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Russian Psychological Journal

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All manuscripts submitted to the journal undergo a double-blind peer review process involving at least two experts.

The journal adheres to international standards of publishing ethics in accordance with the recommendations of the Committee on Publication Ethics (COPE).

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The journal aims to promote international scientific collaboration and exchange of new knowledge and recent developments in areas related to psychology. It seeks to familiarize specialists and all interested readers with the latest achievements of Russian scholars in resolving issues in present-day psychology.

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Russian Psychological Journal accepts theoretical, methodological and empirical contributions relating to scientific research results and achievements in implementation of these results and other innovations in the field of psychology.

The scope of the journal covers all areas of experimental, applied, fundamental, and interdisciplinary psychological sciences and includes (but is not limited to): general psychology; personality psychology; history of psychology; psychophysiology; medical psychology; correctional psychology; legal psychology; social psychology; educational psychology; developmental psychology; acmeology; labor psychology.

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The journal is intended not only for researches, scholars, students, and practitioners, but also for general readers with an interest in the state-of-the-art and most recent developments in psychology.

Russian Psychological Journal welcomes submissions from established researchers, young scholars, educators, and practitioners making significant contributions to thematic fields of the journal.

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Original research article

Russian Teachers' Perceptions of Kindness and Its Manifestations in Educational Activities

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Abstract

Introduction. In recent years, the research on kindness as a character trait has become a subject of increasing interest. The development of kindness in students is inextricably related to the study of kindness in teachers. However, there is the lack of critical attention paid to pedagogical kindness; the phenomenon of kindness has not been studied previously in Russia. This study aims to examine Russian teachers' perceptions of kindness, its manifestations, and its importance for educational activities.

Methods. The study participants (302 teachers) filled out an online questionnaire to define the concept of kindness, the way it manifests itself in educational activities, the importance of pedagogical kindness, and its impact on students, and also provided information on their gender, age, religiosity, presence and number of children, teaching experience, and the age group of students they work with. To process qualitative data, open coding and axial coding were used; multinomial logistic regression was used to identify associations between teachers' perceptions of kindness and kind actions and sociodemographic variables.

Results. The authors (a) identified five thematic categories in the definition of kindness: personal states and qualities, openness to others, understanding of others, external and internal actions and behaviors and (b) proposed a classification for pedagogically kind actions, according to their manifestations during skills and knowledge acquisition, educational activities accompanying educational process, and kindness outside school. No differences were found between teachers' perceptions of kindness and kind actions and their sociodemographic characteristics. The teachers recognize the importance of pedagogical kindness and its positive impact on students.

Discussion. Kindness is not equivalent to helping behavior. However, kindness usually manifests itself in behavior. Therefore, activity theory should be used as a framework for a further study of pedagogical kindness.

Keywords

pedagogical kindness, kindness, kind actions, activity theory, qualitative analysis, components of kindness, teacher's kindness, helping behavior, altruism, prosocial behavior

Highlights

- ▶ Activity theory is applicable to describing kindness and its manifestations in teachers' work.
- ▶ The concept of kindness is broader than the concept of helping/prosocial behavior.
- ▶ From the teachers' point of view, pedagogical kindness has a positive impact on the educational and upbringing processes.

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Introduction

In recent years, significant attention has been paid to the issues of kindness and its development in the context of school and preschool education. In particular, the Federal State Educational Standard of Basic General Education (2010) indicates that the development of students' benevolent attitudes is one of the main results of the educational process. Children's perceptions of kindness and the activities aimed at the development of kindness have been widely described and discussed (Luchina, 2018; Binfet & Passmore, 2019). However, a scholarly interest has only recently shifted to the study of teacher's kindness. Since the teacher is often a role model for children and has a considerable impact on their lives and worldviews, the teacher's kindness represents an integral component of a successful pedagogical process (Katkov, 2017; Loreman, 2011), and the 'inner warmth' of the mentor contributes to active development and showing interest (Vygotsky, 1991). In addition, teaching and kindness are inextricably interrelated, as they enable students to see the world and various situations through the eyes of their teacher (Eroshenkova, 2019; Clegg & Rowland, 2010). However, there is still no common understanding of the essence of teachers' kindness and its concrete manifestations.

In today's psychology and education kindness of teachers, educators or mentors is designated as 'pedagogical kindness', which manifests itself in academic or emotional support provided by teachers to students (Wentzel & Caldwell, 1997) and contributes to creating a safe educational environment and building productive relationships (Akhmerova, Ziatdinova, & Mukhamadeev, 2016; Magnet, Mason, & Trevenen, 2014).

A review of the related literature (Mordovina, 2014; Binfet, 2015; Caldwell, 2017; Fishbein & Ajzen, 2010) indicate that pedagogical kindness manifests itself through specific actions (external activity), which are considered as kind ones by recipients or observers. Attitudes, motives, goals, and potential readiness for kindness manifestation always underlie pedagogically kind actions.

Kind actions can be classified as follows (Canter, Youngs, & Yaneva, 2017):

1. Psychologically passive actions that do not require any specific activity (e.g. to give place to a person in a hurry).
2. Proactive actions as active assistance (volunteering, blood donation, etc.).
3. Prosocial actions based on social norms (to help others when they ask; to help pick up fallen

things) and containing an emotional component (to listen, to let others talk about their problems).

4. Hidden action (to search for a thing that can make another person happy; to cancel a trip when someone close needs help).

However, the above classification of actions relates to a wide range of actions and does not deal with pedagogical or educational activities.

A working definition treats pedagogical kindness as a moral quality of a teacher that has a positive impact on the upbringing and educational processes (Leybina, Pons, & Binfet, 2019). However, this definition and also classification of teachers' kind actions require further clarification. Some scholars define kindness as a characteristic of temperament (Knafo & Israel, 2012). Taking into account associations between character and temperament as well as character definitions, other researchers find it expedient to consider kindness as a character trait (Asmolov, 2001; Borozdina, 2015; Manolova, 2005).

One of the recently published studies on pedagogical kindness is the research conducted by Binfet & Passmore (2017), which, despite the limitations indicated by the authors themselves, is the first report of teachers' perceptions of kindness. Canadian teachers ($n = 257$) defined the concept of 'kindness' and gave examples of kind actions in teacher's work. Thus, the authors distinguished 11 characteristics of a kind teacher and manifestations of pedagogical kindness:

Consciousness – individuals' ability to place the needs of others above their own ones, responsibility, ability to make additional efforts, and, therefore, flexibility in relation to students' desires and needs.

1. Generosity – individuals' ability to devote their time, energy, physical resources, emotions, and willingness to share knowledge and technology.
2. Help – sharing food, time (e.g. volunteering), and things.
3. Care – sharing resources and materials.
4. Encouragement – individuals' ability to protect and support others, to improve others' lives, and to make others happy.
5. Perspective taking / empathy – individuals' ability to accept, be open, understand others and their feelings, treat others as equals.
6. Altruism – unselfishness, sincerity, not demanding anything in return.
7. Respect – a golden rule, fairness, politeness, good manners.
8. Friendliness – greetings, smiles.
9. Patience – taking into account another's standpoint, understanding, patience.
10. Acknowledgement – individuals' ability to acknowledge the efforts of others.

The above classification contains obvious repetitions and broad definitions. Moreover, it is necessary to describe in more detail the specific situations in teachers' work when these qualities manifest themselves. Living in specific cultural and historical context, Russian teachers may perceive kindness quite differently than their Canadian colleagues (Kulikova, 2018; Obukhov, 2017). Teachers' native language can also be very important, as it represents a system of guidelines in communication, including professional and educational, developed by the environment and culture where they grew up and live in (Leontiev, 1981). Additionally, the study of Canadian colleagues did not consider certain factors that may influence the idea of kindness, including gender (Eagly & Crowley, 1986), age (McNair, Okan, Hadjichristidis, & de Bruin, 2019), religiosity (Rabelo & Pilati, 2019); rural or urban place of living and working (Ennis & Chen, 1995), parenthood (Tudy & Gauran-Tudy, 2020; Rees, 1998); age groups of students a teacher works with – preschool, primary

school, secondary school, and high school students (Randall & Engelhard, 2009; Vartuli, 1999); and teaching experience (Kauts & Chechi, 2014).

Thus, this study *aims* to examine Russian teachers' perceptions of kindness, its manifestation, and importance for educational activities.

Methods

Sampling

The study sample comprised 302 preschool and school teachers from Yaroslavl and the Yaroslavl region ($n = 68$) and the Republic of Sakha (Yakutia) ($n = 234$). All the individual participants received a link to an online questionnaire which contained the description of the study, its purposes and importance, and a request for their voluntary participation. The mean age of the study participants was 42.89 ($SD = 11.65$); the average teaching experience was 26.1 ($SD = 9.8$); the average number of own children was 1.97 ($SD = 1.35$). Table 1 shows the qualitative characteristics of the sample.

<u>Variable</u>	<u><i>n</i></u>	<u>%</u>
Gender		
Male	57	18.87
Female	246	81.13
Place of residence		
Urban	170	56.29
Rural	132	43.71
Religiosity		
Yes	99	32.78
No	147	48.67
I don't know	56	18.55

<i>Qualitative characteristics of the sample</i>			
<u>Variable</u>	<u>n</u>	<u>%</u>	
Native language			
National language of one of the republics of the Russian Federation	124	41.07	
Russian	115	38.07	
Russian and one of the national languages of the Russian Federation	63	20.86	
Children			
Yes	249	82.45	
No	53	17.55	
Age group of students			
High school	32	10.59	
Secondary school	34	11.26	
Primary school	35	11.60	
Preschool	96	31.79	
Secondary and high school	58	19.20	
More than two groups	47	15.56	

Measurements

The online questionnaire contained questions related to the following:

1. *General socio-demographic information*: the variables are presented in the descriptive characteristics of the sample.
2. *Definitions of kindness*: providing a general definition of kindness and examples of teachers' kindness which manifests itself in specific actions (describe situations).

3. *Importance of kindness*: evaluating the importance of kindness in teachers' work and its impact on students.
4. *Occurrence of kind actions towards children*: providing information on the frequency of kind actions and on the difference between kindness inside and outside school.
5. *The desire to change individual level of kindness*.

Data analysis

The data was processed using the Intellectus Statistics (2020) and the standard content analysis procedure using the QDA Miner Lite v 2.0.8. (Provalis Research, 2020).

At the first stage of qualitative data analysis which represent the teachers' answers on the questions related to kindness perception, an open coding procedure was carried out without relying on a previously found theory (Charmaz, 2014), organized separately to provide definitions of pedagogical kindness and examples of its manifestations in teachers' work. During the procedure the main categories in the notions of kindness and the types of teacher' kind actions were identified (Ryan & Bernard, 2003); these categories and types were assigned with codes for categorization. Upon completion of the open coding procedure, the axial coding phase began (Charmaz, 2014), which made it possible to identify a number of broad categories for both the ideas of kindness and the examples of kind actions. If several categories or types were identified in a single answer, then each of the categories or types was considered separately. After defining the categories, similar categories were combined into broad ones.

Results

The way teachers understand kindness

When asked to define kindness, 98.1 % of the respondents provided specific 'codable' answers ($n = 524$). We combined 13 themes derived from definitions into 5 categories as follows: external (visible) actions and behaviors (30.2 %); internal (hidden) actions and behaviors (8.2 %); understanding of others (17.9 %); openness to others (24.9 %); personal states and qualities (13.2 %) (Table 2). A separate category (5.6 %) contains descriptions of the absence of unkind actions, thoughts, and feelings: 'absence of evil actions', 'absence of aggression', 'not to wish or do harm to another', 'not to be arrogant', 'not to differentiate good individuals from bad ones', 'not to offend', 'not to cause inconvenience', 'not to put individual interests above the interests of others, if it may harm someone', 'not to be indifferent', and 'not to slender'.

Multinomial logistic regression of independent variables, including age, gender, religiosity, place of residence, native language, presence and number of children, teaching experience, and the age group of students, demonstrated no significant differences in the five categories, which speaks in favour of a relative universality of the way teachers perceive kindness.

<u>Themes</u>	<u>%</u>	<u>Description and definition</u>
Personal states and qualities	13.2 %	

Table 2

Codes for the themes of kindness definition

<u>Themes</u>	<u>%</u>	<u>Description and definition</u>
1. Individual states	5.5 %	Love and respect to oneself, happiness, ability to see the world in bright colors, live in harmony with the world, to consider all things positively, joy, warmth of the soul
2. Values and moral characteristics	6.6 %	Sincerity, honesty and trust, justice, conscience, conscientiousness, modesty, devotion
3. Self-regulation / emotional stability	1.1 %	Regulation of emotions, patience, fully developed emotions, staying gentle, tranquility
Openness to others	24.9 %	
4. Orientation towards people	13.2 %	Responsiveness, sensitivity, attention to others, openness to others, open heart, cordiality
5. Love and good attitude	11.7 %	Loving others, nature, motherland, the world; good and warm attitudes, seeing good in others, benevolence, charity, mercy, favor, humanism
Understanding of others	17.9 %	
6. Understanding others (cognition)	7.9 %	Relating with understanding; understanding others, ability to stand in others' shoes, understanding others' behaviors; lenience
7. Understanding others (emotions)	5.1 %	Empathy, compassion, sympathy, joy of others' win
8. Tolerance	4.9 %	Not differentiating others by age and social status, simplicity in communication, treating others as equals, multidimensional perception of others (not differentiating good individuals from bad ones), to accept others, to respect others' opinion, loyalty

Themes	%	Description and definition
External actions and behaviors	30.2 %	
9. Help	15.3 %	Help in difficult situations, help, care, support, to be a pillar in a difficult time, help when it is needed or not needed, listening
10. Politeness/respect	8.5 %	Treating with respect, smiling, listening to the end, friendliness, careful attitude, good wishes, good breeding, tact, gratitude, caress, gentleness
11. Kind/pleasant actions	6.4 %	Making others' lives comfortable, making nice things to others, sharing, sharing inner warmth, useful deeds, making others happy, creating friendly atmosphere
Internal actions and behaviors	8.2 %	
12. Forgiveness	2.5 %	Forgiving an enemy, not holding grudges, forgiving mistakes
13. Altruistic actions	5.7 %	Compromise, self-sacrifice, going towards meeting others' view, selfless actions

Note: the respondents' statements were used (translated from Russian).

Thus, external and internal kind actions, which are key in understanding kindness (38.4 % of codes), have certain internal prerequisites (Pines & Maslach, 2000) that teachers inextricably linked to the concept of kindness. This means that when considering the phenomenon of kindness, activity theory by A. N. Leontiev (Leontiev, 1981) may be applied, and kindness may be understood as a character trait (Borozdina, 2015). Thus, teachers perceive *kindness as a character trait generated by personal states and qualities, openness to others and the ability to understand them, which manifests itself in external and internal positive actions and behaviors towards others*. This definition goes in line with the theory of planned behavior used to describe kindness (Caldwell, 2017). However, kindness not always manifests itself in helping behavior mentioned by 15.3 % of respondents, or altruism (5.7 %), which means that the category of kind behavior is broader than the category of helping/prosocial behavior (Shermazanyan, 2015).

The way pedagogical kindness manifests itself

Manifestation in actions and behaviors is key in teachers' perceptions of kindness. Therefore, our understanding of external manifestations (actions and behaviors) is important for describing pedagogical kindness. When asked to give examples of pedagogical kindness, 91.39 % of respondents provided specific 'codable' answers ($n = 422$), of which we distinguished 19 themes (Table 3), grouped into 3 categories: *kindness in the educational process associated with skills and knowledge acquisition* (15.9 %); *kindness accompanying educational activities* (54.2 %); *kindness outside school* (22.3 %). A distinctive feature here is that certain actions, for example, material assistance, are anonymous. Some respondents (7.6 %) noted that it is not the custom to talk about kind actions.

Multinomial logistic regression of independent variables, including age, gender, religiosity, place of residence, native language, presence and number of children, teaching experience, and the age group of students, demonstrated no significant differences in the three categories, which speaks in favour of a relative universality of the behavioral manifestations of pedagogical kindness.

Table 3

Codes for the themes of kindness manifestation

<u>Themes</u>	<u>%</u>	<u>Description and examples</u>
Kindness associated with skills and knowledge acquisition – 15.9 %		
1. Free educational assistance	4.9 %	Additional lessons, tutoring, work with slow learners, workshops, tutoring for the Unified State Examination, work with children with special needs
2. Additional efforts as a part of educational activity	2.4 %	Explain material clearly, additional explanations, to find effective ways of knowledge transfer to the students who do not understand the material
3. Moral support and inspiration as a part of classes	4.3 %	Praise, support, to allow redoing a task, to evoke interest, to grant a higher mark, to appreciate hard work and inspire for future success, to make students not afraid of making mistakes, to create success situations, to acknowledge own mistakes and misunderstandings
4. Mildness during classes	3.5 %	To assign simple home tasks, to provide liberty of actions, not to punish for mistakes, not to punish on public, provide constructive critique, without humiliation; to accept students' weaknesses and to help in coping with them
5. Support in other subjects	0.8 %	Support in understanding and preparation of other subjects

Table 3		
<i>Codes for the themes of kindness manifestation</i>		
<u>Themes</u>	<u>%</u>	<u>Description and examples</u>
Kindness accompanying educational activities – 54.2 %		
6. Moral support and encouragement in extracurricular activities and personal development	14.2 %	To comfort, to calm a student down, to nudge development, participation in competitions, to help a student open-up, to develop creative potential, public speaking, assist with self-determination, to develop student's self-confidence, love to life, communication skills, to help in beating fear and lack of self-confidence, to change students' attitude towards themselves, to organize interesting events, to bring to interesting places
7. Objectivity and respect	5.1 %	To relate to everyone with understanding, to avoid having 'favorites', to accept students as they are, to respect boundaries, to communicate ethically and politely
8. Tolerance to bad behaviors	5.9 %	Sympathetic consideration of students missing classes, being rude, expressing negative behavior
9. Physical manifestation	4.9 %	To smile, to respond to hugs and caress, to hug, to hold a student's hand, to put a hand on a shoulder
10. Attention to a student	9.3 %	To listen, to talk about student's problems, to ask students about themselves, their life, family, hobbies; to give advice, if a student asked for that, to commiserate with a student
11. Care after a student	2.4 %	To lend own thing (e.g. scarf) if a student has forgotten his/her own; help to clear the wound, help to dress-up, to look after students' appearance
12. Resolution of problematic situations	6.7 %	Constructive and careful resolution of challenging situations, with consideration of all parties' interests; to keep secrets which a student shared with a teacher, not to spread information about difficult situations or accidents if this causes negative consequences to a student
13. Regulation of relations in students' group	5.7 %	To protect an offended child, to take his/her side, to deliver developing talks and events, intended for relationships harmonization; public praise to increase a student's status

Table 3

Codes for the themes of kindness manifestation

<u>Themes</u>	<u>%</u>	<u>Description and examples</u>
Kindness outside school – 22.3 %		
14. To be a mediator for kind actions	4.1 %	To organize fundraising activities, facilitate kind words and actions exchange; to motivate students to help each other and their families
15. Work with a family	2 %	To assist children in establishing trustful relations with their families
16. Physical help	2.2 %	To carry a child if he/she can't walk; to clean child's house (if parents can't do that), to assist in digging up a garden
17. Custody	1.8 %	To arrange legal custody of a student, to provide temporary shelter, foster care
18. Material help	11 %	To buy goods and groceries for poor children and families, to pay for student's lunch, to buy stationery, to pay for a ride, to donate money for medical treatment, anonymous material help
19. Assistance to former students	1.2 %	To assist in a difficult situation, to help in resolving a challenging issue

Note: the respondents' statements were used (translated from Russian).

The respondents referred the most part of kind actions to the manifestations of *kindness accompanying educational activities* with moral support (14.2 %) and attention to a student (9.3 %) as the most frequent examples of kind actions, and *kindness outside school* with material assistance (11 %) as one of the most popular examples. *Kindness associated with skills and knowledge acquisition* had the least number of examples. This may be explained by the fact that the actions that could be characterized as kind are considered an inherent part of the educational and developmental process during classes (Kan-Kalik, 1987).

The above classification goes in line with the one proposed by Canter et al. (2017) in terms of the presence of all the four types of actions: hidden ('anonymous material assistance'),

passive ('assigning simple home tasks'), prosocial psychological action ('listening'), proactive action ('organizing fundraising activities'). Classification by Canter et al. was not used for coding as it does not consider specific characteristics of educational activities. However, this classification may speak in favour of the similarity of kind actions in pedagogical activities and outside them.

Obviously, activity theory by A. N. Leontiev (Leontiev, 1981) may be appropriate for considering pedagogically kind actions. Among kind actions there are external kind actions and behaviors visible to everyone (e.g. praise, help, etc.) and internal ones (ability to accept students as they are, to treat students' absence at lessons with understanding, to keep secrets), which corresponds to the general definition of kindness formulated above.

Importance of kindness in educational activities

Some respondents (57.61 %) argued that pedagogical kindness is essential for educational activities, while others (32.45 %) noted that it is quite important. Herewith, 70.20 % of respondents believed that it has a significant positive impact on students' academic success and their personal development; 22.51 % of respondents believed that kindness has a moderate positive effect. Therefore, the teachers themselves highly appreciated the importance of pedagogical kindness and its positive impact, which means that there is a need for further research of this phenomenon.

The way the teachers evaluate their own pedagogical kindness

Some teachers (53.64 %) noted that they are quite often kind to students, while others (26.82 %) argued that they are always kind. Such a level of self-assessment of kindness in the context of its high importance explains that 64.23 % of respondents pointed out that they did not notice any difference between the levels of their kindness at school and outside it and 16.22 % believed that their level of kindness at school was higher than outside it. The majority of teachers (80.79 %) mentioned that they were satisfied with their level of kindness and they did not want to change it (increase or decrease).

Discussion

The data on the categorization of pedagogical kindness and kind actions in teachers' perceptions are largely similar to those presented in the study by Binfet & Passmore (2017). In particular, the categories identified by Canadian colleagues, including consciousness, help, care, inspiration, perspective taking / empathy, altruism, respect, friendliness, patience, and acknowledgement are also found among the categories indicated by Russian teachers, which may speak in favour of a relative universality of this concept in different cultures.

The classification of kindness presented in this study has a clearer structure, develops and contributes to the results obtained by Canadian colleagues in previous research, provides specific descriptions, and makes it possible to categorize themes into more understandable categories that have similar characteristics, which determine the levels and personal predispositions of kindness. This contributes to the formulation of the evidence-based definition of kindness and to its further study. In particular, the following five categories of themes in the definition of kindness have been distinguished:

1. Personal states and qualities: individual state, values and moral characteristics, self-regulation, and emotional stability.

2. Openness to others: orientation towards others (attention), love and good attitude towards them.

3. Cognitive and emotional understanding of others and tolerance.

4. External actions and behaviors: help, politeness and respect, kind or pleasant actions.

5. Internal actions and behaviors: forgiveness, altruistic internal actions.

Relying on activity theory, we formulated a general definition of kindness as it was perceived by teachers.

In terms of examples of kind actions towards students, more specific descriptions of behaviors that teachers themselves consider as kind have been obtained and a classification of kind actions has been proposed, where all such actions were divided according to their presence in the educational process associated with skills and knowledge acquisition, in educational activities accompanying educational process, or outside school. It is logical that pedagogical kindness was observed in the educational process, educational and extracurricular activities. It should be noted that describing pedagogical kindness a significant number of teachers implied kindness outside school and even beyond the traditional understanding of the student-teacher relationship.

No differences were observed in the definitions of teachers' kindness and examples of kind actions depending on gender, age, religiosity, place of residence, native language, presence and number of children, teaching experience, and the age group of students, which indicated a relative universality in the way Russian teachers understand this phenomenon.

An important finding was that, as perceived by teachers, kind behavior was not equivalent to helping/prosocial behavior (Thielmann, Spadaro, & Balliet, 2020; Erkhova, 2002), altruism (Palta, 2019), or a separate element of the 'network of kindness' (Knafo & Israel, 2012).

Teachers recognized the importance of kindness in their work and its considerable positive impact on students' academic success and their personal development, which means that it is necessary to study this phenomenon in more detail. Since the theory of activity has been considered, further research on pedagogical kindness manifested in specific actions requires further investigation of goals and motives underlying actions, as well as operations when performing kind actions of a specific category. Additionally, it is important to study the components of kind actions, including decision-making, implementation, control, and correction. This may help describe pedagogical kindness and formulate its scientifically grounded definition. Further research should also involve teachers from other regions of the Russian Federation.

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Original research article

Psychological Characteristics of Children's Motivation for Participating in Artistic Gymnastics

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Abstract

Introduction. Sport motivation is generally considered in educational research, while its psychological foundations remain understudied. This study examines the impact of children's sociometric status, anxiety level, and family background, including parental attitudes, on their motivation for participating in artistic gymnastics.

Methods. The study sample comprised 95 preschool-aged and early school-aged children participating in artistic gymnastics for more than a year. In order to identify the psychological and socio-psychological characteristics of children's motivation, the following measurement tools were used in this study: (a) the Parental Attitudes Questionnaire (A. Ya. Varga, V. V. Stolin), (b) the Choose the Right Face test for the assessment of anxiety (R. Tamml, M. Dorky, V. Amen), (c) the Children's Manifest Anxiety Scale, CMAS (modified by A. M. Prikhozhan), (d) the measure for assessing the level of students' sport motivation by N. G. Luskanova (modified by O. N. Stepanova & A. N. Volkova), (e) sociometry, and (f) statistical data processing.

Results. The findings indicated that there are significant differences in characteristics of children with different levels of motivation. Depending on the parenting style, children with a high level of sport motivation had average or high levels of anxiety and high or low sociometric status in their training groups. Parental attitudes towards these children are characterized by a high level of acceptance and cooperation, which manifest itself in a positive attention to their interests, respect, and encouragement of independence and initiative.

Discussion. The results of this study contribute to our understanding of psychological conditions for optimizing children's sport motivation, open up opportunities for further research on the socio-psychological factors for children's sports motivation, and may be readily used in training programs to improve the psychological competence of sports coaches.

Keywords

motivation, sports activity, artistic gymnastics, training group, preschool-aged children, early school-aged children, coach, anxiety, sociometric status, parental attitude

Highlights

- Parents of children with high motivation for participating in artistic gymnastics are characterized by high levels of acceptance and cooperation in their parenting styles.
- Extrinsic (non-training) motivation towards sports is characteristic of children from the families with low or average levels of control in parenting styles.
- Low-motivated children demonstrate low or high levels of anxiety.
- Children with high status in their training groups have high or low motivation for participating in artistic gymnastics.
- A high level of anxiety in children is associated with lower levels of acceptance and cooperation in parenting styles.

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Introduction

Nowadays there is a growing popularity of sports. As a rule, the path to achieving high sports results begins in preschool childhood. Since, at this stage of child development socialization occurs in a playful way, novice athletes do not always show readiness for intensive training. In addition, sports exercises cannot always be performed in a playful way.

In recent decades, great importance has been attached to motivation for learning in Russia, Europe, the USA, and Canada (Nikitskaya & Tolstykh, 2018). As a rule, the issues of children's motivation towards sports are considered from the educational perspective (A. V. Rodionov et al., 2016; V. A. Rodionov et al., 2017). However, psychological factors remain important but understudied in the context of motivation for systematic participating in sports (Voronina, Krushelnitskaya, & Terentyeva, 2020; Lagutin & Kochengina, 2015; Jacobson, 1969; Chanal, Cheval, Courvoisier, & Paumier, 2019; Kipp & Bolter, 2020).

Studying how preschoolers are selected for the group of artistic gymnastics, Minnikaeva (2015) came to the conclusion that not only abilities, but also motivation, and children's interest in sports are very important. Highly motivated preschoolers most often show very good results in sports in the future (Minnikaeva, 2015). However, initially good motivation may not be sustainable. For example, the analysis of the developmental trajectories in children aged 8–12 years showed that motivation towards physical education starts to decline already at the primary school (Chanal et al., 2019).

Motivation itself does not always contribute to the aims of learning activity. For example, the experiment by Belgian researchers showed that children who were placed in a situation of choice when solving a creative problem were more likely to show intrinsic motivation and achieve greater results, compared to their peers who were deprived of such a choice (Waterschoot, Vansteenkiste, & Soenens, 2019). Pilishvili & Klinkov (2019) examined the influence of the type of educational institution on the motivational profile of students. Thus, the motives for self-development, aesthetic

pleasure, approval, and encouragement turned out to be the most important for participating in sports activities among adolescents of a comprehensive school. The motives for satisfying spiritual and material needs, collectivist orientation, and physical self-assertion prevailed among their peers who go in for a special sports school.

The analysis of psychological and educational research shows that the desire of preschool-aged and early school-aged children to participate in sports activities, as well as their athletic achievements, largely depend on the pedagogical qualifications of coaches who should take into account their personal and socio-psychological characteristics in educational interaction (Arkaeva, 2015; Voronina et al., 2020; Zhulina & Vaskina, 2016; Lagutin & Kochengina, 2015; Rogaleva, Malkin, Khaerzamanova, & Bogdanova, 2018; A. V. Rodionov et al., 2016; V. A. Rodionov et al., 2017; Pluhar et al., 2019).

A kind of sport can also play an important role in the development of children's skills. Thus, a longitudinal study showed that compared to children participating in team sports, their four-year-old peers practicing individual sports showed greater skills in self-regulation two years later (Howard, Vella, & Cliff, 2018). On the other hand, compared to those participating in team sports, children and adolescents practicing individual sports (gymnastics, running, diving) are more likely to show anxiety and depression (Pluhar et al., 2019).

Artistic gymnastics is one of the most traumatic and difficult-to-coordinate sports. The accuracy of the execution of gymnastics routines is very important. When performing exercises, novice athletes need to take into account the configuration of gymnastic apparatus to purposefully adapt their actions, preventing risk situations, that is, to solve rather difficult problems (Minnikaeva, 2015). Preschool-aged and early school-aged children are not yet ready to make adequate decisions; the satisfaction of their needs depends entirely on close adults, primarily parents. At the same time, personal and family factors of children's well-being are in dynamic interaction. For example, Slobodskaya & Akhmetova (2012) found that the risk of unfavorable development of children increases if negative conditions of upbringing are combined with unfavorable individual characteristics of children. On the other hand, the favorable conditions of family upbringing can reduce such risks (Slobodskaya & Akhmetova, 2012). A family structure can also have a considerable impact on a preschooler's personality. Compared with children living with both parents, their peers from single-parent families showed higher scores on anxiety, depression, self-distrust, hostility, feelings of inferiority, and conflict in communication (Golovey, Vasilenko, & Savenysheva, 2016).

Meanwhile, at this age children start to actively interact with 'social' adults – kindergarten teachers, school teachers, as well as coaches in professional sports clubs. Children's motivation towards sports largely depends on their relations with significant others – parents and other family members, teachers, and peers (Voronina et al., 2020; Lagutin & Kochengina, 2015; A. V. Rodionov et al., 2016; V. A. Rodionov et al., 2017; Shcherbinina, 2018; Al-Mashhadi, 2019). Nurgaleev, Finogenova, & Babiy (2019) found statistically significant differences in the sociometric status of schoolchildren-athletes in the informal structure of the school class. The findings indicated that schoolchildren participating in individual sports are predominantly high-status. Moreover, not a single schoolchild practicing sports was among the outsiders.

Al-Mashhadi (2019) discovered that the desire of girl gymnasts to belong to the significant community affects their sports achievements. The results of the study confirmed a direct relationship between social desirability and girls' desire for high-level skills in rhythmic

gymnastics (Al-Mashhadi, 2019). In addition, teachers' perceptions of children's abilities largely determine their success in developing sports skills (Platvoet et al., 2020). The more parents believe that their children can make a significant improvement in their abilities through efforts, the more children will strive to succeed and actually become successful at school (Matthes & Stoeger, 2018). Apparently, this pattern is universal and manifests itself in mastering various disciplines. For example, Dinkelmann & Buff (2016) found that parental belief in their children's competence promote academic motivation and academic performance in mathematics.

According to the results of a study by Kipp & Bolter (2020), parental behavior is associated with the performance of young football players through shaping a certain motivational climate in family relations. Thus, parents can play a more important role than coaches in shaping achievement motivation in their children. At the same time, authoritative and moderately selfish parents are less likely to insist on early sports specialization for their children than perfectionist parents with authoritative or permissive parenting styles, strongly dependent on their subjectively perceived social prescriptions (Wright, Chase, Horn, & Vealey, 2019).

Thus, characteristics of relationships between preschool-aged and early school-aged children and significant others, especially parents and teachers, are of great importance for shaping motivation towards sports. Due regard for these characteristics can enable coaches and sports psychologists to fully use psychological and educational means adequate to the age characteristics of children, promoting a positive emotional background of classes, a steady interest in systematic and purposeful motor activity, a child's desire to perform various motor exercises, and strive for full development.

Methods

Findings of several studies indicate the importance of anxiety (Arkaeva, 2015; Bozhovich, 2008; Zhulina & Vaskina, 2016; Yakobson, 1969) and the system of relations with significant others (Voronina et al., 2020; Krushelnitskaya & Orlov, 2013) for shaping academic motivation in children. However, we did not find any data on the impact of these variables on motivation towards sports among preschool-aged and early school-aged children.

This study *aims* to identify psychological and socio-psychological characteristics of motivation to practice artistic gymnastics in preschool-aged and early school-aged children.

In our study we used the following *measurement tools*: (a) the Parental Attitudes Questionnaire by A. Ya. Varga and V. V. Stolinn (Karelin, 2001); (b) the Choose the Right Face test for the assessment of anxiety in preschool-aged children by R. Tamml, M. Dorky, and V. Amen (Dermanova, 2002); (c) the Children's Manifest Anxiety Scale, CMAS (modified by A. M. Prikhozhan) for the assessment of anxiety in early school-aged children (Prikhozhan, 1995); (d) the measure for assessing the level of students' sport motivation by N. G. Luskanova, modified by O. N. Stepanova and A. N. Volkova (Stepanova & Volkova, 2019), which diagnoses four categories of educational activity – 'high motivation', 'good motivation' (typical of children participating successfully in sports), 'positive attitude towards training sessions' (predominance of extrinsic, non-training motives), and 'low motivation'; (e) sociometry; and (f) statistical processing of data using the SPSS software package.

The study sample comprised 95 children participating in artistic gymnastics for more than a year, of whom 44 were 5–6 years old preschool-aged children (5 groups, 20 girls, 24 boys) and 51 were 7–8 years old primary school-aged children (5 groups, 26 girls, 25 boys). The study was conducted in February – March 2020.

We examined the intragroup structure of groups of children using the sociometric procedure carried out individually with each child. During the conversation with children, we showed them photos of their groupmates and asked if they knew them. After an affirmative answer, we asked children whether they wanted to perform game-based exercises with them in the same team (the exercise was understood as a training exercise familiar to children that they recently performed under the guidance of their coach). In response, children expressed their consent or disagreement to work with their groupmates, which was recorded in the protocol of the sociometric procedure.

Results

Using the measure for assessing the level of students' sport motivation, we obtained statistically significant findings, indicating that sport motivation was higher in preschool-aged children (Mann–Whitney test; $p = 0.021$). Moreover, girls were more motivated than boys (Mann–Whitney test; $p = 0.003$).

The results of assessing children's motivation by the four levels showed that the majority of children have 'good' and 'extrinsic' levels of motivation (Fig. 1).

Using contingency tables, we found that these levels of motivation are more characteristic of preschool-aged children, especially girls ($\chi^2 = 8.313$; $p = 0.016$). At the trend level, it was found that compared to other children, 'low' motivation is more characteristic of school boys ($\chi^2 = 3.000$; $p = 0.083$).

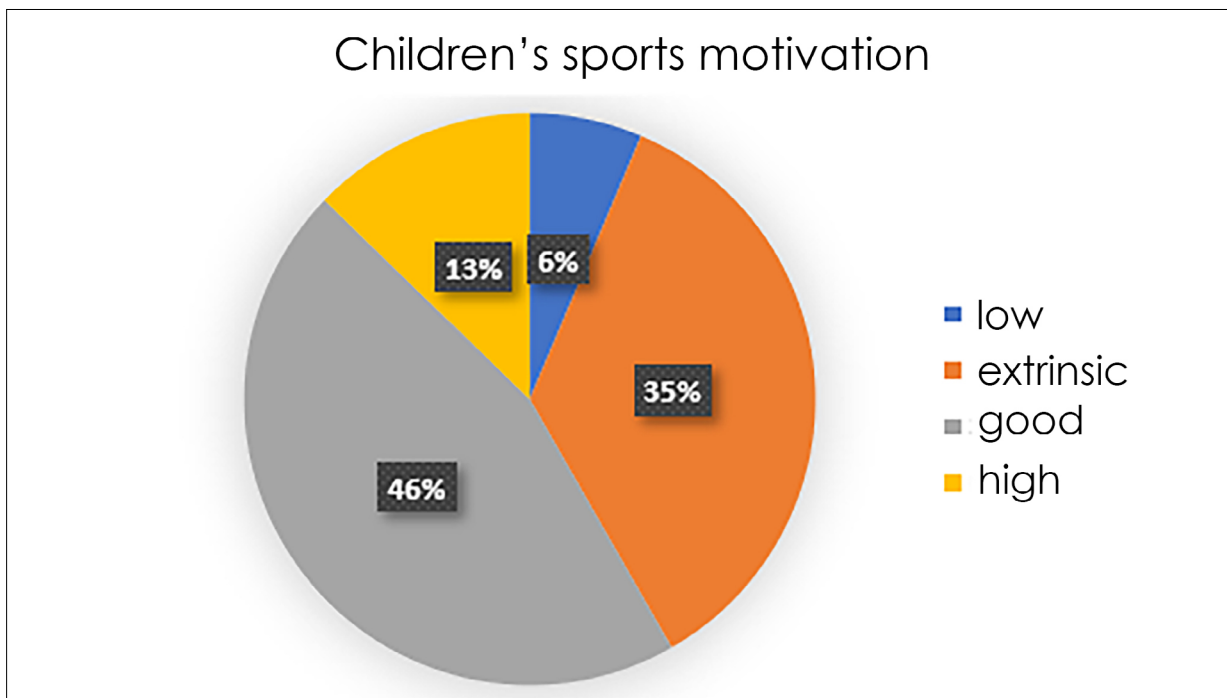


Figure 1. Percentage of children with different motivation for participating in artistic gymnastics

We diagnosed anxiety in preschool-aged children using the Choose the Right Face projective test corresponding to their age. This measurement tool examines a child's anxiety characteristics in typical life situations. For early school-aged children, we used the Children's Manifest Anxiety Scale, CMAS. Both assessment tools identified low, average, and high levels of anxiety (Fig. 2). The results showed that compared with preschoolers, early school-aged children are more likely to have high scores of anxiety (Mann–Whitney test; $p \leq 0.05$). Apparently, the increased anxiety of early school-aged children may be a consequence of the experience of difficulties in their adaptation to the educational environment at the first form.

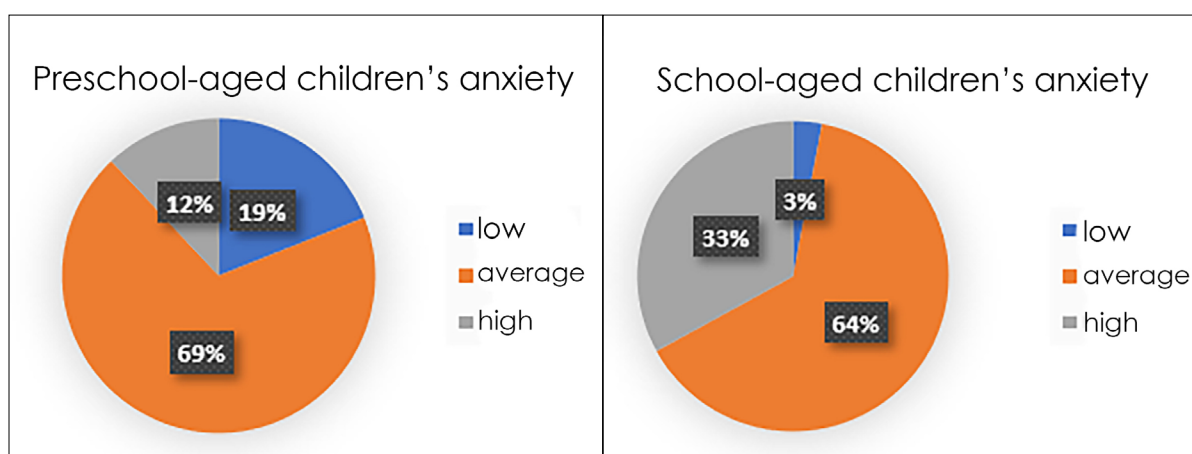


Figure 2. Percentage of anxiety scores for preschool-aged (5–6 years old) and early school-aged children (7–8 years old)

In preschool-aged and early school-aged children, the distribution sociometric statuses turned out to be standard for all the groups. Thus, about half the children were of average sociometric status in their training groups, 10 % of children were of low sociometric status, and 35–45 % of children were of high sociometric status. In general, the status structure of interpersonal relations in the groups turned out to be favorable.

The findings from the Parental Attitudes Questionnaire by A. Ya. Varga and V. V. Stolin indicated that the interviewed parents (all the participants in the study were mothers) most often showed a high level of acceptance of their children and had average scores on the other scales. Therefore, parents show a positive interest in the areas that are important for their children, are ready for cooperation, and strive to meet their reasonable needs (Fig. 3).

To identify the associations between children's sport motivation and other variables (styles of parenting, anxiety, and sociometric status of children in their training groups), we used contingency tables. For statistical significance the Pearson's χ^2 test was performed.

The statistical analysis showed that the parents of highly motivated children (with high educational activity, responsibility, conscientiousness, desire to perform all tasks of coaches), as a rule, show a high level of cooperation in relationships with children ($\chi^2 = 8.456$; $p = 0.048$). Parents of children with low sport motivation have a low level of cooperation (Pearson's criterion $\chi^2 = 11.144$; $p = 0.025$). Parents of children with 'good' motivation for participating in artistic gymnastics (according to the measurement tool developers, this motivation is characteristic of the majority of

children who successfully cope with sports activities), as a rule, have average scores on the 'cooperation scale', i.e. have a moderate level of cooperation with children, do not always show a sincere interest in them and take part in their affairs.

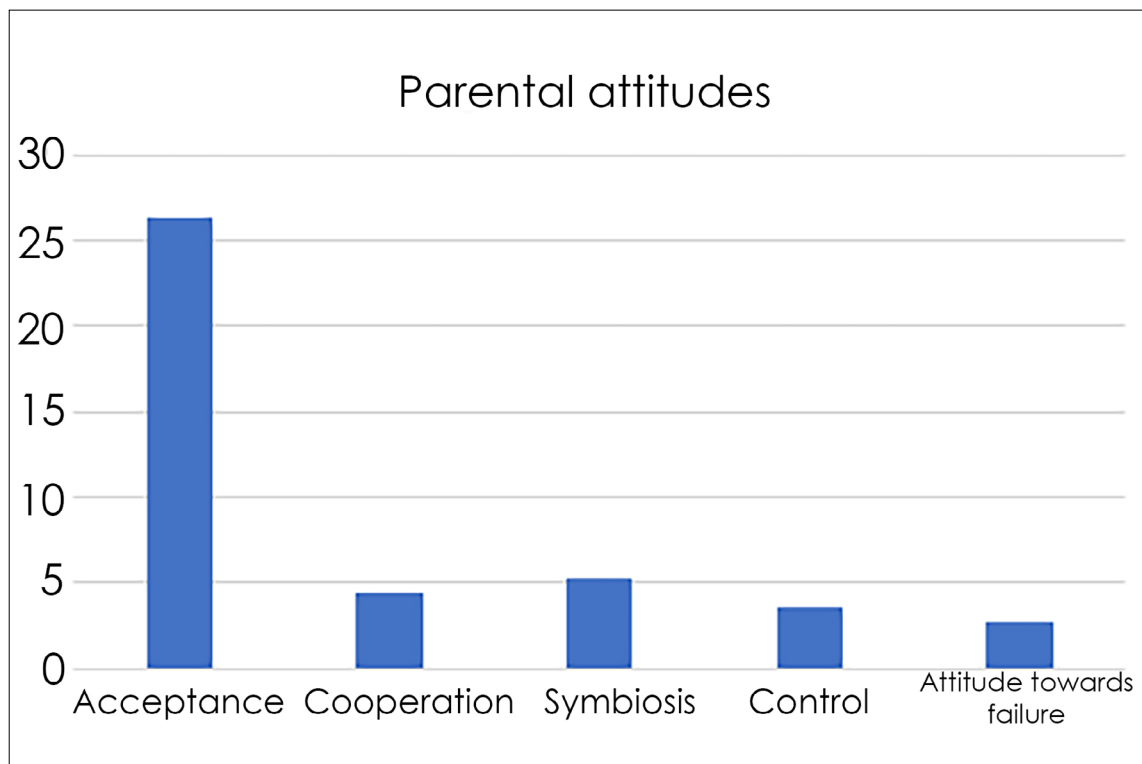


Figure 3. Characteristics of parental attitudes (mean scores)

The high level of children's motivation corresponds to high scores of 'acceptance' in the structure of parental attitudes ($\chi^2 = 13.583$; $p = 0.009$). The scores for the 'symbiosis' scale are at the average level. Apparently, a general emotionally positive attitude towards a child, combined with a moderate psychological distance in contact with a close adult, contributes to a child's desire to go in for sports.

High scores on the 'control' scale were characteristic of parents of children with 'good' but not the highest motivation for participating in artistic gymnastics ($\chi^2 = 12.034$; $p = 0.022$). Extrinsic motivation is most common in children of parents with low and moderate control in their parenting style. At the trend level ($\chi^2 = 6.431$; $p = 0.092$), the findings indicate that average and high scores on the infantilization scale (non-constructive attitude to child's failures) are generally characteristic of parents of children with reduced sport motivation.

Children with low motivation most often have low or high anxiety. The average level of anxiety was mainly observed in children with 'extrinsic' and 'good' sport motivation ($\chi^2 = 10.009$; $p = 0.042$).

High-status children are most often characterized by the highest or lowest motivation ($\chi^2 = 7.738$; $p = 0.050$).

Table 1 shows the characteristics of children's motivational profiles.

Table 1
 Motivational profiles of children participating in artistic gymnastics

Motivation	Children		Parents				Attitude towards failure
	Anxiety	Group status	Cooperation	Acceptance	Symbiosis	Control	
High	Average, high	High, low	High, average	High, average	Average	High	Low
Good	Average	Average	Average	High	Average	Average	Average
Extrinsic	Average	Average	Average	High	High	Average	Average, high
Low	High, low	High, low	Low	Average, low	Average	Average	Average, high

Thus, the highest motivation is characteristic of children (depending on the style of parenting) with both average and high levels of anxiety, high and average scores of acceptance, cooperation, and control in parenting styles, as well as with high or low sociometric status in their training groups.

We should also emphasize the importance of the results of studying the relationship between additional variables in our study – anxiety and characteristics of parental attitudes (using the Spearman’s rho test), since they can affect children’s sport motivation (Table 2).

Table 2
 Correlation analysis of associations between anxiety and parental attitudes towards children (Spearman’s rho test)

	<u>Acceptance</u>	<u>Cooperation</u>	<u>Symbiosis</u>	<u>Control</u>	<u>Attitude towards failure</u>
Anxiety	r -0.320*	-0.257*	-0.170	0.059	0.259*
	p 0.012	0.045	0.191	0.652	0.044

Note: * correlation is significant at the 0.05 level (2-tailed).

Table 2 shows that the high level of anxiety in children is associated with lower scores of acceptance and cooperation in parental attitudes as well as with more negative attitudes towards failures.

The contingency tables confirm that high scores of parental acceptance are associated with an average level of anxiety in children, and average scores of acceptance are associated with a high level of anxiety ($\chi^2 = 12.560$; $p = 0.002$).

Discussion

Anxiety is a significant factor in the success of any, including sports, educational activity. The characteristics of a child's interpersonal relations with peers and significant adults can both enhance and impede the development of high motivation when performing educational activities. Unfavorable relationships with significant others may lead to increased psychological stress in children, which prevents motivation to perform various, including sports, activities.

Compared to early school-aged children, preschool-aged children have higher level of sport motivation and lower level of anxiety. This may be explained by the fact that preschool-aged children still do not perceive sports as an activity that requires constant and hard work associated with responsibility for current and future results. For them, participating in sports sessions is rather an interesting way of spending time, when they can enjoy moving, playing, and chatting. In older preschoolers, sport motivation is facilitated by the high physical activity characteristic of this age, the development of cognitive functions and psychomotor skills, interest in communication, and the accumulation of social experience. Play as the leading type of activity for preschoolers enables children to relate to their sports achievements without excessive worry, even if the results are not very good.

First-graders have just made a very important transition from kindergarten childhood to the position of a junior schoolchild. They master a new social status, go through a difficult stage of adaptation to the learning environment at school (according to A. V. Petrovsky, at the primary school age, the processes of socio-psychological adaptation prevail over the processes of individualization and integration of children into the learning environment) (Krushelnitskaya & Orlov, 2013). Educational activity is the leading activity, which determines primary school-aged children's relations with adults that fundamentally differ from those of preschoolers. The social situation of their development is supplemented with the expansion of the range of tasks, completing homework assignments, which can also reduce the interest and motivation of first graders towards additional sports activities.

The higher sport motivation in girls can be explained by the fact that the level of girls' motivation for learning is generally higher than in boys (Bozhovich, 2008; A. V. Rodionov et al., 2016; V. A. Rodionov et al., 2017) as well as conformity towards significant adults which is more typical of them.

The findings of our study indicated that the most popular (high-status) children in their sports groups are characterized by high and low motivation. This result may be explained by the desire of children unpopular among peers to raise their status, which can be done by diligence in studies and mastering sports skills (since for preschool-aged and early school-aged children, the coach is a highly respected person, whose assessments structure the system of interpersonal relations in the group). Children can also raise the status in their group through their communication skills, 'skills to be friends', while not trying to diligently fulfill the teacher's requirements.

We should also note that a child may show an increased desire to achieve a high status in a group of peers because of unsatisfactory relationships in the family, first of all, relations with parents. The child may seek to compensate for dissatisfaction with the parenting style by increasing his/her status in the peer group. In our study, we studied parental attitudes only on the basis of a survey of adults; therefore we do not have data on how much a child's subjective perception of the style of parenting coincides with the opinion of his/her parents.

The results of various studies show that parents are the most significant persons for their children (Krushelnitskaya & Orlov, 2013). Therefore, the results of our research enable us to argue that the parent-child relationship is the key factor that considerably affects the children's anxiety, their relationship with peers and, as a consequence, sport motivation.

Conclusion

A theoretical analysis of the issues of motivation for participating in artistic gymnastics among preschool-aged and early school-aged children shows that they are still underdeveloped in psychology. The findings of our research indicate that, depending on the parental attitude, the children most motivated for participating in artistic gymnastics have an average or high level of anxiety, and a high or low sociometric status in their training group. Parents of children with the highest sport motivation demonstrate 'acceptance' and 'high level of cooperation' towards them.

The results of the study confirmed that motivation for participating in artistic gymnastics in children is associated with the parental attitudes, anxiety, and the characteristics of interpersonal relationships with peers in a sports training group.

In our opinion, the results obtained in the current study can be used to improve the effectiveness of training sessions. Data on the characteristics of motivation and anxiety of novice athletes can help coaches to build individual teaching strategies, to adapt the style of pedagogical communication, taking into account children's personality traits. Moreover, the coach will be able to give parents psychologically grounded recommendations to optimize their interaction with children in order to increase interest in gymnastics classes.

Taking into account the patterns identified in the study can also be useful in the development of training programs for sports psychologists, coaches, and other specialists working with novice athletes.

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Original research article

Associations Between Emotional Intelligence and Personality Traits Among Socially Active Students

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Abstract

Introduction. This study is a first exploration of associations between emotional intelligence and personality traits in a new generation of socially active students. The authors consider associations of emotional intelligence and personality traits both on levels of domains and facets.

Methods. The study sample comprised 132 students of Southern Federal University aged 17–25 years (80 females and 52 males). All the respondents were representatives of socially active youth; they took an active part in professional and creative competitions, social projects, and self-assessed their level of social activity as high or above average. The study used the following psychological tests: (a) the Emln inventory for assessing emotional intelligence by D. V. Lyusin and (b) the Big Five Inventory-2 modified by S. A. Schebetenko. The R software package for the non-parametric and parametric analysis was used for statistical data processing.

Results and Discussion. Socially active students' emotional intelligence had general (characteristic of all its components) and specific (characteristic of its individual components) associations with personality traits. General associations are those among 'negative emotionality' and 'anxiety' and all the structural components of emotional intelligence. Positive associations among 'energy level' and the components of emotional intelligence related to managing emotions, and negative ones among 'emotional volatility' and structural components of intrapersonal emotional intelligence ($p \leq 0.05$) are classified as specific. The combination of negative emotionality and agreeableness affects general and interpersonal emotional intelligence; the combination of extraversion and negative emotionality affects intrapersonal emotional intelligence.

Conclusion. The results can be applied for the development of students' individual educational trajectories and recommendations for psychological and pedagogical support of students with leadership talent and special educational needs in social activity.

Keywords

emotional intelligence, personality traits, negative emotionality, extraversion, agreeableness, open-mindedness, conscientiousness, social activity, students, special educational needs

Highlights

- High scores on extraversion as a personality trait of socially active students contribute to an increase in the level of interpersonal emotional intelligence. Low scores on negative emotionality contribute to the development of intrapersonal emotional intelligence.
- The combination of negative emotionality and agreeableness affects general and interpersonal emotional intelligence. The combination of extraversion and negative emotionality affects intrapersonal emotional intelligence.
- Results of the study of associations among negative emotionality, extraversion, and emotional intelligence may be used in the development of technologies for psychological counselling when working with students with needs for social activity.

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Introduction

The development of Russian education in the 21st century is impossible without answers to social challenges. To become competitive and successful under overabundance of information and a considerably increased number of interpersonal contacts, a today's student must be socially active and constantly develop his/her communication skills. At the same time, a young person's emotional intelligence, which contributes to an adequate perception of a partner and emotional self-regulation, which, in turn, affects his/her communication efficiency is of great importance.

Over the past three decades, there has been a considerable increase in the number of research papers aimed at studying emotional intelligence. Most of these works examine the role of emotional intelligence in the personal and professional achievements of young people. In particular, the authors indicate that there is a reliable association of a high level of emotional intelligence with willingness to successfully master university programs in the online format (Alenezi, 2020), emotional regulation (Megías-Robles et al., 2019), emotional stability (Lyusin & Mohammed, 2018), and successful interprofessional communication and student leadership qualities (Haight et al., 2017). The highest level of emotional intelligence is observed in early adulthood, which is very important for young people's self-realization (Obukhova, 2013; Obukhova & Obukhova, 2015). Thus, researchers have shown a considerable role of emotional intelligence in successful social activity of young people.

The *'emotional intelligence'* concept was introduced in 1990 by P. Salovey and D. Mayer. The authors defined it as one of the forms of intelligence, which is responsible for individuals' ability to detect their own and other people's emotions and to use this information when forming an action plan (Salovey & Mayer, 1990). Since then, the concept of emotional intelligence has been revised and changed several times. In Russian psychology, emotional intelligence was the most fully defined by D. V. Lyusin. According to D. V. Lyusin, emotional intelligence is a psychological construct that is formed during an individual's life under the influence of a number of factors that determine its

level and specific individual characteristics. Emotional intelligence includes individuals' ability to understand and control their emotions and emotions of others as well (Lyusin, 2004).

Associations of emotional intelligence and personality traits have been actively studied since the second decade of the 21st century (Bochkova & Meshkova, 2018; Vorobyeva, Perkov, & Shchetinina, 2017; Saakyan, 2015; Shipitko, 2019; Atta, Ather, & Bano, 2013). Undoubtedly, prior to this period there were empirical studies on this topic but they were mostly single (van der Zee, Thijs, & Schakel, 2002; Avsec, Takšić, & Mohorić, 2009). In psychology, emotional intelligence and personality traits are still studied in isolation from each other, when studying other psychological characteristics, for example, leadership, mood, etc. (Krasnov, 2018; Lyusin & Ovsyannikova, 2015; Belokon, 2008; Stolarski, Jankowski, Matthews, & Kawalerczyk, 2016). It was in studies that examined the effect of emotional intelligence and personality traits on other psychological characteristics that correlations between personality traits and emotional intelligence were established.

In Russian psychology, associations of emotional intelligence and personality traits were examined by Lyusin (2006). In his study the sample comprised students aged 17 to 27 years. Digitalization, a decrease in interpersonal communication among students, current epidemiological situation, expected increase in distance learning, and increase of its proportion in the mixed learning model explain certain changes in the level and structure of emotional intelligence among youth during the 20s of the 21st century. Besides, today's students are characterized by psychological features specific to the new generation that may be interrelated with emotional intelligence. However, to date, there is no evidence of such associations in Russian psychology.

In the study by Lyusin & Ovsyannikova (2015), the age of respondents ranged from 17 to 49 years old, which makes it impossible to compare the results of the study with the data obtained in 2006 and to consider changes in associations of emotional intelligence and personality traits between representatives of different generations.

We should also note that the issue whether the concept of emotional intelligence is an independent one is still under discussion. For example, the concept of emotional intelligence by Nosenko & Kovrig (see Andreeva, 2009) considers the complex of personality traits as a characteristic of emotional intelligence. At the same time, Andreeva (2009) opposes the inclusion of emotional intelligence in the complex of personality traits.

Several researchers presented more comprehensive studies on associations of emotional intelligence and personality traits (Alghamdi, Aslam, & Khan, 2017; Alegre, Pérez-Escoda, & López-Cassá, 2019; Avsec et al., 2009; Hjalmarsson & Dåderman, 2020; Edobor & Joseph, 2020). Most of the research data has been used as the basis for meta-analytic articles, which results are conflicting. For example, some studies conclude that emotional intelligence and the GFP (General Factor of Personality) are identical (Anglim, Morse, Dunlop, Minbashian, & Marty, 2020; van der Linden et al., 2017). Another meta-analytic study did not find correlations between personality traits and emotional intelligence (Miao, Humphrey, Qian, & Pollack, 2019). We should also note that all the meta-analytic studies used different models of emotional intelligence and personality traits.

Thus, we may conclude that the studies available at the moment are contradictory and incomplete, since most of them do not directly examine associations of emotional intelligence and personality traits; those of them that consider this issue cannot be comparable for several objective reasons. First, researchers base their findings on different theories and ideas about personality traits. Secondly, the age composition of the samples differs considerably. Accordingly, it is impossible to see a shift in associations of emotional intelligence and personality traits among different generations. At the

same time, the increased social activity of young people, which requires successful interpersonal communication and regulation of emotional states prompts to reconsider associations of emotional intelligence and psychological characteristics in today's students.

Therefore, this study *aims* to examine associations of characteristics of emotional intelligence and personality traits in socially active students.

The authors put forward the following *hypotheses*:

1. General and specific associations of the structural components of emotional intelligence and personality traits are characteristic of socially active students. General associations are those among all the components of emotional intelligence; specific associations are characteristic of its individual components.

2. A certain combination of personality traits may affect emotional intelligence of socially active students.

Methods

The research was carried out in two stages (preliminary and main). At the preliminary stage, the sample comprised 197 students aged 17–25 years, studying at Southern Federal University (mainly socio-humanitarian disciplines) and taking part in various professional and creative competitions, student project intensives, social projects, which was confirmed by the official lists of participants of these activities. Student participation in the study was voluntary. At the preliminary stage of the study, students were asked to fill out a questionnaire about the level of their own social activity (low, average, high, and below or above average).

At the main stage of the study, the sample comprised 150 students who self-assessed their own social activity as high and above average. Consequently, social activity of the students who took part in the study was determined by objective (participation in social events) and subjective (high and above average level of social activity) factors, which corresponds to the idea of its essential characteristics – self-determination and involvement in interaction (Kharlanova, 2011).

The tasks of the main stage of our empirical research were fully completed by 132 students out of 150 those participating at the preliminary stage. The results presented in this paper were obtained in the study of these 132 socially active students (aged 17–25) – 80 females (mean age = 19 ± 2) and 52 males (mean age = 21 ± 3). The participants of the main stage of the study were asked to fill out the following questionnaires: the Emln inventory for assessing emotional intelligence by D. V. Lyusin (Lyusin, 2006) and the Big Five Inventory-2 modified by S. A. Schebetenko (Shchebetenko, Kalugin, Mishkevich, Soto, & John, 2018). The R software package was used for statistical data processing, including descriptive analysis, rank correlation analysis (Spearman's rho test), and multiple regression analysis (Student's t-test).

Results and Discussion

Tables 1 and 2 present the results of descriptive statistics for the scales of emotional intelligence and personality traits of socially active students. Normal distribution is observed for all the characteristics.

There is a dispersion of the average scores of characteristics of emotional intelligence in the sample. Based on the average scores of the characteristics of emotional intelligence in the sample of students, we established the average level for interpersonal (44 scores) and general (86 scores) emotional intelligence and the low level (37 scores) for intrapersonal emotional intelligence. With normative mean scores of interpersonal (40–46), intrapersonal (39–47), and general (79–92) emotional

intelligence (Lyusin, 2006), each of the diagnosed characteristics of emotional intelligence is between low and high scores (Table 1, Table 2).

The correlation analysis indicated the presence of general associations of the structural components of emotional intelligence and personality traits (Fig. 1).

	Interpersonal emotional intelligence			
	Understanding emotions	Managing emotions	Interpersonal emotional intelligence	
Minimum	14	4	26	
Median	24	20	43	
Mean	25	19	44	
Maximum	36	29	65	
SD	5	5	9	
	General emotional intelligence			
	Understanding emotions	Managing emotions	General emotional intelligence	
Minimum	23	17	52	
Median	42	39	84	
Mean	43	40	86	
Maximum	62	57	121	
SD	9	9	16	
	Intrapersonal emotional intelligence			
	Understanding emotions	Managing emotions	Controlling expression	Intrapersonal emotional intelligence
Minimum	10	4	0	10
Median	18	13	10	39
Mean	19	13	11	37
Maximum	30	21	20	66
SD	5	4	4	14

Table 2
 Descriptive statistics for the Big Five Inventory-2

	<u>Extraversion</u>	<u>Agreeableness</u>	<u>Open- mindedness</u>
Minimum	14	11	16
Median	39	45	46
Mean	38	45	46
Maximum	57	59	58
SD	9	8	8
	<u>Conscientiousness</u>	<u>Negative emotionality</u>	
Minimum	7	13	
Median	45	36	
Mean	46	36	
Maximum	69	58	
SD	9	9	

We observed a significant positive correlation between the scores the 'energy level' scale (facet of the 'extraversion' domain) and the following scales: 'managing emotions of others' ($r = 0.54$; $p < 0.01$), 'general level of interpersonal emotional intelligence' ($r = 0.50$; $p < 0.01$), and 'general level of emotional intelligence' ($r = 0.51$; $p < 0.01$). In addition, results showed that there is a significant negative correlation between the following scales: 'managing emotions' and 'depression' (facet of the 'negative emotionality' domain) ($r = -0.51$; $p < 0.01$); 'controlling expression' and 'negative emotionality' ($r = -0.51$; $p < 0.01$); 'general level of emotional intelligence' and 'negative emotionality' ($r = -0.54$; $p < 0.01$); 'general level of emotional intelligence' and 'anxiety' (facet of the 'negative emotionality' domain) ($r = -0.50$; $p < 0.01$); 'controlling expression' and 'emotional variability' (facet of the 'negative emotionality' domain) ($r = -0.54$; $p < 0.01$); 'general level of emotional intelligence' and 'emotional variability' (facet of the 'negative emotionality' domain) ($r = -0.50$; $p < 0.01$).

Personality traits	Emotional intelligence characteristics									
	Understanding emotions of others	Managing emotions of others	Interpersonal emotional intelligence	Understanding individual emotions	Managing individual emotions	Controlling expression	Intrapersonal emotional intelligence	General emotional intelligence	Understanding emotions	Managing emotions
<u>Extraversion</u>	0.2	0.4	0.4	0.1	0.3	0.2	0.3	0.4	0.2	0.4
<u>Sociability</u>	0.1	0.1	0.2	0.3	0.3	0	0.1	0.2	0.2	0.2
<u>Assertiveness</u>	0.3	0.5	0.5	0.1	0.4	0.3	0.3	0.5	0.3	0.5
<u>Energy level</u>	0.1	0.4	0.3	0.4	0.4	0.3	0.3	0.4	0.1	0.4
<u>Agreeableness</u>	0	0.2	0.12	0	0	0.1	0.1	0.1	0	0.1
<u>Compassion</u>	0.1	0.2	0.1	0	0	0.1	0	0.1	0	0.2
<u>Respectfulness</u>	0.2	0.2	0.2	0.1	0	0.1	0.1	0.2	0.1	0.2
<u>Trust</u>	0	0	0	-0.1	0	0	0	0	0.1	0
<u>Conscientiousness</u>	0	0.2	0.1	0.1	0.3	0.2	0.3	0.2	0.1	0.2
<u>Organization</u>	0	0	0	0	0.2	0.2	0.2	0.1	0	0.2
<u>Productiveness</u>	0	0.1	0	0.1	0.2	0.1	0.2	0.1	0	0.2
<u>Responsibility</u>	0.1	0.2	0.1	0.1	0.2	0.3	0.3	0.3	0.1	0.2
<u>Negative emotionality</u>	0.3	-0.3	-0.4	-0.4	-0.6	-0.5	-0.6	-0.6	-0.4	-0.4
<u>Anxiety</u>	-0.3	-0.4	-0.4	-0.3	-0.5	-0.5	-0.5	-0.6	-0.3	-0.3
<u>Depression</u>	-0.2	-0.3	-0.3	-0.4	-0.5	-0.2	-0.5	-0.5	-0.4	-0.3
<u>Emotional volatility</u>	-0.2	-0.1	-0.2	-0.3	-0.4	-0.6	-0.5	-0.5	-0.3	-0.3
<u>Open-Mindedness</u>	0	0.2	0.1	0.2	0	0.1	0.1	0.1	0.1	0
<u>Intellectual curiosity</u>	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.2	0.2
<u>Aesthetic sensitivity</u>	-0.1	-0.1	0.1	0	-0.1	0	0	-0.1	0	0.2
<u>Creative imagination</u>	0.2	0.3	0.3	0.2	0.1	0.1	0.1	0.4	0.3	0.4

Figure 1. Associations of the structural components of emotional intelligence and personality traits: the correlation matrix

Legend: 1. The correlation matrix presents the correlation coefficient of the Emln Inventory and the Big Five Inventory-2 (Spearman rank correlation). 2. Correlation coefficients with the level of significance less than 0.05 are crossed out by a horizontal line. 3. The integral characteristics of the Emln Inventory are marked in bold font without underlining. The components of the integral characteristics of the Emln Inventory are marked in normal font without underlining. Personality domains of the Big Five Inventory-2 are marked in bold font with underlining. Personality facets of the Big Five Inventory-2 are marked in normal font with underlining.

The above statistical data indicate that research participants with a high level of extraversion as a personality trait have a high level of interpersonal emotional intelligence, which is logical and natural, since socially active students have a pronounced external orientation towards society, which contributes to the formation of their skills. And if an individual enjoys communicating with others, then, accordingly, his/her skills of interaction and understanding emotions of others will be at a higher level. The second part of the data indicates that socially active students with low scores on facets of the 'negative emotionality' domain and this domain itself have a higher level of intrapersonal emotional intelligence by all its scales. This also seems to be very consistent with reality and theoretical logic, since individuals' ability to manage their emotions, understand them and control expression will positively affect a person's ability to cope with negative emotions.

Associations between 'negative emotionality' and 'extraversion' may be considered as a mechanism for psychological counselling, when, for example, the development of extraversion will lead to a change in the level of negative emotionality. Considering that extraversion, in turn, positively correlates with the level of interpersonal emotional intelligence, and negative emotionality is negatively correlated with intrapersonal emotional intelligence, and some components of intrapersonal emotional intelligence are associated with components of interpersonal emotional intelligence, it is likely to observe a certain interdependence. This means that influencing on one of the above criteria, we can change all the parameters of this circle of the interdependence. This pattern is important for the optimization of the educational process and psychological and pedagogical support of students with special educational needs, for example, with disabilities, with various kinds of addictions, with gifted students, and for the development of intrapersonal emotional intelligence in socially active students as well.

We also observed the following specific associations (see Fig. 1): 'sociability' (facet of the 'extraversion' domain) and the 'conscientiousness' domain positively correlated with the component of 'managing emotions' ($r = 0.3$ at $p < 0.05$); the 'responsibility' facet is positively correlated with the component of 'controlling expressions' ($r = 0.3$ at $p < 0.05$). 'Intellectual curiosity' and 'creative imagination' (facets of the 'open-mindedness' domain) are positively correlated with 'general emotional intelligence' ($r = 0.3$ at $p < 0.05$).

Consequently, the ability to evoke certain emotions in others, to reduce the intensity of unwanted emotions, as well as the ability to manipulate others are closely associated with individuals' level of sociability, open-mindedness, self-confidence, proactiveness, creative imagination, and their leadership qualities, enthusiasm, and ability to cope with stress.

Self-confidence, energy, and enthusiasm are also highly correlated with the socially active students' ability to control their emotions. Anxiety, constant tension, depression, inability to be in a positive mood after failures, emotional instability, and mood swings negatively affect the ability to manage emotions and their external manifestations. However, no significant associations were found between anxiety and constant tension, on the one hand, and the ability to recognize emotions, on the other. The study of participants' ability to cope with emotions and their manifestations was associated with responsibility, stability, ability to finish projects, persistence, organization, and a tendency to maintain order. At the same time, the high level of students' ability to understand and correctly interpret their emotions is associated with less pronounced tendency to depression, inability to maintain a positive mood after failures, emotional instability, and mood swings.

Our findings do not go in line with the results of another study. In our study, 'extraversion' is positively correlated with all the integral structural components of emotional intelligence, with the exception of 'understanding emotions'. Meanwhile, Lyusin & Ovsyannikova (2015) state that 'extraversion' is positively correlated only with 'interpersonal emotional intelligence'. In the same study, 'conscientiousness' is positively correlated with all the integral structural components of emotional intelligence. However, the results described above indicate associations between 'conscientiousness' and 'intrapersonal emotional intelligence'. 'Agreeableness' is associated with 'understanding emotions', 'interpersonal emotional intelligence', and 'general emotional intelligence'. Meanwhile, in our study we observed no significant associations. Such differences in results may be explained by the different age composition of the samples, different time periods of the study, and the representation of socially active students in our study.

When conducting multiple regression analysis, we created three models, based on three main structural components of emotional intelligence – 'general emotional intelligence' (Table 3), 'interpersonal emotional intelligence' (Table 4), 'intrapersonal emotional intelligence' (Table 5). In each model we considered the impact of personality traits on a component of emotional intelligence.

Let us consider the results of the multiple regression analysis of the component of 'general emotional intelligence', which is integral for other ones. Model 1 presents the impact of personality domains on the integral component of 'general emotional intelligence' ($p < 0.01$). The proportion of the explained variance was 0.37, that is, about 37 % of the data on emotional intelligence may be explained by personality traits included in this model. This model indicate that such personality domains as 'extraversion', 'negative emotionality', and 'agreeableness' affect 'general emotional intelligence' ($p < 0.05$). The mutual impact of 'negative emotionality' and 'agreeableness' ($p < 0.05$) is also significant (Table 3).

Table 3				
<i>Multiple regression analysis, Model 1</i>				
<u>Model 1. General emotional intelligence</u>				
Rates				
Personality domain	Standard error	t-statistics	p-value	
Extraversion	0.23780	2.051	0.044617 *	
Negative emotionality	0.65043	-3.643	0.000564 ***	
Open-mindedness	0.22260	1.903	0.061816 .	

Table 3
 Multiple regression analysis, Model 1

<u>Model 1. General emotional intelligence</u>			
Agreeableness	0.63540	-2.364	0.021341 *
Mutual impact of negative emotionality and agreeableness	0.01676	2.214	0.030637 *
R-square: 0.4184; adjusted R-square: 0.3699			
F-statistic: 8.632; p < 0.001			
p-value: 0 '****' 0.001 '***' 0.01 '**' 0.05 '.'			

Model 2 demonstrates the impact of personality domains on 'interpersonal emotional intelligence' (the proportion of explained variance is 18 %, p < 0.005). In this case, 'extraversion', 'negative emotionality', and 'agreeableness' affect 'interpersonal emotional intelligence' (p < 0.05). There is also a mutual impact of 'negative emotionality' and 'agreeableness' (p < 0.05) (Table 4).

Table 4
 Multiple regression analysis, Model 2

<u>Model 2. Interpersonal emotional intelligence</u>			
Rates			
Personality domain	Standard error	t-statistics	p-value
Extraversion	0.14678	2.832	0.00625 **
Negative emotionality	0.38385	-2.705	0.00885 **
Agreeableness	0.36830	-2.050	0.04468 *
Conscientiousness	0.127652	-0.072	0.94312

Table 4 Multiple regression analysis, Model 2			
<u>Model 2. Interpersonal emotional intelligence</u>			
Mutual impact of negative emotionality and agreeableness	0.01001	2.186	0.03267 *
R-square: 0.2341; adjusted R-square: 0.1839			
F-statistic: 4.661; p < 0.01			
p-value: 0 **** 0.001 *** 0.01 ** 0.05 '.'			

Model 3 demonstrates the impact of personality domains on ‘intrapersonal emotional intelligence’ (the proportion of the explained variance is 0.39, p < 0.001), i. e. 39% of emotional intelligence may be explained by the impact of personality traits. Therefore, we may conclude that such personality traits as ‘extraversion’, ‘negative emotionality’, ‘conscientiousness’ affect intrapersonal emotional intelligence. There is also a mutual impact of ‘extraversion’ and ‘negative emotionality’ (p < 0.01) (Table 5).

Table 5 Multiple regression analysis, Model 3			
<u>Model 3. Intrapersonal emotional intelligence</u>			
Rates			
Personality domain	Standard error	t-statistics	p-value
Extraversion	0.63156	-2.673	0.009695 **
Negative emotionality	0.61641	-4.025	0.000165 ***
Open-mindedness	0.18736	0.963	0.339284
Agreeableness	0.21037	-0.687	0.494628
Mutual impact of negative emotionality and extraversion	0.01662	2.732	0.008296 **
Conscientiousness	0.18742	3.228	0.002040 **
R-square: 0.4463; adjusted R-square: 0.39			
F-statistic: 7.925; p < 0.001			
p-value: 0 **** 0.001 *** 0.01 ** 0.05 '.'			

However, according to the data obtained on a sample from Saudi Arabia, 'negative emotionality' and 'conscientiousness' do not affect emotional intelligence (Alenezi, 2020). Whereas in our study, the results of multiple regression analysis indicated a significant effect of 'negative emotionality' on all the components of emotional intelligence. However, the data on the influence of 'extraversion' and 'agreeableness' are consistent with the results of the study by Alenezi (2020). These differences in results may be explained by ethno-cultural characteristics of the sample. At the same time, several studies confirm significant associations between emotional intelligence and negative emotionality (Lyusin & Ovsyannikova, 2015), as well as the impact of all the personality traits on emotional intelligence (Alegre et al., 2019). Significant effects of 'negative emotionality' and 'extraversion' for both genders were also observed in a sample of English-speaking respondents (Siegling, Furnham, & Petrides, 2015).

Conclusion

The following conclusions can be made from the results obtained from our study:

1. Socially active students' emotional intelligence had general (characteristic of all its components) and specific (characteristic of its individual components) associations with personality traits. General associations are those among 'negative emotionality' and 'anxiety' and all the structural components of emotional intelligence. Positive associations among 'energy level' and the components of emotional intelligence related to managing emotions, and negative ones among 'emotional volatility' and structural components of intrapersonal emotional intelligence ($p \leq 0.05$) are classified as specific.

2. The findings indicate that personality domains and facets affect emotional intelligence in socially active students. The combination of negative emotionality and agreeableness affects general and interpersonal emotional intelligence; the combination of extraversion and negative emotionality affects intrapersonal emotional intelligence.

The results obtained in the study and the conclusions drawn on their basis confirm the hypotheses of the study and can be used in the development of recommendations for the psychological and pedagogical support of students with special educational needs and with leadership talent. The revealed patterns may help develop pedagogical technologies, training programs, and individual educational trajectories of students.

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Original research article

A Psychometric Study of the Bayley Scales of Infant and Toddler Development – Third Edition in the Russian Federation

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Abstract

Introduction. There is currently no universal comprehensive measurement tool for the assessment of children development in the Russian Federation (RF). The Bayley-III scales developed by American researchers are widely used as such a tool. Numerous research groups recognize the need to modify the original scales before using them in a new linguistic and socio-cultural environment.

Methods. The authors (a) translated the original Bayley-III manual into Russian, (b) tested the tool by assessing cognitive, language, and motor development of 163 Russian children aged 2–11 months, and (c) made an indirect comparison of the mean scale scores of neuropsychological development and those obtained from the original American sample of children using Student's t-test.

Results. The modified version of the Bayley-III manual has been successfully tested in the RF. The indices of language and motor development of the children examined in this study did not statistically differ from the original American data (10 points). Higher scores were obtained for the cognitive scale (10.7 versus 10; $p = 0.003$). However, this effect was not very pronounced (Cohen's $d = 0.25$).

Discussion. The indices of neuropsychological development of Russian children fully comply with the original Bayley-III norms, which opens up new possibilities for its use in the RF. Slightly higher scores of the cognitive scale among Russian children do not generally affect the compliance with the original tool, since the difference was not significant. The results of this study can be extrapolated to full-term Caucasian children aged 2–11 months, whose parents have at least secondary education and average level of earnings. The widespread use of Bayley-III requires its further adaptation in larger and more representative samples of children from different regions of the RF with the additional assessment of social-emotional development as well as adaptive behavior.

Keywords

Bayley-III scales, Bayley-3, neuropsychological development, infants, toddlers psychometric study, adaptation, developmental assessment, complex development, cognitive sphere, motor sphere

Highlights

- ▶ Examining the Bayley Scales of Infant and Toddler Development – Third Edition, the authors carried out the analysis of the structure of its scales, the original standardization procedure, and previous international experience of adaptation/psychometric studies of the tool.
- ▶ Testing the Russian version of Bayley-III involved the assessment of the neuropsychological development of 163 children aged 2–11 months living in Yekaterinburg and the Sverdlovsk region.
- ▶ The authors performed an indirect comparison of the data obtained in this study and the original Bayley-III norms.
- ▶ Cognitive, language, and motor scales scores demonstrated a high level of compliance with the Bayley-III norms and can be extrapolated to the population of children in the Russian Federation, taking into account the limitations.

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Introduction

Psychologists and the medical community have been long paying close attention to the initial period of child development. This interest is explained by the importance of timely diagnosis for developmental disorders in early childhood as well as by considerable genetic and phenotypic variability that determines the neurodevelopment of children. Although certain predictors of atypical development may be detected in infancy, many of these disorders are diagnosed quite late, in the second or third year of life. Besides, despite the presence of numerous methods assessing child development, there is no 'gold standard' for the complex assessment of child development in the Russian Federation (RF) (Kustova, Taranushenko, & Demyanova, 2018).

In view of the above considerations, the search for effective diagnostic tools capable of accurate identification of developmental disorders during the first years of life and their testing becomes highly important. Diagnosing developmental delay during this period, when the body's compensatory mechanisms are at a high level, can considerably increase the efficiency of corrective therapeutic interventions.

The Bayley Scales of Infant and Toddler Development – Third Edition, hereinafter Bayley-III (Bayley, 2006), is the most studied diagnostic tool used all over the world. Bayley-III is widely recognized as a 'gold standard' for assessing the general development of children aged 16 days to 3.5 years (Azari et al., 2017; Ranjitkar et al., 2018; Yue et al., 2019). This measurement tool is based on well-known and generally accepted developmental theories (D. Bruner, L. S. Vygotsky,

A. R. Luria, J. Piaget) and is consistent with the results of research in child development, including studies in neuropsychology and in information processing (Aylward, 1988; Colombo & Cheatham, 2006; Colombo & Mitchell, 2009), functional socio-emotional theory (Greenspan, DeGangi, & Wieder, 2001), and the theory of adaptive behavior (Weiss, Oakland, & Aylward, 2010).

A significant limitation for the widespread application of the Bayley-III in the RF is the lack of age-specific norms for the Russian population of children. Cross-cultural studies show the need to adapt this assessment instrument, taking into account language differences and social characteristics of the population (Azari et al., 2017; Hegde, Rao, Raguram, & Gangadhar, 2013; Hoskens, Klingels, & Smits-Engelsman, 2018; Fuiko et al., 2019; Steenis, Verhoeven, Hessen, & van Baar, 2015; Sun et al., 2019). Application of the Bayley-III without prior standardization can lead to misinterpretation of results in the form of overestimation or, conversely, underestimation of a child's level of development.

Despite the fact that the Bayley-III has been actively used in the world since 2006, its proper adaptation has not yet been carried out in the RF. However, the Bayley-III is actively used for research and clinical purposes (no. BN40703). In view of this limitation, most Russian authors use the Bayley-III as an experimental tool rather than a diagnostic instrument, using its raw scores for statistical analysis (Kiselev et al., 2016; Belousova & Shvets, 2019; Bakushkina, Kiselev, Lvova, Suleimanova, & Tuktareva, 2018; Kiselev, Lvova, & Bakushkina, 2016). Several papers presented the converted raw scores, which ranges were identified on the basis of the American normative data (Zavadenko, Medvedev, & Degtyareva, 2018; Kosyakova & Bepalova, 2019; Shifman, 2016).

Thus, the importance of the Bayley-III application and present limitations of its practical employment as a diagnostic tool dictate the need for the appropriate adaptation and psychometric studying procedures in the Russian population of children. As the first stage of this procedure, the authors of this study analyzed the structure of the Bayley-III scales, examined the original standardization procedure, and conducted a systematic analysis of the experience of its adaptation and psychometric study in previous international studies. Prior to the application of the assessment scales in the Russian sample, the authors translated the original Bayley-III manual and evaluation forms into Russian. As a final stage, the authors carried out an experimental study of the neuropsychological development of 163 children from 2 to 11 months using the modified Bayley-III; the findings were compared with the original indices obtained from the sample of American children.

The Bayley-III design

The Bayley-III utilizes an efficient administration design that relies on age-based starting points, reverse principle, and discontinue criteria (Bayley, 2006).

The Bayley-III includes five scales. Each scale contains a certain number of items. Thus, the Bayley-III includes the following scales: (a) cognitive scale (91 items); (b) language scale (with subscales of receptive language (49 items) and expressive language (48 items)); (c) motor scale (with subscales of fine motor (66 items) and gross motor (72 items)); (d) social-emotional scale (35 items); and (e) adaptive behavior scale (241 items). Cognitive, language, and motor scales directly assess a child's performance on items, which makes it possible to evaluate the level of neuropsychological development (NPD). The social-emotional and adaptive behavior scales use indirect assessment presented in the form of a questionnaire filled out by a specialist based on caregivers' answers about the characteristics of their child's behavior in everyday life.

If the child performs the items correctly, one point is scored. The points for each scale are summed up. The so-called 'raw' scores are converted into (a) scaled scores that establish the boundaries of normative development; (b) composite scores used to compare all the scales and to identify individual characteristics of a child's development; (c) percentiles that make it possible to estimate the frequency of occurrence of the indices obtained by a child in the population corresponding to the standardizing sample.

Standardization of the Bayley-III in the USA

The recruitment of participants in the original standardization of the Bayley-III was carried out in the United States of America (USA) between January and October 2004 based on 2000 US census data (Bayley, 2006). The sample was stratified by age, gender, ethnicity, geographic region, parental or caregivers' education level. The sample consisted of 17 age groups with letter designations from A to Q, including 1,700 children aged 16 days to 43 months and 15 days. In each group, children were gender-equal. Most of the participants were Caucasian; their parents had average or above average levels of education and earnings.

The goals and objectives of the subsequent application of the measurement tool, – namely, the need to assess the compliance of a child's development with age norms, explained the fact that the majority of participants were 'typically developing' children. This category included children born at 37–42 weeks of gestation, without considerable neurological and somatic pathology, who did not receive treatment for mental, physical or behavioral disorders, and did not have the following diagnoses: attention deficit hyperactivity disorder (ADHD); chromosomal abnormalities; diseases caused by prenatal exposure to toxic substances (including fetal alcohol syndrome); congenital malformations of the central nervous system (CNS); genetic or congenital diseases; mental retardation; intraventricular hemorrhage; pathologies of the respiratory system; severe attachment disorders; severe sensory impairment; low birth weight; prematurity.

Children were excluded from the main research sample if they received assistance under the Early Childhood Intervention program, had risk factors affecting the development of the central nervous system, and if they were taking medications that could affect the tolerance of physical and intellectual activity, received inpatient treatment, had hearing or vision impairments, and their parents were not native English speakers.

Approximately 10 % of the sample consisted of children with clinical diagnoses, including Down syndrome, cerebral palsy, autism, Asperger syndrome, Rett syndrome, cognitive epileptiform disintegration, prematurity, fetal alcohol syndrome, specific speech disorders, asphyxia, hypotrophy, etc. We enlarged our experimental sample by including children of this category in order to increase its representativeness.

Psychometric and Adaptation studies of the Bayley-III

Because of its high diagnostic value the Bayley-III is widely used throughout the world. Table 1 presents previous studies attempted to adapt or psychometrically test the Bayley-III in other countries.

Table 1
 The Bayley-III adaptation/psychometric publications

Authors, country, year	Sample characteristics	Procedure and results
Hua et al., China, 2019	<p>N = 1444; age groups are formed according to the Bayley-III manual. <i>Inclusion criteria:</i> full-term children; absence of medical complications and clinical diagnosis at the time of examination, absence of treatment for mental, physical, or behavioral difficulties. <i>Exclusion criteria:</i> comorbidities or risk factors for development, such as hearing or visual impairment, medication that affects behavior, hospitalization or infection during testing, nutritional problems, sleep problems.</p>	<p>The authors made both forward and backward translation and cultural adaptation. Children were assessed only with the cognitive scale. Test-retest reliability, correlation and reliability of criteria for compliance with Bayley-III psychometric criteria were performed in 5–10 % of children randomly selected from the entire sample. <i>Conclusions:</i> The Bayley-III cognitive scale can be used to assess development as well as to account for gender differences when used in a Chinese sample.</p>
Ranjitkar et al., Nepal, 2018	<p>N = 600; 6–11 months of age. <i>Inclusion criteria:</i> age up to 1 year; residence in Bhaktapur municipality and surrounding areas for the next 12 months; signed informed consent. <i>Exclusion criteria:</i> severe systemic disease requiring hospitalization; severe malnutrition; taking vitamin B12 supplements; severe anemia; ongoing acute infections requiring medical treatment.</p>	<p>The authors made both forward and backward translation and adaptation according to cultural characteristics. The sample comprised 10 % of premature babies. <i>Conclusions:</i> the scores on the cognitive and motor scales are comparable to American norms. The indices on the language scales were significantly lower than those in the American sample and require special attention in interpretation. In general, Bayley-III can be used on Nepalese children 6–11 months of age. Cultural adaptation and standardization of the scales are prerequisites for a more valid and reliable assessment using this tool.</p>

Table 1 The Bayley-III adaptation/psychometric publications		
Authors, country, year	Sample characteristics	Procedure and results
Krogh et al., Denmark, 2012	N = 45; longitudinal study: 4, 7, 10 and 13 months of age. <i>Exclusion criteria:</i> prematurity; the presence of physical/mental disorders.	The authors made only forward translation. 55.1 % of parents in the Danish sample had 16 or more years of getting education. In the original American sample this percentage was 27.6 %. <i>Conclusions:</i> significant differences were obtained between Danish and American norms on all scales. In particular, Danish children have lower scores on the receptive language scale for all the ages. Bayley-III should be used with caution in non-US samples.
Chinta et al, Australia, 2014	N = 156; 3 years of age. <i>Inclusion criteria:</i> full-term healthy children, without chromosomal abnormalities, having no history of surgical interventions.	No adaptation was carried out, the original version and American norms were used to assess the development of Australian children. <i>Conclusions:</i> Australian children obtained higher scores on all the scales, except for the motor scale. Applying American norms can lead to an underestimation of mild disorders. Adaptation including standardization is required for local samples.
Azari et al., Iran, 2017	N = 403; age from 1 to 42 months (all the A–Q age groups of the original Bayley-III). The least number of children (N = 10) is in the age group E. The maximum number of children (N = 38) is in the age group D. <i>Inclusion criteria:</i> 1 to 42 months of age; normal development and the absence of any obvious developmental disorders; native Persian speakers.	The authors made both forward and backward translation, and adaptation according to cultural features. <i>Conclusions:</i> The Bayley-III is a valid and reliable tool for assessing the development of Persian-speaking children.

Table 1
 The Bayley-III adaptation/psychometric publications

Authors, country, year	Sample characteristics	Procedure and results
Yu et al., Taiwan, 2013	<p>N = 178 (preterm), N = 62 (term-born). Longitudinal study: 6, 12, 18, and 24 months (with age-adjustment for the preterm infants). <i>Inclusion criteria (full-term)</i>: birth weight over 2500 g; gestation period 38–42 weeks; absence of serious prenatal and perinatal complications. <i>Inclusion criteria (preterm)</i>: birth weight less than 1500 g; gestational period less than 37 weeks; joining the study within 7 days of birth; a child in a single pregnancy or the first child in a multiple pregnancy; no congenital anomalies or severe neonatal diseases. <i>Additional criteria for all the participants</i>: mothers over 18 years of age who can read and speak Chinese; no past history of alcoholism and/or drug addiction; parents who are married at the time of a child's birth.</p>	<p>Assessment done with the Bayley-III, and additionally with the second version of the tool. Thus, the results of both evaluations were compared and a conclusion about the potential for application of each of them was made. <i>Conclusions</i>: The Bayley-III is a reliable tool for assessing the development of full-term and premature Taiwanese children aged 6–24 months.</p>
Steenis et al., Netherlands, 2015	<p>N = 1912; age from 14 days to 42 months 14 days; 17 age groups according to the Bayley-III manual. <i>Inclusion criteria</i>: according to parents' report, a child has no problems with physical or mental health, has no regular medication intake; birth weight above 2500 g; gestational age – at least 37 weeks.</p>	<p>The analysis was carried out using Dutch and American norms. The Dutch sample as well as the American one comprised 10 % of children at risk or with developmental delays. <i>Conclusions</i>: Dutch norms differ from American ones by all the 5 scales; the differences are clinically significant. The importance of population-specific norms for the interpretation of developmental assessment results was shown.</p>
Ballot et al., South Africa, 2017	<p>N = 74; each child was assessed at least once. The evaluation of the development was carried out at the age of 9–12 and 15–20 months. <i>Inclusion criteria</i>: full-term infants discharged within 48 hours of birth. <i>Exclusion criteria</i>: obvious developmental anomalies.</p>	<p><i>Conclusions</i>: Bayley-III is a reliable tool for assessing the development of South African urban children.</p>

<u>Authors, country, year</u>	<u>Sample characteristics</u>	<u>Procedure and results</u>
Hanlon et al., Ethiopia, 2016	N = 896; 2 age groups: 30 months (N = 440), 42 months (N = 456). Inclusion criteria: normal weight and height at birth.	The authors made both forward and backward translation and modified stimulus materials (for example, replaced the images in a picture book) in accordance with cultural characteristics. <i>Conclusions:</i> the adjusted version of the Scales has shown its reliability and applicability for Ethiopian children.
Sun et al., Vietnam, 2019	N = 267; age 3–43 months. <i>Inclusion criteria:</i> children under 4 years of age from District 8 of Ho Chi Minh City. <i>Exclusion criteria:</i> history of chronic severe illness (e.g., congenital heart disease, epilepsy); prematurity; previous hospitalization in intensive care; developmental delay.	Adaptation through forward and backward translation; modifications with regard to cultural features, results of the pilot study. The structure of the adapted instrument differs from the original one. However, the differences are consistent with the theories of early development. <i>Conclusions:</i> The adapted version of Bayley-III shows high reliability, and also meets strict criteria of invariance for gender and age groups.

Of all the variety, there is only one study that performed adaptation close to the original procedure, including forward and backward translation, cultural adaptation, the analysis of all the ages according to the original tool, as well as 10 % of children with developmental disabilities included into a sample (Steenis et al., 2015); the evaluation at all age ranges corresponding to the original Bayley-III scales has been done in three studies (Azari et al., 2017; Hua et al., 2019; Steenis et al., 2019); forward and backward translations were performed in four studies (Azari et al., 2017; Hua et al., 2019; Steenis et al., 2015; Sun et al., 2019); two studies used longitudinal design (Krogh, Væver, Harder, & Køppe, 2012; Yu et al., 2013); in one study, the maximum number of children in age groups was 38 (Azari et al., 2017). Only one study comprised 10 % of children with clinical diagnoses (Steenis et al., 2015); another study comprised 10 % of premature children (Hua et al., 2019).

The findings of the analysis of the Bayley-III adaptation or psychometric studies indicate that in most cases the scores of the assessed children differed from the American norms on either all the scales or the majority of them (Chinta, Walker, Halliday, Loughran-Fowlds, & Badawi, 2014; Krogh et al., 2012; Steenis et al., 2015). On the other hand, many authors have demonstrated the possibility of successful application of American norms on a local sample without prior cultural adaptation (Ballot et al., 2017; Yu et al., 2013). In general, most of the studies indicate the reliability of the instrument after its adaptation (Azari et al., 2017; Hanlon et al., 2016; Hua et al., 2019;

Ranjitkar et al., 2018; Sun et al., 2019). Thus, most of the Bayley-III adaptations are incomplete and, despite the conclusions about the possibility of their use, the diagnostic results should be interpreted with caution.

Methods

The data collection was carried out within the Longitudinal Study of Neurocognitive Development in Children at the Laboratory of Brain and Neurocognitive Development, Department of Psychology, Ural Federal University named after the first President of Russia B. N. Yeltsin (UrFU). The recruitment of children was carried out using the resources of the Department of Psychology of the Ural Federal University, the Department of Pediatric Neurology and Neonatology of the Urals State Medical University, and the Yekaterinburg Clinical Perinatal Center (Children's City Hospital no. 10). The project was approved by the ethics committee at the Ural State Medical Academy of the Ministry of Health and Social Development of the Russian Federation. We provided the legal representatives of children participating in the study with information about the goals and methods of the project and explained them the principle of maintaining anonymity. We obtained a voluntary informed consent from a parent or a caregiver of a child before their participation in the project.

Current analysis was carried out on 3 scales (with all the corresponding subscales) – (a) cognitive, (b) language, and (c) motor. The scores of the scales based on the parent/guardian reports (social-emotional and adaptive behavior scales) were not used due to their lower reliability. The evaluation with the assessment tool was conducted by the researchers of the laboratory who received certified training in the use of Bayley-III as a psychodiagnostic tool. The study was carried out in a specially equipped room with parallel video recording of the process for the subsequent additional analysis of behaviors of children and parents.

The Bayley-III psychodiagnostic tool used in the study was officially purchased from a publishing house (England); its diagnostic materials and the content of single items was appropriate for the Russian socio-cultural environment. Thus, we used the original stimulus materials corresponding to the administration rules of the Bayley-III with evaluation forms translated into Russian.

The forward translation of the Bayley-III manual and its evaluation forms was carried out with preservation of contextual meaning. Difficulties in the modification of the tool were primarily associated with the grammatical differences in English and Russian languages. For example, in item 34, the subscale of receptive language, and item 34, the subscale of expressive language, the original version assumes an assessment of a child's understanding and use of the present continuous, which has no analogue in Russian speech. In Russian, the present tense is preferable when describing static situations and events occurring at the moment, which is used when carrying out diagnostics. In this regard, after the translation, these items were modified as follows: in the first case, we analyzed a child's understanding of verbs in the present tense and in the second case – their use. These items are intended for children over 1.5 years of age.

For the recruitment of study participants, we applied following inclusion criteria: full-term babies (beyond 37 weeks of gestation, according to the WHO criteria) from 2 months 16 days to 10 months 30 days, whose anthropometric parameters at birth correspond to the physiological norm.

To increase the representativeness and compliance with the original Bayley-III, 10 % of children with a family risk of ADHD or autism spectrum disorders (ASD), as well as with clinical diagnoses of ischemic stroke and prematurity were included into the sample.

The criteria for inclusion in the project corresponded to the pediatric norms that meet the WHO recommendations in order to compare the study results with the original data (Bayley, 2006; Volodin, 2009).

The recruitment of children was carried out by the pediatricians, neurologists, neonatologists from medical institutions in Yekaterinburg. The primary documentation of the study was a survey containing information on anthropometric and clinical characteristics of children at birth, anamnesis, information about the presence of ASD and ADHD were filled in.

In terms of the main socio-economic and demographic characteristics of the families, the scores obtained in our sample of children were mostly comparable with the American data (Bayley, 2006; Byers-Heinlein & Lew-Williams, 2013; Rao, Hammen, & Poland, 2009; Savostyanov et al., 2018). Nevertheless, our sample had certain differences. Thus, the parents of the children participating in our study were the educated urban population of Yekaterinburg and the Sverdlovsk region, while the original tool involved representatives of all social strata and regions of the United States. Besides, in the American sample a wider range of diseases, including more severe disorders, was presented among children with neurological pathology.

In general, our sample comprised 163 Caucasian children of 2–11 months, who lived mainly in Yekaterinburg and whose parents or caregivers have secondary or higher education and average or high level of earnings.

Statistical analysis was carried out using the Gretl 2019d software (Allin & Riccardo, 2020). The Student's t-test was used for indirect comparison of the mean scale scores with the American standard scores (which were 10 (\pm 3) points for all the scales in all age groups). The statistical significance of differences was established at $p < 0.05$ level. When calculating differences for the scale scores, we used estimates of effect size (Cohen, 1988).

Results

The final sample comprised 163 infants in the age from 2 months 24 days to 10 months 29 days (64 % of boys), of whom 10 % had a family risk of ASD and ADHD or a clinical diagnosis. Table 2 presents anthropometric and clinical characteristics of the children at birth. The parameters of normally developing children at birth met the WHO criteria for full-term pregnancies. Children with the pathology had either a clinical diagnosis (ischemic stroke, $n = 4$; prematurity, $n = 5$) or disease-specific family history (risk for ASD, $n = 4$; risk for ADHD, $n = 2$). Compared to 'normal' children, Apgar scores for children with a clinical diagnosis and disease-specific family history were higher by 1 point.

<u>Index</u>	<u>Mean (SD); range</u>
Gestational age, weeks	39 (1); 34–42
Body weight, g	3280 (440); 1830–4228
Body length, cm	51 (2); 42–58

Index	Mean (SD); range
1-minute Apgar score	6 (1); 5–8
5-minute Apgar score	8 (1); 5–9

Note: SD refers to standard deviation.

The NPD characteristics of Russian children generally corresponded to the original data on the three main scales – cognitive, language, and motor (Table 3). However, for Russian children the mean score of cognitive development was slightly higher than the original American norms in the corresponding age range (10.7 versus 10), which was confirmed statistically ($p = 0.003$). However, in terms of the effect size, this difference was poorly pronounced (0.7 points; Cohen's $d = 0.25$). There were no statistically significant differences in the subscales of receptive and expressive language, and fine and gross motor subscales (Table 3).

Scales	Study scale scores (1) (n = 163)	Original scale scores (1) (n = 600)	p (2)
Cognitive	10.7 (2.57) CI 95 % [10.3–11.1]	10 (3)	0.003
Receptive language	9.67 (2.24) CI 95 % [9.32–10]	10 (3)	0.1
Expressive language	10.2 (1.95) CI 95 % [9.85–10.5]	10 (3)	0.3
Fine motor	10 (2.24) CI 95 % [9.69–10.4]	10 (3)	1
Gross motor	9.98 (2.57) CI 95 % [9.58–10.4]	10 (3)	0.9

Note: (1) group mean (GM), confidence interval (CI) – only for the RF; (2) statistical significance differences, Student's t-test.

Discussion

Within current research we conducted the psychometric study of the scales of cognitive, language, and motor development of the Bayley-III in a sample of children of the first year of life. The psychometric study involved the translation of the original manual and its evaluation forms, analysis of application of evaluation scales in other populations as well as of the structure of the original standardization.

An indirect comparison of the mean scale scores of Russian children with the original American data (utilized for initial standardization), showed no significant differences in the Bayley-III subscales of expressive and receptive language, gross and fine motor subscales in the age range from 2 months 16 days to 10 months 30 days. This result, on the one hand, confirms the quality of translation and adaptation of the original Bayley-III scales, and on the other hand, it speaks in favor of the compliance of the normative boundaries of NPD for Russian and American children. Russian children showed higher scores (0.7 points) on the scale of cognitive development, which could be a consequence of the local characteristics of the experimental sample, in particular, the shift in socio-demographic characteristics towards more educated urban families, and also differences in the characteristics of children with neurological pathology. However, applied difference (effect size) was very low. Taking into account identified patterns, an increase in the size and representativeness of the sample, as, for example, in a study by Chinese authors (Hua et al., 2019), with high probability will lead to full statistical correspondence with the original American data on the cognitive scale.

The findings from the Russian sample of children can be only compared to several studies presented above that carried out the adaptation/psychometric study procedure in other ethnic samples. For example, Ranjitkar et al. (2018) when testing Bayley-III in Nepal, as well as Chinta et al. (2014) in Australia, obtained results that are comparable with the results from the Russian sample only on the fine and gross motor subscales. The study carried out in Denmark (Krogh et al., 2012) showed that the results differ from those obtained in the Russian sample on the subscales of receptive and expressive language, gross motor subscale (lower scores), and fine motor subscale (higher scores) for the children up to 11 months of age; the results on the cognitive scale are comparable.

On the other hand, in contrast to Russian data, the findings from a sample of Dutch children differed significantly across all the scales (Steenis et al., 2015). However, we should note that this is the only study which sample comprised 10 % of children with clinical diagnoses and risks of developmental delay.

It should be pointed out that each of the studies used different comparison procedures with the original Bayley-III data, which could also affect the interpretation of the results. In addition, the following differed: the procedure of adaptation/psychometric study of the measurement tool (performing forward and backward translation, cultural adaptation, adjustments of stimulus materials, etc.), the age of the assessed children, the socio-demographic parameters of the participants, etc. Thus, it is rather difficult to make any conclusions about the comparability of the results obtained in the Russian sample with the data of other populations studies.

In general, the indices of normal NPD obtained in the Russian sample showed almost complete agreement with the original data, which indicates the possibility of the scales application and indirectly confirms the validity of the method even when transferred to another linguistic

and socio-cultural environment. This preliminary result enables us to make positive forecasts for future use of the Bayley-III scales not only as an experimental instrument, but also as a clinical diagnostic tool for assessing NPD. Nevertheless, taking into account the limitations of this sample, the results obtained in our study can be reliably extrapolated only to the population of children aged 2 to 11 months from socially well-educated urban families.

In addition, since the components of the indirect assessment (social-emotional scale and the scale of adaptive behavior) were excluded from the analysis in the present study, the results can only be applied for assessing NPD. In general, for the final confirmation of the psychometric validity of the measurement tool, it is necessary to conduct a large multicenter study, which sample would correspond to all the main socio-demographic characteristics of the population of the RF and proportionally represent different regions, taking into account the balance of the rural and urban population.

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Systematic review

Value Orientations of Today's Youth in the Context of Prosocial Behavior

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Abstract

Introduction. Value orientation of today's youth is a key problematic aspect of socio-cultural cognition. This paper concentrates on characteristics of value orientations of today's young people, and how they impact prosocial behavior in this age group.

Theoretical Basis. There is a lack of conceptual and systematic understanding of value orientations and their association with young people's value and meaning sphere. This study represents a first attempt to determine ontogenetic changes in each component of the psychological construct and social development of today's generation of young people.

Results and Discussion. An analytical literary overview provides a background for the main value orientations of youth and their development trends. The fact that traditional values, including family, health, and love still remain main social trends for female youths, represents a gender characteristic of values of young generation. Meanwhile, male youths strive for self-realization. A high level of remuneration remains the main work motivation among young people; they are also interested in the compliance of work with their interests. This paper generalizes and systematizes the results of current studies on age-related characteristics of associations among prosociality and other intrapsychic systems, including volitional regulation, intelligence indicators, and social responsibility. The factors of youth deprivation (egoistic motivation and distortions in the attributive system of trust in the world) influence the age genesis of prosociality. Initiative and intelligence determine prosocial tendencies in adolescence, late adolescence, and early adulthood. The programs for stimulating prosociality should be focused on a mature prosociality. This idea provides conceptual frameworks for objective criteria for the expediency of prosocial forms of behavior, reflexive subjectivity, and personal pleasure from actions for the benefit of another person.

Keywords

youth, age-related characteristics, young generation, prosocial behavior, socialization, personality, value orientations, development, age period, adolescence

Highlights

► There is an increasing number of studies in the genesis of prosociality in recent decades.

► The psychological approach to studying young people's value orientations is associated with the investigation of early forms of prosocial behavior, age-related patterns of its development at each stage of ontogenesis, and characteristics of this process and the possibilities of its stimulation.

► Opportunities for predicting the processes of social development and its prospects, psychological and pedagogical support for prosocial development in accordance with the stages of the development of the phenomenon, and simplification and facilitation of the process of analyzing mature forms of the construct in young people determine the prospects for studying the characteristics of young generation in the context of prosocial behavior.

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Introduction

The transformation of social values, which is characteristic of today's society, exerts influence on the social experience of young generation at the subjective personal level. In recent decades, permanent changes in Russian socio-economic and political environment complicate individuals' choice of a social type of behavior and its proper manifestation. This paper *aims* to determine the characteristics of young people's value system, which affects their prosocial and antisocial behavior in current conditions of social development.

Theoretical Basis

The issues of functioning of society, characteristics of its influence on life activity and behavior of young generation and the reverse influence of these factors on the nature of the development of society have attracted and continue to attract the attention of researchers across various fields of scientific knowledge, including N. V. Vlasova, N. A. Drachuk, I. S. Efremov, E. V. Akhmadeeva, N. V. Kukhtova, P. A. Ivanov, P. P. Kychkin, V. Ya. Davydova, K. O. Lazutko, S. A. Makhin, etc.

Zhokhova (2016) points out that the processes of transformation of society lead to the emergence of the so-called syndrome of 'modern personality', which covers the following characteristics: (a) openness to innovations and changes (which is especially important during the period of informatization of society and the formation of digital economy and globalization processes); (b) awareness of the number of existing views and opinions in the surrounding society without national and stereotypical boundaries; (c) readiness to express and substantiate individual position and tolerance towards others; (d) ability to focus attention on the future instead of the past; (e) sense of subjective strength; (f) desire to anticipate trends in the development of events and to strategically plan individual actions; (g) trust in the social order; (h) holistic and adequate awareness and acceptance of existing inequality in the distribution of benefits and reasoned social privileges; (i) striving for self-improvement and continuous education; and (j) respect for the dignity of other subjects of society.

Several authors (for example, Bryant & Crockenberg, 1980) argued that observance or violation of social behavior, its realization on the basis of institutionalizing social norms in society or preference for their asocial types determines both the success of individuals' social formation, their social interaction with others and the effectiveness of the development of the whole society. Since behavior is extremely complex in its structure, it, like any system, can be considered from different perspectives.

Vygotsky's work emphasizes that youth is a period of the process in which the main personal characteristics of the subject are produced and established, which is institutionalized and controlled by historical and cultural characteristics (Vygotsky, 2016). According to the most recent data, the chronological boundaries of youth depend on the socio-historical development of the country (region) of residence, culture, and methods and forms of socialization characteristic of a particular society. In sociology, the lower age limit is most often defined as 14–16 years, and the upper one as 25–29 years (Ribeiro da Silva, Rijo, & Salekin, 2020).

According to Vlasova (2018) and Dezhevoi (2018), the main characteristics of this life period include material dependence on family members or the social security system, as well as the influence of instability in the social and economic situation. Efremov & Akhmadeeva (2018), Drachuk (2018) emphasize the fundamental role of young people's aspirations not to undertake obligations to society, their immediate environment, and themselves, which expands the boundaries of the age of youth.

Studies of the concept of youth make sense only in comparison with other age groups, which develop on the basis of the incompleteness of the process of primary socialization of the individual, which entails a certain social immaturity of young people and thereby weakens the assessment criteria for violators of social norms and values. The next conceptual characteristic of the differentiation of young people in social stratification is their creative activity and development prospects, which directly depend on the dynamics of the formation of value orientations (Lu, 2020; Scott & Cnaan, 2020).

We should emphasize that the process of forming a value orientation among young people is still far from complete. Therefore, there is no social and psychological barrier to abandon the new fear of failure due to the lack of negative experience. Thus, Kychkin & Davydova (2018) argue that a permanent desire to master previously unknown innovative objects and subjects of reality, as well as the lack of reflection on the likely risk of consequences in the future are characteristic of young generation.

The permanent scientific and technological progress increases both the importance of young people in the socio-cultural development of society and socio-cultural differences between generations, which is determined by accelerated restoration of living conditions, which, in turn, imparts a considerable effect on the structure of young people's value orientations and the whole society as well (Rhodewalt & Peterson, 2008).

Clarke (2016) notes that in the everyday consciousness, the initial stage of socialization is completed when a young person starts a family, i.e., if he/she takes responsibility for procreation.

However, nowadays this criterion is not decisive, which indicates changes in socio-psychological boundaries of a young age. On the one hand, the lower age limit for adolescence, which is traditionally associated with adolescent puberty, has increased considerably. On the other hand, the learning process associated with the socially necessary time of preparation for work and social life has intensified and its incompleteness indicates the absence of social status, which also raises the upper age limit of youth as an age period.

Currently, the criteria for social maturity may include the following: completion of the educational process and professional development, transition to an independent working life, relative financial independence from parents (tutors or other relatives), marriage and the birth of the first child, and obtaining political and civil rights. These criteria cannot act simultaneously; their sequence and combination provide a certain social status (Rubtsov et al., 2018). For most young members of society these components of the concept of social maturity occur from 14 to 35 years of age.

Results and Discussion

An analysis of the fundamental provisions regarding the characteristics of youth as a socio-demographic group requires an objective reflection on specific characteristics of the object of research, which is the integrity of complex social relations that help identify specific characteristics of this phenomenon. From 14 to 35 years of age individuals acquire a stable occupational and labor status in society (Wong, Khiatani, & Chui, 2019). Several authors state that the social self-determination of youth is a complex multi-level system of personal self-determination, which includes getting an education, conscious choice of a profession, self-determination in the labor sphere, creating a family, choosing a place of residence, creating positions in the socio-political and socio-cultural spheres, etc. (Gentzler, Palmer, Ford, Moran, & Mauss, 2019).

Over the past 20 years, the theory of fundamental values by Sh. Schwartz was the basis for hundreds of studies within the framework of the concept of youth values. At the basis of the author's conceptual approach there were associations of 10 basic values or 4 meta-values with different attitudes, opinions, types of behavior, personality traits, and socio-demographic indicators. Schwartz's studies also measured the characteristics of the development of values in childhood and adolescence and their age-related changes. The central thesis of the theory formulated by Sh. Schwartz is that the complex of values represents a motivational continuum, and motivational differences among values can be considered as continuous differences instead of discrete ones (Schwartz, Verkasalo, Antonovsky, & Sagiv, 1997).

Social self-determination of young people is a stage-by-stage process. In accordance with the achievement of social criteria of maturity, young people can be divided into several groups that determine their position in society and have characteristic features (Wong, Khiatani, & Chui, 2019).

The adolescent group (young people up to 19 years old) contains mainly students of comprehensive schools, students of institutions of secondary vocational education, and first- and second-year university students. Material (in particular, financial) dependence on the older generation explains a relatively loyal attitude towards value orientations and standards of behavior of others.

However, the incompleteness of the processes of forming a worldview and informational openness, or rather individual uncertainty in these criteria, lead to the formation of value orientations with mutually exclusive values. The denial of any social rules and norms and nihilism may be the consequence of this (Magomedova, 2018).

Young people aged 20–25 are mainly students and subjects who are in the process of completing vocational training. We should note that the decline in the general standard of living of the population in Russia has led to early employment among students, the need to work, often unskilled, in their free time. This group is the most vulnerable, since in this age period the subject is at the beginning of his/her labor activity, but at the same time does not have sufficient professional and social experience (Matveeva, 2018). At this age the process of adoption of social standards and traditions is already going through its active phase, but the formation of value orientations continues in connection with the intensification of young people's practical activities.

At the age of 26–35, almost all young people have already made a professional choice, have a certain qualification and work experience, and often start a family. In the context of value orientations, subjects of this age group often have high job demands, which determines the presence of hidden unemployment among young people of this group (long-term choice of job). That is, practical activity enables individuals to reconsider the existing value orientations. If the process of inaction, uncertainty of social status is long-term, individuals revise socially important values of value orientations (Mironova, Semenova, & Khaleeva, 2018).

Russian researchers Khomutnikova & Kirsanova (2018) substantiate the impact of the dynamics of political, economic, and social changes from the late 20 to the early 21 century on the development of post-Soviet youth. During this period, the processes of differentiation prevail among youth. At the same time, integration processes are less obvious than differentiation ones. This may be explained by the fact that post-Soviet societies undergo profound socio-political changes, which entails changes in the socio-cultural environment for interaction of social groups (Feldstein, 1994). Consequently, inequality in the property status was one of the key problems for Soviet and post-Soviet youth. There is an increase in attention to material well-being and status among young people.

Young people who have inherited a certain social status adopt different, sometimes completely opposite, values in their personal beliefs. Information regarding socio-economic situation of young generation, which is quite difficult to statistically produce in an official format, provides the objective variability of social statistics for income and the number of part-time and remote workers and self-employers (Chernov, 2008). Young people often have difficulties in understanding actual income and expenses of their parental families and therefore cannot clearly assess their well-being (especially typical for school-age youth).

Salyadinova (2018) notes that, compared to other social groups, young people without sufficient experience and professional skills more often have to perform the most unattractive types of work, experiencing an imperfection of social status.

According to Lazutko & Makhin (2016), in value orientations there is a certain gender differentiation of views. Thus, *health*, *family*, and *children* are in the system of life priorities among

females; many of them think that *love* is very important. *Material well-being* and *professional employment* are in the second place for males, which is more important than *children* and *family*; many of them argue that *economic independence* is very important. This may be explained by the fact that men are considered 'breadwinners', and fulfilling the function of a family member who provides material benefits is important for young people's self-realization, and, therefore, is a prerequisite for starting a family and having children.

Considering the aspects of socialization and adaptation of young generation from the value perspective, we should emphasize the concept of 'prosociality', which characterizes a complex of actions inherent in prosocial behavior (Ivanov, 2015). **Prosocial behavior** implies compassion and a sense of caring for others, and also behavior that helps or benefits others. In other words, prosocial behavior can be interpreted as a willingness to help those who need this material, physical, moral, or psychological help (Bryant & Crockenberg, 1980).

Sorokin (2019) argues that value orientations, which represent a number of moral norms and requirements for young generation, are the main factors and characteristics of self-regulation and regulation of behavior among young people. In this context, the author states that it is culture (not as a social institution but as a characteristic of subjective development) that imparts models, standards, examples of good behavior (in a subjective sense) to individuals.

Specific characteristics and manifestations of human behavior depend directly on the nature of relationships with other subjects or the group to which individuals belong, which are affected by external factors. Prosocial (antisocial) behavior is also determined by group norms and values, statuses, and roles. Lyubtsova & Serykh (2019) state that a young person's action is characterized by behavior that consists of certain personal manifestations. The behavior of individuals as social subjects should be understood as a system of interrelated actions to perform certain functions that require communication between individuals and society. Social behavior is a relatively consistent complex of socially important human actions. Molchanova (2013) makes the point that a deed, as a consequence of action and a meaningful element of behavior in whole, represents an act of moral self-determination of individuals, in which they affirm themselves in their relation to other individuals, groups, and society.

The issues of young people's prosocial actions are discussed in psychological science within two approaches – social behavior and prosociality as an analysis of the development and functioning of its dispositional basis. Certain aspects of prosociality are considered when solving related scientific problems: individuals' moral development, socialization processes, and age-related genesis of altruism or empathy. The ontogenetic perspective of the issue has emerged in recent decades (Sventsitskii & Kazantseva, 2015).

Taking into account the considered characteristics of young people as an age category, we should note that at this age period the indicators of cognitive development continue to influence social self-realization, without playing a decisive role. Social responsibility determines social activity only if there is an orientation towards well-being of partners in its hierarchical structure. Personal prosociality develops throughout life. It becomes an integral construct by the end

of adolescence. Starting in adolescence, prosociality functions at one of four levels – *impulsive and situational*, *inert*, *mature prosociality* or *altruism* (Kukhtova, 2004).

In terms of social importance, altruism is the level of pro-social self-realization. According to the criterion of personal importance, mature prosociality is the most productive, which provides a harmonious combination of two orientations – *towards the good for others* and *self-value as a social subject*.

The process of socialization (with primary signs of individualization), which is especially characteristic of a person at a young age, represents an important factor for individual specificity in the development of prosocial behavior. As evidenced by the research results, the specificity of social understanding and readiness for prosocial behavior is more associated with differences in the socializing influence of parents than with dispositional variability. Thus, young people have considerable changes in the value sphere even in adolescence. Recognition of the value of '*kindness*' decreases, while '*honesty*', '*loyalty*', and '*sincerity*' demonstrate an upward trend. Hormonal changes are a natural source of change.

In scientific research there is a tendency towards stabilization of prosocial behavior through both the analysis of self-appraisal among youth and opinions of experts in sociology and psychology. This pattern is also obvious in opinions of representatives of two main institutions of socialization – teachers and parents. After analyzing the opinions on the change in the frequency of prosocial actions of adolescents according to ten criteria, psychologists came to the conclusion that during a year there is an upward trend in the development of the cognitive component of prosociality and stabilization of its empathic (empathy is understood as conscious empathy with the current emotional state of another person, taking into account the feeling of the origin of the experience) and behavioral ones. Reaching a 'plateau', prosocial behavior acquires individual characteristics and selectivity (Salyadinova, 2018).

The tendency towards stabilization of prosocial development is most often associated with late adolescence or with the entire period of youth. It is based on the meaning system of the value view of the world, which leading mechanisms are reflection and meaning-building.

In addition to the process of stabilization, there are other patterns in the pro-social development of young people. Clarke's research (2016) points to the emergence of new prosocial trends – a tendency to participate in volunteer programs, increase in civic engagement, development of a prosocial identity, and awareness of personal responsibility for the lives of others and a value attitude towards them.

When discussing the trajectory of the development of prosocial behavior in late adolescence, adolescence and youth, we distinguish several conceptual grounds that enable us to predict the strengthening of prosocial trends during these periods. Based on studies of the characteristics of young people, the formation of their value orientations in modern society, we should note that due to the development of the value sphere at this age period, young people perceive passive or delinquent behavior as a manifestation of personal immaturity. Most young people believe that an increase in attention to others and prosocial orientation and a decrease in self-orientation are

important criteria for the transition to adulthood. During these age periods, the intensive development of socio-cognitive processes and adoption of social views continues, which is an important condition for the development of pro-social trends.

Analyzing the positions of specialists in relation to the main manifestations of deviant behavior among young people, we should note that during the transformation periods of socio-economic processes in Russian society, the number of young people who commit criminal acts increases. This suggests the existence of a proportional relationship between the manifestations of deviant behavior in the form of crime and the lack of stability in society. Statistics for 1990 and 2015 indicates numerous representatives of youth involved in criminal activity.

According to the portal of official legal statistics of the General Prosecutor's Office of the Russian Federation, in 2015 the number of crimes committed in the country increased by 9 % compared to 2014 (from 2,190,578 to 2,388,476 crimes, respectively). At the same time, the share of minors who committed crimes in the period from 2014 to 2015 also increased by 3 % (from 54,369 to 55,993 crimes); the positive dynamics of the share of students who committed crimes was 2 % (from 54,870 to 55,963 crimes) (Crime Indicators in Russia, n.d.).

Based on these data, we may state that risk of the environment to which young people adapt, as well as the transitional nature of society are the key reasons explaining the involvement of young people in deviant forms of behavior.

The results of the study by Popova (2017) may be useful for the analysis of the political consciousness of today's young generation. Thus, the author's study on the political orientations of young people (age group from 14 to 30 years old) indicate that the values of '*preserving traditions*', '*order*' and '*freedom*' are relevant for approximately the same number of respondents (45–46 %); meanwhile '*implementation of reforms*' seems relevant only for one third of respondents (34.9 %). In the mass consciousness of young people there is a common opinion about the value of '*human interests*'. At least 72 % of respondents consider them to be a priority over the interests of the state (18 %). They believe that the state needs to primarily pay attention to low-income youth living in small villages (up to 20,000 residents) and students as well.

Today, the essential characteristics of the activities of young people are not accompanied by their significant involvement in the social and political life of the country. However, as experts rightly point out, this should not correlate with the real opportunity for certain groups of young people to defend their interests if necessary (Polivaeva & Belenikin, 2016). In addition, we should remember that in modern society, mass participation is no longer the main criterion for the level of maturity and development of civic initiatives, as in the previously considered periods of the late 20th century.

In modern socio-economic conditions, young people who were born after the collapse of the USSR and who underwent the consequences of the crisis of the 1990s enter an active social life. Apparently, young people who are focused on successful career and material well-being will choose a candidate who, in their opinion, can guarantee the possibility of full realization of their life plans. Conversely, young people whose parents have failed to protect themselves from the

consequences of social change may show electoral passivity or completely ignore political life in the country. They may become the target of political manipulation.

At the present stage, new movements become the driving force of historical development. The traditional organizations of collective action are replaced by modern actors – new social movements, groups that arise when solving problems through direct action approaches. Thus, a model of modern civic participation emerges and is implemented; this model includes voluntary movement. This may be explained by the lack of group and individual participation, as well as wider citizen involvement in decision-making at the local, national, and global levels.

In the modern world, there are alternative channels of influence of young citizens on the socio-political process and various social networks. A characteristic feature of new social movements is a qualitative orientation towards modern, post-materialistic values and collective identity, which is based on the formation of a common cultural identity and value-normative framework rather than socio-economic differences (Istomina & Oberemko, 2015).

Analyzing associations among social, political, and protest participation of young people in civil processes, Dekker & Halman (2003) focus on two types of voluntary participation – social and political. Thus, there is an association between the types of participation. However, this association is the least obvious between young people's participation in public life and protest activity.

The volunteer movement is a non-violent association of equal participants whose activities rely on the ideas of volunteering in the implementation of social initiatives aimed at stimulating/limiting social change and solving social problems. The volunteer movement is characterized by the following main characteristics: socio-economic effect, absence or minimization of wages, availability of social benefits, free choice without compulsion and external obligations, equality of volunteers working inside the organization and outside any organized forms of activity (Uvarova & Fedoseeva, 2015).

The youth volunteer movement is, on the one hand, a product, and on the other, an element of civil society and its self-organization. The lack of a unified scientific concept of the volunteer movement is associated with difficulties in developing a strategy for the successful development of civil society.

Despite the increased activity of young generation in their attempts to reform the state and voluntary actions of assistance in the form of volunteering, the civic position and activity of young people often have negative consequences generated by the radicalism of views on various aspects of sociocultural life. Thus, one of the most pressing problems of today is the problem of extremism among young people, since young people, due to their socio-psychological characteristics, are among the most ideologically influenced categories of population. Therefore, ideologues of extremism and terrorism consider the younger generation as the main source of recruiting their followers.

Radically-minded and targeted groups and organizations carry out indoctrination of young people, based on the ideas of religious or national extremism. The ideologists of terrorist and religious-extremist organizations contribute to the cultivation of radical views among young

people. This confrontation with the state and society uses all available means. These negative trends are supported by the fact that the majority of those on the way to extremism and armed violence are young people aged from 16 to 30 (Vasil'ev, Fisenko, & Uzhegova, 2016).

The reasons for adhering to the radical extremist ideas can be political, social, and economic. The main reserve for various radical organizations is the growing number of unemployed young people who have recently found themselves in a particularly difficult situation. When the scientific community and the state face the problem of the adult life of young people, protests become more frequent, and the mood is extremely aggressive. Young people are an integral part of the following concepts: love of risk, the 'feeling' of extremist activity, ability to assert themselves in the adult world, emotional excitability, inability quickly to become attached to others and the lack of skills to resolve even low-intensity conflict situations (Gorodentsev & Sheudzhen, 2015).

Lack of social maturity, professional and life experience and, as a consequence, low social status of young people make extremism a phenomenon of today's youth. According to the Ministry of Internal Affairs of the Russian Federation, today there are about 150 youth extremist groups operating in Russia. Not only the number, but also the level of crime increases; violence becomes more organized, as certain political and social structures try to use young people for their own purposes, provoking extremist actions. Therefore, in the fight against manifestations of extremism and terrorism among young people the main emphasis should be placed on their early prevention.

In different countries, including Russia, the prevention of extremism is carried out by legislatively enshrined and powerful methods. The experience of recent years shows that punitive methods are not enough for fighting terrorism and do not bring the expected results for young people. They are necessary, but cannot replace psycho-prophylactic ones. These methods should be complemented by joint actions of all the government bodies with the support of civil society, science, education, and the business community. Special attention should be paid to the family, school, universities, religious leaders, the media, figures in literature, cinema, music, science, etc. It is important to create a single educational space – family–school–university, where the main role will be played by an information response against extremism and terrorism in youth education.

The development of youth extremism indicates the insufficient social adaptation of young people and the development of their anti-extremist, anti-terrorist thinking. The main areas of work in the field of preventing extremism and terrorism in the educational process will be the following: (a) practical recommendations necessary for the state and society; (b) scientific analysis of historical, cultural, and philosophical aspects of the processes taking place in youth culture; (c) development of a system of preventive measures, including socio-cultural conditions, for the formation of tolerance among young people; (d) improving the cultural and entertainment activities of today's young generation; (e) creation of authoritative public youth organizations; (f) awareness of the need for self-determination of the individual, fostering a culture of interethnic communication; (g) formation of a spiritual and moral atmosphere, mutual respect based on the principles of respect for human rights and freedoms, readiness for cultural interaction; and

(h) analysis of the effectiveness of measures taken to prevent manifestations of extremism and xenophobia among young people with the necessary adjustments to increase their effectiveness.

The conducted research enabled us to draw the following conclusions:

1. In a broad sense, value orientations represent individuals' choice of certain material and spiritual values, moral and social attitudes that determine their lifestyle and form the attitude to the world around them.

2. The period of primary socialization of individuals is accompanied by the development of their consciousness, self-consciousness, norms of behavior, moral qualities, and worldview. Youth as a special part of society is constantly in the focus of sociological research. There is usually no stable system and hierarchy of values among youth; young people's values are easily influenced and change rapidly. The hierarchy of youth values may differ from the hierarchy of values in the population in whole.

3. From a historical perspective, the dynamics of youth values directly or indirectly depends on the transformations of the traditional values of generations and socio-economic factors of development.

4. Values, life guidelines and expectations of young people determine their development, desire for well-being and happiness and also the context and direction of development and perception of well-being.

5. The complex of personally important aspirations of individuals represents an orientation of stable motives underlying their orientation in the social environment and their assessments of situations. They may have varying degrees of awareness, and, being aimed at goals that are important for individuals, they will not automatically produce active human actions upon their achievement in reality. This is especially true for young people with rather strong aspirations, which, however, are not always accompanied by a high ability to realize them due to insufficient knowledge, skills that have not been fully realized, overestimation of their own capabilities and idealization of the circumstances of reality. The priority of internal values over external ones enable us to assert that a self-developing system of values prevails among young people over a self-presenting one, when young people prefer the motive 'to be' rather than the motive 'to seem'.

6. At the present stage, value orientations of young people have certain characteristics depending on individual psychological and socio-economic conditions for the formation and development of personality. The formation of a civic position and social activity takes place among young people who are characterized by humanism, respect for the environment, and respect for national traditions. In addition, such young people become more tolerant towards other nations and devoted to national and state interests.

7. Modern youth strives to acquire certain cultural benefits and services, including receiving education, visiting cultural centers, engaging in self-development, etc.

8. The era of globalization and development of the information society raises the problem of the negative impact of information flows on young people who have not yet formed a civic position and ideology. Lack of knowledge in different spheres (politics, religion, etc.) among

young people makes them easily influenced, which requires special attention in terms of their upbringing and education and appropriate enlightenment as well.

Conclusion

Thus, in modern society there is a tendency to lengthen the formal period for completing the process of primary socialization of young people, which affects the formation of their value orientations. In young people's value orientations spiritual values give way to material and economic ones, which actualizes the search for solutions to the issue of prosocial behavior among young people.

In general, young people make progress in the development of various aspects of the functioning of prosociality. By the end of adolescence, this process slows down, and then rises again after 25–26 years. We should note that despite attempts to extend the conclusions to the development of the entire prosocial construct, they should be referred, first of all, to the cognitive foundations of the strategy of sociocultural development and self-evaluative judgments.

There are two interrelated approaches to studying the issues of young people's prosocial development – the analysis of prosocial behavior and the study of individuals' prosociality as dispositional basis of personality. In the first case, attention is focused on determination, features, forms, and types of prosocial activity. In the second, the subject of analysis is the unique construct of the psyche, which determines the individuals' readiness to act for the benefit of others.

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Original research article

Characteristics of the Semantic Layer of the Image of the World Among Young Representatives of the Indigenous Small-numbered Peoples of the North

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Abstract

Introduction. Research on the ethno-cultural characteristics of the image of the world in the indigenous small-numbered peoples of the North is important. This paper presents the results of an empirical investigation of the image of the world (a semantic layer) among young representatives of the indigenous small-numbered peoples of the North. This study is the first report on the application of a three-level model of the image of the world for describing its characteristics among young representatives of indigenous ethnic groups.

Methods. The study sample comprised 225 individual participants aged 16–25 years, living in the North and Northeast of Russia, 110 of whom were representatives of the indigenous small-numbered peoples of the North and 115 of whom were representatives of the non-indigenous population. The study employed the group associative experiment.

Results and Discussion. The findings indicate the presence of non-random differences in the structures of semantic assessments, which indicates the presence of specific characteristics of the semantic layer of the image of the world among representatives of indigenous peoples of the North. In the group of representatives of the indigenous small-numbered peoples of the North the first ranks in associations with the 'my life five years ago' stimulus correspond to the following descriptors: 'school', 'study', and 'friends'; with the 'my life now' stimulus – 'study', 'work', and 'sports'; with the 'my life five years later' stimulus – 'work', 'family', and 'children'; with the 'nature' stimulus – 'beauty', 'forest', and 'animals'; with the 'human' stimulus – 'kind', 'friend', and 'reasonable'; and with the 'happiness' stimulus – 'family', 'love', and 'children'.

In the group of representatives of the non-indigenous population the first ranks in associations with the 'my life five years ago' stimulus correspond to the following descriptors: 'school', 'friends', and 'carefree'; with the 'my life now' stimulus – 'study', 'love', and 'work'; with the 'my life five years later' stimulus – 'family', 'work', and 'children'; with the 'nature' stimulus – 'forest', 'beauty', and 'sea'; with the 'human' stimulus – 'kind', 'personality', and 'reasonable'; and with the 'happiness' stimulus – 'family', 'love', and 'children'.

The differences observed when comparing associative semantic universals indicate that associative links are determined by differences in subjective experiences and cultural contexts.

Keywords

image of the world, semantic layer, meaning systems, indigenous peoples, small-numbered peoples, peoples of the North, youthful age, associative experiment, semantic universals, representations

Highlights

- Characteristics of the semantic structures of the image of the world among young representatives of the indigenous small-numbered peoples of the North manifest themselves in the representations of the past, present and future.
- The associations related to formalized events prevail over personal ones among young representatives of the indigenous small-numbered peoples of the North.
- Compared to the subjects of the experimental group, in the group of representatives of the indigenous small-numbered peoples of the North the structures of the semantic layer of the image of the world are characterized by less diverse associations.
- The differences observed when comparing associative semantic universals indicate that semantic structures of the image of the world are determined by differences in subjective experiences and cultural contexts.

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Introduction

In Russian psychology the concept of the 'image of the world' has emerged relatively recently; it is associated with methodological issues of studying the processes of perception, as well as with the problem of human reflection of the objective reality. The analysis of the studies on the image of the world indicates that this concept can be defined as an integral multi-level construct, which basis is formed by the meanings and the systems of meanings of the subject. The subjective structure of the image of the world, on the one hand, is regulated by the individual experience of the subject and develops in the process of his/her activities. On the other hand, it orders the individuals' representations of the world and determines the ways of interacting with it (Leontiev, 1979; Serkin, 2018; Smirnov, 1985).

Empirical studies of specific characteristics of the image of the world deal mainly with professional aspects of this issue (Artemyeva, 1999; Klimov, 1995; Serkin, 2016; Skleinis, 2018; Smirnov, 1985; Strelkov, 2003). Meanwhile, no studies are available that are based on holistic theoretical models of the image of the world and take into account the characteristics of ethnic belonging to the indigenous small-numbered peoples of the North (hereinafter referred to as ISPN) in the context of a certain age period (youth). The study of psychological characteristics of young representatives of indigenous minorities is important because of the ongoing processes of loss of

ethnic identity, cultural traditions, and traditional activities of indigenous ethnic groups not only in Russia but also all over the world (Armenta, Whitbeck, & Habecker, 2016; King, 2019; Barnes & Josefowitz, 2019; Nesdaole, Lepnurm, Noonan, & Voigts, 2015; Pomerville, Burrage, & Gone, 2016; Houkamau & Sibley, 2011). Indigenous small-numbered peoples as a special group of the population are characterized by the presence of traditional types of management, as well as the specific features the social and cultural way of life (Buchek, 2016; Indenbaum, 2008; Ryabova & Serkin, 2016; Serkin, 2008). The relevance of the study of the image of the world among representatives of the indigenous peoples of the North is also explained by practical importance. The federal target programs aim at preserving and developing the traditional culture of northern ethnic groups and carry out projects for the socio-psychological support of the indigenous population. Thus, the relevance of the present study is determined by insufficient theoretical elaboration of the issues of the image of the world among representatives of the indigenous peoples of the North and practical importance.

There is a lack of generally recognized models of the image of the world (Serkin, 2018). Therefore, methodological issues of experimental research on the image of the world remain important in today's psychology. In order to operationalize the concept, V. P. Serkin addresses to a three-level model of the image of the world (Artemyeva, Strelkov, & Serkin, 1983), which includes nuclear (amodal goal-motivational complex), semantic (meaning systems), and perceptual (images of actual perception) structures. Various measurement tools may be used to describe the image of the world, including those for studying values, motivation, as well as psychosemantic and projective tests and personality questionnaires (Serkin, 2018).

The majority of international (Bertran & Nistal, 2017; Greaves, Houkamau, & Sibley, 2015; Sibley & Houkamau, 2013) and Russian researchers (Buchek, 2016; Vorobyova, 2018; Indenbaum, 2016; Ryabova, 2017; Serkin, 2018) emphasize the importance of ethno-cultural characteristics of the image of the world, which is formed in the context of individual and socio-cultural experience and manifests itself in intercultural differences of ethnic communities, including the perceptions of the world, subjective assessments of temporal characteristics, differences in ideas about the significance of life events, etc. Summarizing the results of previous studies of the psychological characteristics of indigenous minorities (Savani & Job, 2017; Johnson, Bowker, & Cordell, 2004; Cowie, Greaves, Milfont, Houkamau, & Sibley, 2016), our hypothesis states that the representatives of the ISPN and the representatives of non-indigenous ethnic groups have certain individual differences in the ways of perception and assessment of the world, which manifest themselves at all levels of the image of the world, including the level of semantic structures, and determine the ethnic specific characteristics of the image of the world.

Methods

The data collection was carried out in the period from 2016 to 2017. The study was partially conducted at the following educational institutions: North-Eastern State University of Magadan, secondary vocational schools of Magadan, Magadan region, and Chukotka Autonomous Okrug. In total, the study sample comprised 225 individual participants aged 16 to 25 years, living in the North and Northeast of Russia (Magadan region, Chukotka Autonomous Okrug). Participation in the study was voluntary. Tables 1 and 2 present sample characteristics.

Table 1

Characteristics of the sample of representatives of indigenous and non-indigenous peoples

<u>Group</u>	N	<u>Gender</u>				<u>Age</u>		
		male	%	female	%	min	max	Mean (SD)
ISPN	110	49	44.55	61	55.45	16	25	20.35 (2.33)
non-ISPN	115	38	33.04	77	66.96	16	25	19.47 (1.62)
Total	225	87	38.67	138	61.33	16	25	19.89 (2.04)

Table 2

National composition of the sample of representatives of indigenous and non-indigenous peoples

<u>ISPN</u>	<u>N</u>	<u>%</u>	<u>non-ISPN</u>	<u>N</u>	<u>%</u>
Evens	57	51.82	Russians	110	95.65
Chukchis	25	22.73	Ukrainians	2	1.74
Koryaks	15	13.64	Azerbaijanis	1	0.87
Itel'mens	4	3.64	Ingush	1	0.87
ISPN	3	2.73	Lezghians	1	0.87
Essene Yakuts	2	1.82			
Kamchadals	2	1.82			
Yukaghirs	2	1.82			
Total	110	100.00	Total	115	100.00

In Table 2 the representatives of indigenous peoples of the North are combined into a single group of the ISPN. A previous pilot study conducted in the framework of the questionnaire survey of young representatives of the ISPN helped determine the criteria by which the subjects distinguished different indigenous peoples. It was found that the majority of representatives of the ISPN did not distinguish representatives of different indigenous small-numbered ethnic groups, including according to ethno-cultural criteria (culture, origin, place of residence, way of life, appearance) and combined them into a single group (Ryabova & Serkin, 2016). Additionally, 89 % (n = 98) of the sample of the representatives of ISPN were residents of cities and urban settlements, and 12 % (n = 12) of them were residents of national villages; 15 % (n = 17) of the total sample of the representatives of the ISPN were engaged in traditional activities of northern ethnic groups (national dances, applied arts, bone carving, bead weaving, hunting, and fishing).

To identify ethnic specific characteristics of the image of the world of representatives of the indigenous peoples of the North, this study was operationalized on the basis of a three-level model (Artemyeva et al., 1983), which made it possible to identify specific characteristics of semantic, nuclear, and perceptual structures of the image of the world. This paper considers features of a semantic layer of the image of the world among indigenous youth using the group associative experiment (Serkin, 2009). Using this model, previous studies examined professional specific characteristics of the image of the world. This study is the first report on the application of a three-component structure to investigation of ethnic specific characteristics of the image of the world.

The group associative experiment is a projective measurement tool that examines individuals' associative links in a certain area in accordance with the stimulus (Serkin, 2009; De Deyne & Storms, 2008; King & Riggs, 1972). During the procedure, the subjects are asked to evaluate the word-stimulus, noting the first associations that come to mind. The following words and phrases were used as stimuli: 'my life five years ago', 'my life now', 'my life five years later', 'nature', 'human', and 'happiness'; these words and phrases are neutral for both groups. To interpret the results we identified associative semantic universals – combinations of non-random associations with the stimuli in the groups.

Results and Discussion

Tables 3–8 show the results for the group associative experiment.

<u>ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>	<u>Non-ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>
School	34	1	School	37	1
Study	13	2	Friends	16	2
Friends	11	3	Carefree	13	3

Table 3
Distribution of significant non-random associations with the 'my life five years ago' stimulus

<u>ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>	<u>Non-ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>
Carefree	9	4	Merry	12	4
Merry	8	5	Study	7	5
Childhood	7	6	Childhood	6	7
Home	6	7.5	Love	6	7
First love	6	7.5	Exams	6	7
Walking	4	11	First love	5	9
Sport	4	11	Brother	4	12.5
Happiness	4	11	Games	4	12.5
Student	4	11	Mother	4	12.5
Schoolchild	4	11	Family	4	12.5
Bicycle	3	16	Sister	4	12.5
Normal	3	16	Calm	4	12.5
Family	3	16	Excitement	3	19
Good	3	16	Graduation	3	19
Exams	3	16	Partying	3	19
			Home	3	19
			Interesting	3	19
			Uncertainty	3	19
			Parents	3	19
			Freedom	3	31.5
Sum	100		Sum	113	
Total sum	251		Total sum	282	

Note: identical non-random associations are indicated in bold here and in the following tables.

Table 3 shows the results of ranking non-random associations ($v \geq 3$) (Serkin, 2009) with the 'my life five years ago' stimulus. In general, representations of the past life are similar among the representatives of both groups. The following associations were identical: 'school' (34 and 37), 'study' (13 and 7), 'friends' (11 and 16), 'carefree' (9 and 13), 'merry' (8 and 12), 'childhood' (7 and 6), 'home' (6 and 3), 'first love' (6 and 5), 'family' (3 and 4), and 'exams' (3 and 6). Additionally, the 'school' descriptor corresponds to the first rank for the subjects in both samples. It is obvious that representatives of indigenous and non-indigenous ethnic groups associated the events of the past with the school. Several descriptors, including 'school' (34 and 37), 'study' (13 and 7), 'friends' (11 and 16), 'carefree' (9 and 13), 'merry' (8 and 12), 'home' (6 and 3), and 'exams' (3 and 6) had significant differences in frequency. In the experimental group, the 'study' descriptor was at the second place in the number of associations. On the contrary, the same rank corresponded to the 'friends' descriptor in the control group. For indigenous youth the past is apparently more associated with study and events related to it. On the contrary, for non-indigenous ethnic groups communication with friends was probably more important during this period. The quantitative ratio of the frequency of the descriptors of 'carefree', 'merry' and 'childhood' prevails in the control group. This may be explained by the fact that the past is more carefree and merry among non-indigenous youth. We should also note that the experimental group had more frequent associations related to the 'home' descriptor. This is probably because the majority of the surveyed representatives of the ISPN came to study in Magadan from their native national villages and towns.

An almost identical ratio in frequency distributed among the following descriptors: 'childhood' (7 and 6), 'first love' (6 and 5), and 'family' (3 and 4). Moreover, there were associations that differed in groups. 'Walking', 'sports', 'happiness', 'student', 'schoolchild', 'bicycle', 'normal', and 'good' were observed only among the subjects of the experimental group. 'Love', 'brother', 'mother', 'calm', 'excitement', 'graduation', 'partying', 'interesting', 'uncertainty', and 'parents' were observed only among the subjects of the control group. The respondents of the control group had a wider range of associations. The distribution of differing descriptors indicates that associations related to emotional and personal feelings ('love', 'uncertainty', 'excitement', and 'freedom') prevail in the control group. In the experimental group, associations related to educational activities prevail. Our results go in line with the data obtained in the study by V. P. Serkin and V. L. Solovenchuk (Serkin, 2008).

A comparative analysis of students' representations of their own lives showed that the ideas related to formalized events (educational activities, stating events) prevail in the ISPN group; these ideas prevail over personal ones and may be indicators of adaptation.

In general, the subjects of the experimental group had a positive attitude towards the past, which was associated with active types of activity ('sports', 'walking', and 'bicycle'). The control group showed a considerable concentration on personal events and feelings; a positive attitude towards the past prevails. There is a clear interconnection of ideas with family and kinship relations ('sister', 'mother', 'brother', and 'parents').

The sum of significant non-random associations and the total sum of the frequency of associations in the control and experimental groups differ significantly (ISPN = 251 (100), non-ISPN = 282 (113)). Associative links are established during the process of accumulation of subjective experience and are determined by the context of culture. Subjective experience contains the structures of individual knowledge and skills acquired in the process of education, training and interaction

with the world. From the point of view of Indenbaum (2016), the genesis of cognitive activities is associated with specific characteristics of children’s communication and interaction with adults during early development, and not with ethnicity. According to the author, the infrastructure of the place of residence, including the characteristics and conditions of sociocultural deprivation, is a factor influencing the development of cognitive skills in indigenous children (Indenbaum, 2016). Consequently, we can identify the factors that determine specific characteristics of the subjective experience of representatives of the peoples of the North – upbringing as a child-adult interaction and the social infrastructure of the place of residence, which is characterized by limitations in the educational space and communication. The individual subjective experience of representatives of the non-indigenous population living in the city is probably more diverse and implies ‘more’ ways to interact with the world.

Table 4
Distribution of significant non-random associations with the ‘my life now’ stimulus

<u>ISP</u> N associations	<u>F</u> requency	<u>R</u> ank- <u>f</u> requency	<u>Non-ISP</u> N associations	<u>F</u> requency	<u>R</u> ank- <u>f</u> requency
Study	27	1	Study	24	1
Work	11	2	Love	13	2.5
Sports	7	3.5	Work	13	2.5
Student	7	3.5	Family	12	4
Friends	6	5.5	University	10	5
Interesting	6	5.5	Friends	8	6.5
Eventful	4	9.5	Happiness	8	6.5
New acquaintances	4	9.5	Sports	7	8
Excellent	4	9.5	Independence	6	9.5
Family	4	9.5	Boring	6	9.5
Boring	4	9.5	Merry	5	11.5
University	4	9.5	Interesting	5	11.5
Merry	3	14.5	Institute	4	14.5
Mother	3	14.5	Responsibility	4	14.5
Husband	3	26.5	Joy	4	14.5
Dormitory	3	14.5	Stability	4	22
Independence	3	14.5	Difficult	4	14.5

Table 4
Distribution of significant non-random associations with the 'my life now' stimulus

ISPN associations	Frequency	Rank-frequency	Non-ISPN associations	Frequency	Rank-frequency
			Husband	3	22
			Communication	3	22
			Loneliness	3	22
			Plans	3	22
			Freedom	3	22
			Seminar	3	22
			Sleep	3	22
			Calm	3	22
			Student days	3	22
			Exams	3	22
Sum	78		Sum	99	
Total sum	238		Total sum	346	

Table 4 shows the results of ranking non-random associations ($v \geq 3$) with the 'my life now' stimulus. In general, representations of the present life are similar among the representatives of both groups. The following associations were identical: 'study' (27 and 24), 'work' (11 and 13), 'sports' (7 and 7), 'friends' (6 and 8), 'interesting' (6 and 5), 'family' (4 and 12), 'boring' (4 and 6), 'university' (4 and 10), 'merry' (3 and 5), 'husband' (3 and 3), and 'independence' (3 and 6). Moreover, the 'study' descriptor corresponds to the first positions of the descriptor ranks for the subjects in both samples. It is obvious that ideas related to educational activity are relevant for representatives of indigenous and non-indigenous populations who are students.

Several descriptors, including 'study' (27 and 24), 'family' (4 and 12), 'university' (4 and 10), and 'independence' (3 and 6) had significant differences in frequency. The present life is more associated with educational activity in the experimental group and with family and personal relationships in the control group. This is confirmed by the data on differing associations. For example, there is no 'love' descriptor in the ISPN group. The associations differing in groups were distributed as follows: 'student', 'eventful', 'new acquaintances', 'beautiful', 'mother', and 'dormitory' were observed only among the subjects of the experimental group; 'love', 'happiness', 'institute', 'responsibility', 'joy', 'stability', 'difficult', 'communication', 'loneliness', 'plans', 'freedom', 'seminar', 'sleep', 'calm', 'student days', and 'exams' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations. In contrast to the experimental group, associations related to emotional and personal feelings and events prevail in the control group. We should note the 'dormitory' association that emerged in the ISPN group. This may be explained by the fact that the majority of representatives of the indigenous peoples of the North came to study in Magadan from national villages

and live in a dormitory. An almost identical ratio in frequency was distributed among the following descriptors: 'work' (11 and 13), 'sports' (7 and 7), 'friends' (6 and 8), 'interesting' (6 and 5), 'boring' (4 and 6), 'merry' (3 and 5), and 'husband' (3 and 3). On the whole, associations related to positive feelings and emotions ('interesting', 'merry', 'eventful', 'beautiful', etc.) prevail in the representations of the subjects in both samples.

The sum of significant non-random associations and the total sum of the frequency of associations in the control and experimental groups differ significantly (ISPN = 238 (78), non-ISPN = 346 (99)). Such a distribution of the frequency of associations may be explained by the fact that the majority of young men and women from the indigenous population live in villages and towns, in sociocultural deprivation that manifests itself in the scarcity of educational space, communication, and access to the values of traditional culture (Indenbaum, 2008; Serkin, 2008).

Table 5

Distribution of significant non-random associations with the 'my life five years later' stimulus

<u>ISPN associations</u>	<u>Frequency</u>	<u>Rank-frequency</u>	<u>Non-ISPN associations</u>	<u>Frequency</u>	<u>Rank-frequency</u>
Work	34	1	Family	41	1
Family	33	2	Work	38	2
Children	5	4	Children	21	3
Home	5	4	Happiness	8	4
Friends	5	4	Moving	7	5.5
Interesting	4	8	Success	7	5.5
Car	4	8	Career	6	7
Independent	4	8	Uncertainty	5	8.5
Happiness	4	8	Good job	5	8.5
Success	4	8	Friends	4	13
Apartment	3	13	Interesting	4	13
Love	3	13	Husband	4	13
Husband	3	13	Travel	4	13
Child	3	13	Own house	4	13
Stability	3	13	Own apartment	4	13
			Sports	4	13
			Money	3	20.5
			Home	3	20.5
			Love	3	20.5
			New	3	20.5
			Responsibility	3	20.5
			Child	3	98.5
			Self-development	3	20.5
			Warmth	3	20.5
			Purposefulness	3	20.5
Sum	103		Sum	129	
Total sum	208		Total sum	338	

Table 5 shows the results of ranking non-random associations ($v \geq 3$) with the 'my life now' stimulus. In general, representations of the future life are similar among the representatives of both groups. The following associations were identical: 'work' (34 and 38), 'family' (33 and 41), 'children' (5 and 21), 'home' (5 and 3), 'friends' (5 and 4), 'interesting' (4 and 4), 'happiness' (4 and 8), 'success' (4 and 7), 'love' (3 and 3), 'husband' (3 and 4), and 'child' (3 and 3). The following descriptors had significant differences in frequency: 'work' (34 and 38), 'family' (33 and 41), 'children' (5 and 21), 'happiness' (4 and 8), and 'success' (4 and 7). For the subjects of the control group the associations with their future related to a family prevail over those related to work; for the subjects of the experimental group work is more significant than a family. In contrast to the experimental group, having children is significant to the subjects of the control group. Therefore, in contrast to young representatives of the peoples of the North, non-indigenous youth associate their future plans and prospects with a successful and happy life.

An almost identical ratio in frequency was distributed among the following descriptors: 'home' (5 and 3), 'friends' (5 and 4), 'interesting' (4 and 4), 'love' (3 and 3), 'husband' (3 and 4), and 'child' (3 and 3). The associations differing in groups were distributed as follows: 'car', 'independent', 'apartment', and 'stability' were observed only among the subjects of the experimental group; 'moving', 'career', 'uncertainty', 'good job', 'travel', 'own house', 'own apartment', 'sports', 'money', 'new', 'responsibility', 'self-development', 'warmth', and 'purposefulness' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations. The distribution of the frequency of associations differing in groups suggests that plans to leave the city of Magadan are more significant for the subjects from the non-indigenous population than for the representatives of the experimental group.

Table 6

Distribution of significant non-random associations with the 'nature' stimulus

<u>ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>	<u>Non-ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>
Beauty	21	1.5	Forest	26	1
Forest	21	1.5	Beauty	21	2
Animals	16	3	Sea	20	3
Sea	12	4	Trees	12	5
River	11	5.5	Beautiful	12	5
Sun	11	5.5	Sun	12	5
Recreation	7	7.5	Animals	11	7
Barbecue	7	7.5	Recreation	9	9
Birds	6	9.5	River	9	9
Tundra	6	9.5	Barbecue	9	9
Mountains	5	12.5	Tranquility	8	11
Trees	5	12.5	Verdure	7	12
Mosquitoes	5	12.5	Bonfire	6	14.5

Table 6

Distribution of significant non-random associations with the 'nature' stimulus

<u>ISP</u> N associations	Frequency	<u>Rank-</u> <u>frequency</u>	<u>Non-ISP</u> N associations	Frequency	<u>Rank-</u> <u>frequency</u>
Tranquility	5	12.5	Lake	6	14.5
Water	4	17	Beautiful	6	14.5
Animals	4	17	Fresh air	6	14.5
Grass	4	17	Flowers	6	14.5
Flowers	4	17	Clean air	5	17
Purity	4	17	Air	4	19
Harmony	3	23.5	Life	4	19
Verdure	3	23.5	Grass	4	19
Beautiful	3	23.5	Water	3	26
Bears	3	23.5	Harmony	3	26
Lake	3	23.5	Mushrooms	3	26
Hunt	3	23.5	Friends	3	26
Freedom	3	23.5	Insects	3	26
Warmth	3	23.5	Sky	3	26
			Unpredictable	3	26
			Landscapes	3	26
			Plants	3	26
			Hills	3	26
Sum	140		Sum	178	
Total sum	291		Total sum	365	

Table 6 shows the results of ranking non-random associations ($v \geq 3$) with the 'nature' stimulus. In general, representations of nature are similar among the representatives of both groups. The following associations were identical: 'beauty' (21 and 21), 'forest' (21 and 26), 'animals' (16 and 11), 'sea' (12 and 20), 'river' (11 and 9), 'sun' (11 and 12), 'recreation' (7 and 9), 'barbecue' (7 and 9), 'trees' (5 and 12), 'tranquility' (5 and 8), 'water' (4 and 3), 'grass' (4 and 4), 'flowers' (4 and 6), 'harmony' (3 and 3), 'verdure' (3 and 7), 'beautiful' (3 and 12), and 'lake' (3 and 6). The following descriptors had significant differences in frequency: 'forest' (21 and 26), 'animals' (16 and 11), 'sea' (12 and 20), 'trees' (5 and 12) and 'beautiful' (3 and 12). Thus, besides the 'beauty' and 'forest' descriptors, respondents of the experimental group associate nature with the animal world; subjects from the control group associate nature with the forest, sea, and beauty. An almost identical ratio in frequency was distributed among the following descriptors: 'beauty' (21 and 21), 'river' (11 and 9), 'sun' (11 and 12), 'recreation' (7 and 9), 'barbecue' (7 and 9), 'water' (4 and 3), 'grass' (4 and 4), 'flowers' (4 and 6), and 'harmony' (3 and 3).

The associations differing in groups distributed as follows: 'birds', 'tundra', 'mountains', 'mosquitoes', 'animals', 'purity', 'bears', 'hunt', 'freedom', and 'warmth' were observed only among the subjects of the experimental group; 'bonfire', 'beautiful', 'fresh air', 'clean air', 'air', 'life', 'mushrooms', 'friends', 'insects', 'sky', 'unpredictable', 'landscapes', 'plants', and 'hills' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations. We should also note that according to the differing associations, the subjects of the experimental group associate nature with the animal world ('birds', 'bears', 'animals', and 'hunt'), while the respondents of the control group associate nature with 'air' ('fresh air', 'clean air', and 'air'). The 'tundra' association (6) was identified only among the representatives of indigenous peoples. Tundra is a natural zone with a harsh climate; it has historically been one of the zones of residence of the indigenous small-numbered peoples of the North. Therefore, the indigenous population can associate nature with a harsh climate and extreme living conditions, namely tundra.

Table 7
Distribution of significant non-random associations with the 'human' stimulus

<u>ISPN associations</u>	<u>Frequency</u>	<u>Rank-frequency</u>	<u>Non-ISPN associations</u>	<u>Frequency</u>	<u>Rank-frequency</u>
Kind	9	1	Kind	9	1
Friend	8	2.5	Personality	8	2
Reasonable	8	2.5	Reasonable	7	3
Human	7	4	Communication	6	4
Personality	5	6.5	Kindness	5	6.5
Society	5	6.5	Friend	5	6.5
Family	5	6.5	Love	5	6.5
Honesty	5	6.5	Honesty	5	6.5
Kindness	4	10.5	Animal	4	12.5
Anger	4	10.5	Life	4	12.5
Responsive	4	10.5	Anger	4	12.5
Good	4	10.5	Destruction	4	12.5
Activity	3	14	Hands	4	12.5
Woman	3	14	Creature	4	12.5
Man	3	14	Dull	4	12.5
			Smart	4	12.5
			Merry	3	23
			Head	3	23
			Woman	3	23
			Sincerity	3	23
			Beloved	3	23
			Man	3	23
			Legs	3	23
			Society	3	23
			Work	3	23
			Strong	3	23
			Death	3	23
			Society	3	23
			Human	3	23
Sum	61		Sum	55	
Total sum	190		Total sum	288	

In general, representations of the human are similar (Table 7) among the representatives of both groups. The following associations were identical: 'kind' (9 and 9), 'friend' (8 and 5), 'reasonable' (8 and 7), 'human' (7 and 3), 'personality' (5 and 8), 'society' (5 and 3), 'honesty' (5 and 5), 'kindness' (4 and 5), 'anger' (4 and 4), 'woman' (3 and 3), and 'man' (3 and 3). For both groups of subjects, the first positions of the descriptor ranks correspond to the 'kind' descriptor. However, several descriptors have significant differences in frequency – 'friend' (8 and 5), 'human' (7 and 3), 'personality' (5 and 8), and 'society' (5 and 3). The subjects of the experimental group associate the human with the 'friend' concept; the human is primarily a personality for the subjects of the control group. We may assume that some representatives of the indigenous population express the need for personal relationships in which they can find mutual understanding and support. For the subjects from the control group, the human, first of all, is an independent subject of social relations and communication. An almost identical ratio in frequency was distributed among the following descriptors: 'kind' (9 and 9), 'reasonable' (8 and 7), 'honesty' (5 and 5), 'kindness' (4 and 5), 'anger' (4 and 4), 'woman' (3 and 3), and 'man' (3 and 3). In general, both groups have positive representations of the human as an individual with reason and consciousness, guided by moral and ethical judgments.

The associations differing in groups distributed as follows: 'family', 'responsive', 'good', and 'activity' were observed only among the subjects of the experimental group; 'communication', 'love', 'animal', 'life', 'destruction', 'hands', 'creature', 'dull', 'smart', 'merry', 'head', 'sincerity', 'beloved', 'legs', 'work', 'strong', 'death', and 'society' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations.

Table 8

Distribution of significant non-random associations with the 'happiness' stimulus

<u>ISPN associations</u>	<u>Frequency</u>	<u>Rank-frequency</u>	<u>Non-ISPN associations</u>	<u>Frequency</u>	<u>Rank-frequency</u>
Family	37	1	Family	34	1
Love	21	2	Love	32	2
Children	13	3	Children	16	3
Health of loved ones	12	4	Joy	10	4
Joy	11	5	Friends	8	5
Health	9	6	Health	7	6
Mother	6	7	Harmony	5	7.5
Home	5	8.5	Home	5	7.5
Peace	5	8.5	Money	4	13
Friends	4	10.5	Life	4	13
Child	4	10.5	Health of loved ones	4	13
Wealth	3	13.5	Mother	4	13

Table 8

Distribution of significant non-random associations with the 'happiness' stimulus

<u>ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>	<u>Non-ISPN associations</u>	<u>Frequency</u>	<u>Rank- frequency</u>
Work	3	13.5	Peace	4	13
Freedom	3	13.5	Parents	4	13
Sun	3	13.5	Sun	4	13
			Tranquility	4	13
			Smile	4	13
			Well-being	3	21.5
			Recreation	3	21.5
			Nearby close ones	3	21.5
			Freedom	3	21.5
			Laughter	3	21.5
			Warmth	3	21.5
			Satisfaction	3	21.5
			Appeasement	3	21.5
Sum	129		Sum	131	
Total sum	232		Total sum	309	

In general, representations of happiness are similar (Table 8) among the representatives of both groups. The following associations were identical: 'family' (37 and 34), 'love' (21 and 32), 'children' (13 and 16), 'health of loved ones' (12 and 4), 'joy' (11 and 10), 'health' (9 and 7), 'mother' (6 and 4), 'home' (5 and 5), 'peace' (5 and 4), 'friends' (4 and 8), 'freedom' (3 and 3), and 'sun' (3 and 4). In addition, for both groups, the first three positions of the descriptor ranks were identical, from which we can conclude that for indigenous and non-indigenous youth the main components of happiness are family, love, and children. However, several descriptors had significant differences in frequency: 'family' (37 and 34), 'love' (21 and 32), 'children' (13 and 16), 'health of loved ones' (12 and 4), and 'friends' (4 and 8). For the experimental group, happiness is more associated with a family and health of loved ones; for the control group happiness is more associated with love, children, and friends. We can assume that representatives of the indigenous population are characterized by greater anxiety and fear for the health and life of their close ones. This may explain such a significant difference in the ratio of the frequency of this descriptor. Representations related to personal relationships prevail in the control group.

An almost identical ratio in frequency was distributed among the following descriptors: 'joy' (11 and 10), 'health' (9 and 7), 'mother' (6 and 4), 'home' (5 and 5), 'peace' (5 and 4),

'freedom' (3 and 3), and 'sun' (3 and 4). The associations differing in groups distributed as follows: 'child', 'wealth', and 'work' were observed only among the subjects of the experimental group; 'harmony', 'money', 'life', 'parents', 'calmness', 'smile', 'well-being', 'recreation', 'nearby loved ones', 'laughter', 'warmth', 'satisfaction', and 'appeasement' were observed only among the subjects of the control group. Moreover, the respondents of the control group had a wider range of associations.

Conclusion

1. Comparison of associative semantic universals related to the 'my life five years ago', 'my life now', and 'my life five years later' stimuli makes it possible to identify subjective temporal characteristics of the semantic structures of the image of the world. The associations related to formalized events (educational activities, work, ascertaining events) prevail over personal ones (love, family, children) in the representations of the past, present and future among young representatives of the indigenous small-numbered peoples of the North.

2. The general distribution by the number of the frequency of associations for all the stimuli shows that the representations of the indigenous small-numbered peoples of the North have less diverse associations. Such a distribution of the frequency of associations may be explained by the influence of factors of the social infrastructure of the place of residence, sociocultural deprivation, limitations in the educational space and communication, and access to the values of traditional culture.

3. The differences observed when comparing associative semantic universals related to the 'nature', 'human', and 'happiness' stimuli indicate that associative links are determined by differences in subjective experience (for example, for the ISPN group, the human is more associated with the 'friend' concept, while for the control group, the human is, first of all, personality) and the context of culture (for example, nature is more associated with the animal world and a harsh climate among the representatives of the indigenous small-numbered peoples of the North).

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