

BRAIN MECHANISMS OF FORMATION OF HOLISTIC PERCEPTION IN CHILDREN AND ADOLESCENTS AGED 5-6 TO 13 YEARS. A SERIES OF ARCHIVAL ARTICLES BY D.A. FARBER AND N.E. PETRENKO, PUBLISHED IN THE JOURNAL "NEW RESEARCH" IN 2010-2015. Machinskaya R.I.

ABSTRACT. The anniversary issue of the journal New Research presents a series of articles by D.A. Farber and N.E. Petrenko, carried out from 2010 to 2015, covering one of the key areas of research into the formation of mechanisms of visual object perception in children and adolescents. These articles cover pre-school, junior high school, pre-adolescence, and adolescence. The choice of these particular papers is related to two circumstances: all of them were published in the journal New Research and are part of its archival materials, which provides a unique opportunity to re-introduce specialists to relevant research, but the main thing is different. These works vividly reflect the most important methodological findings, methodological approaches, and patterns of development of brain mechanisms of visual perception revealed by the results of research.

Keywords: articles by D.A. Farber and N.E. Petrenko, years of issue 2010-2015, visual perception, age

UNDERSTANDING OF PARTICIPANTS' EMOTIONS IN SOCIAL SITUATIONS AND THEIR RETENTION IN WORKING MEMORY IN CHILDREN AGED 6-8 YEARS: RELATIONSHIP WITH EXECUTIVE FUNCTIONS DEVELOPMENT. Khakimova D.M., Korneev A.A., Zakharova M.N., Machinskaya R.I.

ABSTRACT. We investigated the effectiveness of understanding and retaining in working memory the emotions of characters in social situations, as well as the relationships between these processes and individual developmental characteristics of executive functions in children aged 6–8 years (N=48). It was shown that preschool children and first-graders recognized the emotions of characters in social situations quite well. The most recognizable emotion is joy, while emotions such as anger, sadness, and fear were recognized with less accuracy. No age-related differences were found in the recognition and retention of emotional expressions in memory. Correlations were identified between the time and accuracy of performing the main experimental task and the performance indicators on several assessments aimed at measuring various components of executive functions.

Keywords: socially significant information, executive functions, working memory, preschool age, primary school age

RESEARCH OF THE EFFECTIVENESS OF VISUAL WORKING MEMORY UNDER CONDITIONS OF GAME AND SOCIAL MOTIVATION. DEVELOPMENT OF AN EXPERIMENTAL MODEL AND ITS TESTING WITH ADULT SUBJECTS Korneev A.A., Snagoschenko K.I., Lomakin D.I., Machinskaya R.I.

ABSTRACT. The paper presents an experimental model designed to investigate the influence of different types of motivation (game and social) on the performance of a cognitive n-back task. The aim of the study was to test the model on an adult sample and assess its applicability to future studies with adolescents. Twenty-five subjects aged 18 to 37 years participated in the study. Analysis of behavioral indicators demonstrated the effectiveness of introducing motivational conditions (increased response accuracy and reduced time spent on the task). The

obtained results support the feasibility of further use of the experimental model with adolescent participants.

Keywords: motivation, game motivation, social motivation, n-back, visual working memory

Efficiency of sustained attention and inhibitory control during approach versus avoidance motivation in adolescents aged 13-14 years Talalay I.V., Machinskaya R.I.

ABSTRACT. The paper presents a comparative study of the efficiency of sustained attention and inhibitory control under three experimental conditions associated with different motivational states: (1) no motivation, (2) approach motivation, and (3) avoidance motivation. The study involved 24 healthy right-handed participants (15 females) aged 13.4 ± 0.6 years; they performed a modified Go/NoGo task with visual and auditory target and non-target stimuli. The experimental design included three sessions corresponding to the three motivational states. In the approach motivation session, bonus points were awarded to participants for correct responses. In the avoidance motivation session, penalty points were deducted for incorrect responses from the standard number, which participants were informed about at the beginning of the session. Participants with the highest number of points received a prize. In the no motivation session, no points were awarded or deducted. Significant differences between the motivation conditions were found only in the results reflecting the efficiency of sustained attention: in comparison with the no-motivation condition, participants' reaction times were significantly reduced in both the approach and avoidance motivation conditions. However, an increase in the percentage of correct responses was observed only in the approach motivation condition. These results indicate that conditions engendering approach motivation are the most favorable for performing monotonous tasks that require sustained attention.

Keywords: sustained attention, inhibitory control, approach/avoidance motivation, adolescents aged 13-14 years, Go/NoGo task

METHODS OF MAINTAINING COGNITIVE FUNCTIONS IN ELDERLY PEOPLE AND EVALUATING THEIR EFFECTIVENESS IN THE SOCIAL SERVICE SYSTEM: REVIEW OF SCIENTIFIC RESEARCH Sidorenkova A.V.

ABSTRACT. The article examines modern methods of maintaining cognitive functions in older people in the context of the social care system. Particular attention is paid to the results of scientific studies that reveal the impact of various interventions on the mental health of older people. Experimental approaches such as cognitive training, physical activity and social interaction are analyzed in terms of their effectiveness and applicability to social care practice.

Keywords: Elderly people, methods of maintaining cognitive functions, cognitive impairment, social services, diagnostic methods.

POSSIBILITIES OF PSYCHOLOGICAL REHABILITATION OF PRESCHOOL CHILDREN WITH ONCOHEMATOLOGICAL PATHOLOGY THROUGH THE METHOD OF MARIA MONTESSORI. Zorina E.S., Matveeva K.B.

ABSTRACT. The article examines the specific characteristics of the emotional and volitional sphere of preschool children with oncohematological diseases undergoing inpatient treatment. The study identifies difficulties children experience in recognizing and expressing emotions, establishing emotional contact, and developing emotional intelligence. As part of the experimental work, a series of sessions based on the Montessori method was conducted to support the development of children's emotional sphere. The results demonstrated positive dynamics in the experimental group and statistically significant differences compared to the control group, confirming the effectiveness of the Montessori method as a tool for psychological rehabilitation.

Keywords: preschool children, oncohematological pathology, emotional and volitional sphere, psychological rehabilitation, Maria Montessori method, emotional intelligence development.

THE PECULIARITIES OF THE FORMATION OF SPIRITUAL AND MORAL VALUES OF ADOLESCENTS IN A DIGITAL SOCIETY. Vladykina A.D.

ABSTRACT. The article examines the peculiarities of the formation of spiritual and moral values of adolescents in the context of the digital transformation of society. The author analyzes the mechanisms of influence of the virtual environment on the value orientations of the younger generation, risk factors and the possibilities of targeted pedagogical influence through digital technologies. The results of a longitudinal study are presented, demonstrating the transformation of adolescents' ideas about social interactions in the period from 2016 to 2024. The necessity of developing a comprehensive system of spiritual and moral education adapted to the challenges of the digital age is substantiated.

Keywords: spiritual and moral values, teenagers, digital society, virtual identity, value orientations, digital socialization, upbringing.

5-9 THE RELATIONSHIP BETWEEN EMOTIONAL INTELLIGENCE AND AGGRESSIVE BEHAVIOR IN MIDDLE SCHOOL STUDENTS (GRADES) Mikhaylishchuk E.M.

ABSTRACT. Aggressive behavior in adolescents is a highly complex and multifactorial phenomenon that requires comprehensive analysis. The article examines in detail the classification of types of aggression and the key theory explaining its mechanisms—Albert Bandura's social learning theory. Particular attention is paid to adolescence (grades 5-9), which is characterized by increased vulnerability to the influence of biological, social, and psychological factors. The central element of the research is the analysis of the relationship between aggressive behavior and emotional intelligence. Based on the analysis of literature, it can be concluded that a low level of emotional intelligence correlates with increased aggressiveness, while its development serves as an effective prevention tool. The article emphasizes the necessity of implementing programs aimed at developing emotional competencies in adolescents within the educational environment.

Keywords: aggressive behavior, social learning theory, Albert Bandura, adolescents, emotional intelligence, aggression prevention, school environment, Bobo doll experiment

THE INFLUENCE OF OBSESSION OF HEALTHY LIFESTYLE ON A PERSON PSYCHOLOGICAL STATE: WHEN HEALTH BECOMES UNHEALTHY Belous P. I., Shchegoleva M. A.

ABSTRACT. The article provides an overview of studies on the negative impact of pathological obsession of healthy lifestyle on a person's psychological state. The article analyzes the formation of addiction, its effect on the body and its manifestation, as well as the physical and mental consequences. Methods of prevention and correction, including cognitive behavioral therapy, are described.

Keywords: healthy lifestyle, addiction, neurotransmitters, eating disorder, behavioral signs

THE INFLUENCE OF AEROBICS CLASSES ON HUMAN COGNITIVE ABILITIES Kharchenko V. D., Schegoleva M. A.

ABSTRACT. The article examines the impact of aerobic exercise on human cognitive functions. The authors note the positive effects of aerobic exercise, which improve blood circulation, activate neuroplasticity and increase the production of happiness hormones, which makes it an effective tool both for the prevention of age-related cognitive impairment and for increasing mental productivity at a younger age. Particular attention is paid to aerobics as one of the ways to improve psychophysical condition, combining physical exercise and stimulation of brain function. In conclusion, the authors offer recommendations for the introduction of aerobic exercises into everyday activities.

Keywords: aerobic exercise, cognitive functions, aerobics, neuroplasticity, physical activity, stress, prevention of cognitive impairment.

THE EFFECTIVENESS OF USING DIGITAL TOOLS IN TEACHING ALGEBRA: A COMPARATIVE ANALYSIS ON THE EXAMPLE OF THE TOPIC "FUNCTIONS" IN THE 8TH GRADE Glinsky I. Y.

ABSTRACT. The article presents the results of a pedagogical study aimed at evaluating the effectiveness of teaching methods using the Microsoft Office Excel spreadsheet processor –when studying the topic "Functions" in 8th grade. Due to the lack of parallel classes in the school, a comparative analysis was carried out with the results of students from previous years. A special feature of the study is that the dynamics assessment was carried out on the basis of the results of a single control work on this topic, without taking into account the input control, since the concept of function is systematically introduced in the 8th grade. The theoretical basis was provided by works considering ICT as a means of increasing visibility and enhancing cognitive activity, as well as innovative and visualized approaches to teaching mathematics. The results demonstrate that the introduction of a workshop focused on visualization and experimental study of the functions $y = x^2$, $y = x^3$, $y = \sqrt{x}$, $y = |x|$, leads to a statistically significant increase in the average score and the proportion of students with high-quality knowledge compared with the traditional teaching method. The connection of the methodology with the formation of meta-subject results, in particular, ICT competence and the ability to work with mathematical models,

is shown. The workshop was implemented in the format of a non-standard lesson-research, which allowed to increase the motivation and involvement of students.

Keywords: algebra 8th grade, topic "Functions", Microsoft Excel, pedagogical experiment, comparative analysis, practical training, quality of knowledge, control work, visualization, interactive technologies, meta-subject results, non-standard lesson, functional literacy.