

## Abstracts for the journal «New Research» № 2 (82) 2025

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### **Research of socio-cultural transformation in the Donetsk People's Republic and its impact on the educational environment (literature review)**

**ABSTRACT.** *The article provides an overview of theoretical and applied research on the impact of sociocultural transformation in the Donetsk People's Republic (DPR) on the educational environment and the development of primary school children during the transition period after the region became part of the Russian Federation. The text examines the sociocultural environment, identifying its fundamental components (social space and time, society and state, social environment) and their impact on the formation of a child's personality. This study focuses on the challenges associated with the transformation of traditional values, changes in educational practices, and children's adaptation to new conditions. The article will be of interest to educators, sociologists and specialists in the field of educational policy, as it offers a scientifically based approach to ensuring the right to education in conditions of social transformation.*

**Keywords:** *sociocultural transformation, Donetsk People's Republic (DPR), primary school students, educational environment, personal development, transition period, right to education.*

*Sonkin V.D.*

### **Loads used in children's sports: pedagogical, psychological, and physiological aspects**

**ABSTRACT.** *A review of modern literature analyzes the pedagogical, psychological and physiological aspects of loads used in children's sports. Much attention is paid to games and their role in early physical education. Specific age-related characteristics of the child's body that affect sensitivity to sports loads are emphasized. Gender differences in the dynamics of physical capabilities of preschool and primary school children are highlighted.*

**Keywords:** *preschool and primary school children; sports loads; functional capabilities; gender differences; sports games*

*Tarasova D.V., Schegoleva M. A.*

### **The history of the formation of acro-yoga and the features of its development in Russia and abroad**

**ABSTRACT.** *The rapid development of yoga as a complex of health exercises has led to its internal division into many directions. And this process does not stop – innovative programs appear on the basis of previously known ones, other modifications and content are offered, new equipment is introduced. Acro-yoga has emerged from the practice of pair yoga relatively recently,*

but we have found very little information on this topic, which is what made this study relevant. The article presents the history of the formation of acro-yoga and the features of its development in Russia and abroad.

**Keywords:** yoga, acrobatics, acro-yoga, wellness, mindfulness.

**Kedrova E.V., Schegoleva M. A.**

***Effect of group aerobic exercises on increasing the level of cardiorespiratory endurance of adult population***

**ABSTRACT.** The article presents an analytical review of modern scientific research devoted to the influence of group aerobic classes on increasing the level of cardiorespiratory endurance in the adult population. The analysis covers a wide range of components and includes both physiological mechanisms of adaptation of the cardiovascular and respiratory systems to regular aerobic exercise, and the influence of social factors on motivation and commitment to the training process. The article pays significant attention to the role of social motivation in the success of group training: it examines the influence of group dynamics, a sense of belonging to a community and mutual support of participants on compliance with the training regimen and the achievement of set goals. The key conditions that ensure safety and maximum benefit of loads for those involved are considered. In conclusion, the study presents recommendations on dosing loads for beginners, continuing and elderly people.

**Keywords:** aerobics, group training, endurance, cardiorespiratory system, physical activity, recommendations

**Goncharova G.A., Dogadkina S.B.**

***The Effect of Regular Physical Activity at the Initial Stage of the Training Process on Central Hemodynamics in Preschool and Early School-Age Children.***

**ABSTRACT.** The present study is devoted to the analysis of central hemodynamic parameters in children aged 5–10 years who participate in sports and their peers with a less active lifestyle. The study reveals the influence of regular physical activity on heart rate (HR), systolic (SBP), and diastolic blood pressure (DBP). Most children who are actively engaged in sports demonstrate a slight decrease in resting heart rate. They also show a reduction in both systolic and diastolic blood pressure, which may indicate that their cardiovascular system is successfully adapting to regular physical exercise. Gender – 87 Гончарова Г.А., Дозадкина С.Б. differences in the response to physical activity were identified. Among female athletes aged 7-8 years, a significant increase in both SBP and DBP was observed.

**Keywords:** physical training, childhood, heart rate, blood pressure

**Lomakin D.I.**

***Decision-making in adolescents with non-optimal states of emotional and motivational brain systems***

**ABSTRACT.** The study was aimed to reveal the relationship between the functional state of the brain cortical-subcortical regulatory systems (RS), efficiency of the voluntary control and the decision-making in a situation of uncertainty in adolescents. The functional state of participants' RS was assessed by the structural qualitative analysis of individual EEG. Based on the results of the EEG analysis, groups of adolescents with suboptimal functioning – 101 Ломакин Д.И. of frontothalamic, frontolimbic and frontobasal systems were selected. An experimental task with a monetary reward (Balloon Analog Risk Task) was used to study the decision making process under uncertainty. The qualitative neuropsychological examination was applied to study the functions of programming, selective regulation and control of activity – executive functions (EF). Different dynamics of betting in the monetized game were revealed depending on the functional state of the RS and the individual characteristics of EF in the studied groups of adolescents. The possibility of a specific influence of the brain systems of voluntary control and emotional-motivational regulation on the decision-making process in adolescence is discussed.

**Keywords:** Cortical-subcortical brain regulatory systems, executive functions, emotional-motivational regulation, decision-making in a situation of uncertainty, risk propensity, BART

**Kurgansky A.M.**

***Integration of functional systems theory, properties of the nervous system, and a triple-network model of the brain in understanding temperaments***

**ABSTRACT.** The study is devoted to the integrative approach that links temperament with the blocks of the functional systems theory. Three key behavioral blocks are identified that successively replace each other: Block 1: Attention/analysis (afferent synthesis); Block 2: Action (programming and control); Block 3: State of rest (after accepting the result and triggering the acceptor of the result of the action). Based on this, hypothetically temperament is considered as a manifestation of the features of the transition between these blocks in the process of the behavioral cycle. In this case, a melancholic (weak) person has difficulties in the transition from Block 1 to Block 2, i.e. from analysis to action, which can lead to neuroticism. A choleric (unbalanced) person has difficulties transitioning from Block 2 to Block 3, “gets stuck” on the action block, with difficulty calming down, which can lead to irritability. For a phlegmatic person (inertia) the transition from Block 3 to Block 1, that is, from a state of rest to attention and external stimuli is difficult, which can manifest itself as apathy and drowsiness. The sanguine person (mobility) easily switches between blocks, sometimes superficially. At the same time, it is known that these behavioral features have their positive sides: greater functionality of the corresponding block for each of the temperaments, up to the point of showing talent. Hypothetically, Block 1 is associated with the Salience Network (SN), Block 2 with the Central Executive Network (CEN), and Block 3 with the Default Mode Network of the brain (DMN). Key words: P.K. Anokhin's functional systems theory, properties of the nervous system, three-network brain model, Hippocratic temperaments.

**Keywords:** P.K. Anokhin's functional systems theory, properties of the nervous system, three-network brain model, Hippocratic temperaments.

**Komkova Yu. N., Ryabkova T.S.**

***The functional state of the body when reading an educational text and its dependence on the formation of a skill in adolescents***

**ABSTRACT.** *The functional state of the body was studied using heart rate variability (HRV) parameters in 15-year-old adolescents (n=22, 63.6% girls) while reading a complex text. Based on a set of objective OMA parameters, groups with different levels of reading skills were identified (Group 1 – high, Group 2 – low). The nature of the autonomic nervous response of adolescents indicates that reading continues to be a complex cognitive task. High variability of HRV indices was revealed when performing a complex cognitive task. Adolescents with less developed reading skills demonstrate high variability.*

**Keywords:** *reading, adolescence, reading skill, heart rate variability.*

**Barantsev S.A., Chernova M.B., Krivolapchuk I.A.**

***Anatoly Mikhailovich Shlemin is one of the leading specialists in physical education of schoolchildren***

**ABSTRACT.** *The article describes the scientific activity of an employee of the Institute (1979 to 2010), Professor A.M. Shlemin, a leading scientific specialist in the field of physical education of schoolchildren. His main works are devoted to improving the physical education of secondary school students and, above all, primary school students.*

**Keywords:** *scientific activity, physical education, school*