
- Astre, G., Deleruyelle, S., Dortignac, A., Bonnet, C., Valet, P., & Dray, C. (2018). Diet-induced obesity and associated disorders are prevented by natural bioactive type 1 fish collagen peptides (Naticol®) treatment. *Journal of physiology and biochemistry*, *74*(4), 647–654. DOI: <https://doi.org/10.1007/s13105-018-0650-0>
- Avery, R. J., Eisenberg, M. D., & Cantor, J. H. (2017). An examination of structure-function claims in dietary supplement advertising in the U.S.: 2003–2009. *Preventive medicine*, *97*, 86–92. DOI: <https://doi.org/10.1016/j.ypmed.2017.01.008>
- Axon, D. R., Vanova, J., Edel, C., & Slack, M. (2017). Dietary Supplement Use, Knowledge, and Perceptions Among Student Pharmacists. *American journal of pharmaceutical education*, *81*(5), 92. DOI: <https://doi.org/10.5688/ajpe81592>
- Benito-Ruiz, P., Camacho-Zambrano, M. M., Carrillo-Arcenales, J. N., Mestanza-Peralta, M. A., Vallejo-Flores, C. A., Vargas-López, S. V., Villacís-Tamayo, R. A., & Zurita-Gavilanes, L. A. (2009). A randomized controlled trial on the efficacy and safety of a food ingredient, collagen hydrolysate, for improving joint comfort. *International journal of food sciences and nutrition*, *60* Suppl 2, 99–113. DOI: <https://doi.org/10.1080/09637480802498820>
- Bolke, L., Schlippe, G., Gerß, J., & Voss, W. (2019). A Collagen Supplement Improves Skin Hydration, Elasticity, Roughness, and Density: Results of a Randomized, Placebo-Controlled, Blind Study. *Nutrients*, *11*(10), 2494. DOI: <https://doi.org/10.3390/nu11102494>
- Borumand, M., & Sibilla, S. (2014). Daily consumption of the collagen supplement Pure Gold Collagen® reduces visible signs of aging. *Clinical interventions in aging*, *9*, 1747–1758. DOI: <https://doi.org/10.2147/CIA.S65939>
- Bruyère, O., Zegels, B., Leonori, L., Rabenda, V., Janssen, A., Bourges, C., & Reginster, J. Y. (2012). Effect of collagen hydrolysate in articular pain: a 6-month randomized, double-

- blind, placebo controlled study. *Complementary therapies in medicine*, 20(3), 124–130. DOI: <https://doi.org/10.1016/j.ctim.2011.12.007>
- Bukic, J., Kuzmanic, B., Rusic, D., Portolan, M., Mihanovic, A., Seselja Perisin, A., Leskur, D., Petric, A., Bozic, J., Tomic, S., & Modun, D. (2021). Community pharmacists' use, perception and knowledge on dietary supplements: a cross sectional study. *Pharmacy practice*, 19(1), 2251. DOI: <https://doi.org/10.18549/PharmPract.2021.1.2251>
- CalGo® Salmon Bone Collagen Calcium Powder-宸品有限公司. (n.d.). 宸品有限公司. Retrieved from: https://www.champion-bio.com/product-detail/salmon_bone_collagen_calcium/
- Carvalho, A. M., Marques, A. P., Silva, T. H., & Reis, R. L. (2018). Evaluation of the Potential of Collagen from Codfish Skin as a Biomaterial for Biomedical Applications. *Marine drugs*, 16(12), 495. DOI: <https://doi.org/10.3390/md16120495>
- Chen, R. H., Hsu, C. N., Chung, M. Y., Tsai, W. L., & Liu, C. H. (2008). Effect of different concentrations of collagen, ceramides, N-acetyl glucosamine, or their mixture on enhancing the proliferation of keratinocytes, fibroblasts and the secretion of collagen and/or the expression of mRNA of type I collagen. *Journal of Food and Drug Analysis*, 16(1), 11.
- Coppola, D., Oliviero, M., Vitale, G. A., Lauritano, C., D'Ambra, I., Iannace, S., & de Pascale, D. (2020). Marine collagen from alternative and sustainable sources: Extraction, processing and applications. *Marine drugs*, 18(4), 214. DOI: <https://doi.org/10.3390/md18040214>
- Czajka, A., Kania, E. M., Genovese, L., Corbo, A., Merone, G., Luci, C., & Sibilla, S. (2018). Daily oral supplementation with collagen peptides combined with vitamins and other bioactive compounds improves skin elasticity and has a beneficial effect on joint and general wellbeing. *Nutrition Research*, 57, 97-108. DOI: <https://doi.org/10.1016/j.nutres.2018.06.001>
- Dasong Liu, Mehdi Nikoo, Gökhan Boran, Peng Zhou, Joe M. Regenstein, *Annual Review of Food Science and Technology* 2015 6:1, 527-557. DOI: <https://doi.org/10.1146/annurev-food-031414-111800>
- De Luca, C., Mikhal'chik, E. V., Suprun, M. V., Papacharalambous, M., Truhanov, A. I., & Korkina, L. G. (2016). Skin Anti Aging and Systemic Redox Effects of Supplementation with Marine Collagen Peptides and Plant-Derived Antioxidants: A Single-Blind Case-Control Clinical Study. *Oxidative medicine and cellular longevity*, 2016, 4389410. DOI: <https://doi.org/10.1155/2016/4389410>
- Du, J., Hincke, M. T., Rose-Martel, M., Hennequet-Antier, C., Brionne, A., Cogburn, L. A., ... & Gautron, J. (2015). Identifying specific proteins involved in eggshell membrane formation using gene expression analysis and bioinformatics. *BMC genomics*, 16(1), 1-13. DOI: <https://doi.org/10.1186/s12864-015-2013-3>
- Duke University Medical Center. (2005, February 27). Lack Of Specific Collagen Type Leads To Osteoarthritis. *ScienceDaily*. Retrieved from: www.sciencedaily.com/releases/2005/02/050223161951.htm
- Dwyer, J. T., Coates, P. M., & Smith, M. J. (2018). Dietary supplements: regulatory challenges and research resources. *Nutrients*, 10(1), 41. DOI: <https://doi.org/10.3390/nu10010041>
- Edgar, S., Hopley, B., Genovese, L., Sibilla, S., Laight, D., & Shute, J. (2018). Effects of collagen-derived bioactive peptides and natural antioxidant compounds on proliferation and matrix protein synthesis by cultured normal human dermal fibroblasts. *Scientific Reports*, 8(1), 1-13. DOI: <https://doi.org/10.1038/s41598-018-28492-w>
- ES tiesības - EUR-Lex. (n.d.). ES Tiesības - EUR-Lex. Retrieved from: <https://eur-lex.europa.eu/homepage.html?locale=lv>

- European Medicines Agency. (2023, October 2). European Medicines Agency. Retrieved from: <https://www.ema.europa.eu/en>
- Farmācijas likums. (2022, January 4). Retrieved from: <https://likumi.lv/doc.php?id=43127>
- Forecast Ltd, M. D. (2022, January 1). *Collagen Peptides Market Size, Growth, Share | 2023-2028*. Market Data Forecast. Retrieved from: <http://www.marketdataforecast.com/>
- Gallo, N., Natali, M. L., Sannino, A., & Salvatore, L. (2020). An overview of the use of equine collagen as emerging material for biomedical applications. *Journal of Functional Biomaterials*, 11(4), 79. DOI: <https://doi.org/10.3390/jfb11040079>
- Genovese, L., Corbo, A., & Sibilla, S. (2017). An Insight into the Changes in Skin Texture and Properties following Dietary Intervention with a Nutricosmeceutical Containing a Blend of Collagen Bioactive Peptides and Antioxidants. *Skin pharmacology and physiology*, 30(3), 146–158. DOI: <https://doi.org/10.1159/000464470>
- Grebow, J. (n.d.). *Peak dietary supplement sales leveling off during COVID-19 pandemic, but growth still remains strong over last year, market researchers report during webcast*. Nutritional Outlook. Retrieved from: <https://www.nutritionaloutlook.com/view/peak-dietary-supplement-sales-leveling-during-covid-19-pandemic-growth-still-remains-strong>
- Hakuta, A., Yamaguchi, Y., Okawa, T., Yamamoto, S., Sakai, Y., & Aihara, M. (2017). Anti-inflammatory effect of collagen tripeptide in atopic dermatitis. *Journal of dermatological science*, 88(3), 357–364. DOI: <https://doi.org/10.1016/j.jdermsci.2017.09.002>
- Hexsel, D., Zague, V., Schunck, M., Siega, C., Camozzato, F. O., & Oesser, S. (2017). Oral supplementation with specific bioactive collagen peptides improves nail growth and reduces symptoms of brittle nails. *Journal of cosmetic dermatology*, 16(4), 520–526. DOI: <https://doi.org/10.1111/jocd.12393>
- Honvo, G., Lengelé, L., Charles, A., Reginster, J. Y., & Bruyère, O. (2020). Role of Collagen Derivatives in Osteoarthritis and Cartilage Repair: A Systematic Scoping Review With Evidence Mapping. *Rheumatology and therapy*, 7(4), 703–740. DOI: <https://doi.org/10.1007/s40744-020-00240-5>
- Institute of Medicine (US) and National Research Council (US) Committee on the Framework for Evaluating the Safety of Dietary Supplements. (2005). *Dietary Supplements: A Framework for Evaluating Safety*. National Academies Press (US).
- Jafari, H., Lista, A., Siekapen, M. M., Ghaffari-Bohlouli, P., Nie, L., Alimoradi, H., & Shavandi, A. (2020). Fish Collagen: Extraction, Characterization, and Applications for Biomaterials Engineering. *Polymers*, 12(10), 2230. DOI: <https://doi.org/10.3390/polym12102230>
- Kanzaki, N., Otsuka, Y., Izumo, T., Shibata, H., Nagao, H., Ogawara, K., ... & Nakamura, Y. (2016). Glucosamine-containing supplement improves locomotor functions in subjects with knee pain—a pilot study of gait analysis. *Clinical Interventions in Aging*, 835–841. DOI: <https://doi.org/10.2147/CIA.S103943>
- Kennedy, M. (2018). The vitamin epidemic: what is the evidence for harm or value?. *Internal Medicine Journal*, 48(8), 901–907. DOI: <https://doi.org/10.1111/imj.13976>
- Kim, D. U., Chung, H. C., Choi, J., Sakai, Y., & Lee, B. Y. (2018). Oral intake of low-molecular-weight collagen peptide improves hydration, elasticity, and wrinkling in human skin: a randomized, double-blind, placebo-controlled study. *Nutrients*, 10(7), 826. DOI: <https://doi.org/10.3390/nu10070826>
- König, D., Oesser, S., Scharla, S., Zdzieblik, D., & Gollhofer, A. (2018). Specific collagen peptides improve bone mineral density and bone markers in postmenopausal women—a randomized controlled study. *Nutrients*, 10(1), 97. DOI: <https://doi.org/10.3390/nu10010097>

- Kuivaniemi, H., & Tromp, G. (2019). Type III collagen (COL3A1): Gene and protein structure, tissue distribution, and associated diseases. *Gene*, 707, 151–171. DOI: <https://doi.org/10.1016/j.gene.2019.05.003>
- Leeming, D. J., & Karsdal, M. A. (2019). Type V collagen. In *Biochemistry of Collagens, Laminins and Elastin: Structure, Function and Biomarkers* (pp. 51–57). Elsevier. DOI: <https://doi.org/10.1016/B978-0-12-817068-7.00005-7>.
- Lin, P., Alexander, R. A., Liang, C. H., Liu, C., Lin, Y. H., Lin, Y. H., ... & Kuan, C. M. (2021). Collagen formula with Djulis for improvement of skin hydration, brightness, texture, crow's feet, and collagen content: A double-blind, randomized, placebo-controlled trial. *Journal of Cosmetic Dermatology*, 20(1), 188-194. DOI: <https://doi.org/10.1111/jocd.13500>
- Lopez, H. L., Ziegenfuss, T. N., & Park, J. (2015). Evaluation of the Effects of BioCell Collagen, a Novel Cartilage Extract, on Connective Tissue Support and Functional Recovery from Exercise. *Integrative medicine (Encinitas, Calif.)*, 14(3), 30–38.
- Lordan R. (2021). Dietary supplements and nutraceuticals market growth during the coronavirus pandemic - Implications for consumers and regulatory oversight. *PharmaNutrition*, 18, 100282. DOI: <https://doi.org/10.1016/j.phanu.2021.100282>
- Lordan, R., Rando, H. M., COVID-19 Review Consortium, & Greene, C. S. (2021). Dietary Supplements and Nutraceuticals under Investigation for COVID-19 Prevention and Treatment. *mSystems*, 6(3), e00122-21. DOI: <https://doi.org/10.1128/mSystems.00122-21>
- Luckock, U., Harnett, J., & Cairns, R. (2021). Vitamin and mineral supplement exposures: cases reported to Australia's largest Poisons Information Centre, 2014-2015 to 2018-2019. *The British journal of nutrition*, 126(12), 1788–1793. DOI: <https://doi.org/10.1017/S0007114521000647>
- Lupu, M. A., Gradisteanu Pircalabioru, G., Chifiriuc, M. C., Albulescu, R., & Tanase, C. (2020). Beneficial effects of food supplements based on hydrolyzed collagen for skin care (Review). *Experimental and therapeutic medicine*, 20(1), 12–17. DOI: <https://doi.org/10.3892/etm.2019.8342>
- Mohammed, A., & He, S. (2021). A Double-Blind, Randomized, Placebo-Controlled Trial to Evaluate the Efficacy of a Hydrolyzed Chicken Collagen Type II Supplement in Alleviating Joint Discomfort. *Nutrients*, 13(7), 2454. DOI: <https://doi.org/10.3390/nu13072454>
- Moskowitz R. W. (2000). Role of collagen hydrolysate in bone and joint disease. *Seminars in arthritis and rheumatism*, 30(2), 87–99. DOI: <https://doi.org/10.1053/sarh.2000.9622>
- Naomi, R., Ridzuan, P. M., & Bahari, H. (2021). Current Insights into Collagen Type I. *Polymers*, 13(16), 2642. DOI: <https://doi.org/10.3390/polym13162642>
- Nurilmala, M., Hizbullah, H. H., Karnia, E., Kusumaningtyas, E., & Ochiai, Y. (2020). Characterization and Antioxidant Activity of Collagen, Gelatin, and the Derived Peptides from Yellowfin Tuna (*Thunnus albacares*) Skin. *Marine drugs*, 18(2), 98. DOI: <https://doi.org/10.3390/md18020098>
- Nutraceuticals Market Size & Share Report, 2021-2030*. (n.d.). Nutraceuticals Market Size & Share Report, 2021-2030. Retrieved from: <https://www.grandviewresearch.com/industry-analysis/nutraceuticals-market>
- Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., McGuinness, L. A., ... Moher, D. (2021). The PRISMA 2020 statement:

- an updated guideline for reporting systematic reviews. *BMJ (Clinical research ed.)*, 372, n71. DOI: <https://doi.org/10.1136/bmj.n71>
- Parenteau-Bareil, R., Gauvin, R., Cliche, S., Gariépy, C., Germain, L., & Berthod, F. (2011). Comparative study of bovine, porcine and avian collagens for the production of a tissue engineered dermis. *Acta biomaterialia*, 7(10), 3757–3765. DOI: <https://doi.org/10.1016/j.actbio.2011.06.020>
- Pārtikas nekaitīgums | Eiropas Savienības faktu lapas | Eiropas Parlaments. (2022, November 30). Pārtikas Nekaitīgums | Eiropas Savienības Faktu Lapas | Eiropas Parlaments. Pieejams: <https://www.europarl.europa.eu/factsheets/lv/sheet/51/partikas-nekaitigums>
- Pārtikas un veterinārais dienests. (2015) *Uztura bagātinātāji Vadlīnijas*. Retrieved from <https://www.pvd.gov.lv/lv/media/952/download>
- Pārtikas un veterinārais dienests. (n.d.). *PVD · Uztura bagātinātāju reģistrs*. PVD reģistri. Pieejams: <https://registri.pvd.gov.lv/ub>
- Paškontroles sistēma. (n.d.). Paškontroles Sistēma | Pārtikas Un Veterinārais Dienests. Pieejams: <https://www.pvd.gov.lv/lv/paskontroles-sistema>
- Pereira, C., Barros, L., & Ferreira, I. C. F. R. (2017). Dietary Supplements: Foods, Medicines, or Both? A Controversial Designation with Unspecific Legislation. *Current pharmaceutical design*, 23(19), 2722–2730. DOI: <https://doi.org/10.2174/1381612823666170117122801>
- Porcaro, F., Caminiti, L., Crisafulli, G., Guglielmo, F., & Pajno, G. B. (2019). Anaphylaxis to cutaneous exposure to bovine colostrum based cream. *Asian Pacific journal of allergy and immunology*, 37(1), 9–11. DOI: <https://doi.org/10.12932/AP-230717-0120>
- Proksch, E., Schunck, M., Zague, V., Segger, D., Degwert, J., & Oesser, S. (2014). Oral intake of specific bioactive collagen peptides reduces skin wrinkles and increases dermal matrix synthesis. *Skin pharmacology and physiology*, 27(3), 113–119. DOI: <https://doi.org/10.1159/000355523>
- Prospector. (n/a). *Peptan® F 2000 HD by Rousselot Inc. - Food, Beverage & Nutrition*. UL Prospector. Retrieved from: <https://www.ulprospector.com/en/na/Food/Detail/1694/195080/Peptan-F-2000-HD>
- Ricard-Blum S. (2011). The collagen family. *Cold Spring Harbor perspectives in biology*, 3(1), a004978. DOI: <https://doi.org/10.1101/cshperspect.a004978>
- Ruff, K. J., Morrison, D., Duncan, S. A., Back, M., Aydogan, C., & Theodosakis, J. (2018). Beneficial effects of natural eggshell membrane versus placebo in exercise-induced joint pain, stiffness, and cartilage turnover in healthy, postmenopausal women. *Clinical interventions in aging*, 13, 285–295. DOI: <https://doi.org/10.2147/CIA.S153782>
- Schauss, A. G., Stenhjem, J., Park, J., Endres, J. R., & Clewell, A. (2012). Effect of the novel low molecular weight hydrolyzed chicken sternal cartilage extract, BioCell Collagen, on improving osteoarthritis-related symptoms: a randomized, double-blind, placebo-controlled trial. *Journal of agricultural and food chemistry*, 60(16), 4096–4101. DOI: <https://doi.org/10.1021/jf205295u>
- Schunck, M., Zague, V., Oesser, S., & Proksch, E. (2015). Dietary Supplementation with Specific Collagen Peptides Has a Body Mass Index-Dependent Beneficial Effect on Cellulite Morphology. *Journal of medicinal food*, 18(12), 1340–1348. DOI: <https://doi.org/10.1089/jmf.2015.0022>
- Schwartz, S. R., Hammon, K. A., Gafner, A., Dahl, A., Guttman, N., Fong, M., & Schauss, A. G. (2019). Novel Hydrolyzed Chicken Sternal Cartilage Extract Improves Facial Epidermis and Connective Tissue in Healthy Adult Females: A Randomized, Double-Blind, Placebo-Controlled Trial. *Alternative therapies in health and medicine*, 25(5), 12–29.

- Sharp, M. F., & Lopata, A. L. (2014). Fish allergy: in review. *Clinical reviews in allergy & immunology*, 46(3), 258–271. <https://doi.org/10.1007/s12016-013-8363-1>
- Soh, Z., Richards, A. J., McNinch, A., Alexander, P., Martin, H., & Snead, M. P. (2022). Dominant stickler syndrome. *Genes*, 13(6), 1089. DOI: <https://doi.org/10.3390/genes13061089>
- Tak, Y. J., Kim, Y. J., Lee, J. G., Yi, Y. H., Cho, Y. H., Kang, G. H., & Lee, S. Y. (2019). Effect of Oral Ingestion of Low-Molecular Collagen Peptides Derived from Skate (*Raja Kenojei*) Skin on Body Fat in Overweight Adults: A Randomized, Double-Blind, Placebo-Controlled Trial. *Marine drugs*, 17(3), 157. DOI: <https://doi.org/10.3390/md17030157>
- Walter, K., Tansek, M., Tobias, E. S., Ikegawa, S., Coucke, P., Hyland, J., Mortier, G., Iwaya, T., Nishimura, G., Superti-Furga, A., & Unger, S. (2007). COL2A1-related skeletal dysplasias with predominant metaphyseal involvement. *American journal of medical genetics. Part A*, 143A(2), 161–167. DOI: <https://doi.org/10.1002/ajmg.a.31516>
- Wang, H. (2021). A review of the effects of collagen treatment in clinical studies. *Polymers*, 13(22), 3868. DOI: <https://doi.org/10.3390/polym13223868>
- White C. M. (2020). Dietary Supplements Pose Real Dangers to Patients. *The Annals of pharmacotherapy*, 54(8), 815–819. DOI: <https://doi.org/10.1177/1060028019900504>
- Zdzieblik, D., Brame, J., Oesser, S., Gollhofer, A., & König, D. (2021). The Influence of Specific Bioactive Collagen Peptides on Knee Joint Discomfort in Young Physically Active Adults: A Randomized Controlled Trial. *Nutrients*, 13(2), 523. DOI: <https://doi.org/10.3390/nu13020523>