ABSTRACTS FOR THE JOURNAL «NEW RESEARCH» № 2 (86) 2026

REVIEW OF MONITORING STUDIES COMPONENTS OF THE QUALITY OF LIFE OF SCHOOLCHILDREN, CONDUCTED AT IVFRAO (2001-2004), THE RESULTS OF WHICH WERE PUBLISHED IN THE JOURNAL "NEW RESEARCH" IN 2012

Sonkin V.D.

ABSTRACT. *The research of the All-Russian monitoring in 2001-2004 devoted to the assessment of the quality of life of schoolchildren is analyzed.*

Keywords: *schoolchildren, quality of life*

MUSCULAR PERFORMANCE OF CHILDREN AGED 5-8 YEARS OLD, NON-SPORTS PARTICIPANTS AND PARTICIPANTS

Sonkin V.D.

ABSTRACT. *Ergometric testing was used to compare the muscular performance of 5- to 8-year-old children, both active and non-active. Participants included 111 child athletes (39.4% girls) and 507 non-athletes (50.3% girls). Sprints (120-150 m) and long-distance runs (6 min) were used as test loads. A significant advantage of children involved in sports was revealed in terms of sprint and long-distance running speed, as well as calculated ergometric parameters. The type of sport influences the preferential development of aerobic, anaerobic glycolytic, or anaerobic phosphagen mechanisms of energy production. The notion of many sports pediatricians regarding the lack of specific adaptation of the body of children of this age during training was not confirmed.*

Keywords: *children aged 5-8 years, muscular performance, sports, ergometric indicators, energy supply structure of cyclic work*

PHYSICAL ACTIVITY AS A FACTOR OF PREVENTION OF CHRONIC DISEASES IN MODERN CONDITIONS

Vasilyeva A.E., Shmygelsky I.A.

ABSTRACT. *The study highlights the importance of regular physical activity in preventing chronic diseases associated with a sedentary lifestyle. It explores the positive effects of moderate physical activity on the cardiovascular, immune, and musculoskeletal systems, as well as on mental and emotional well-being. Based on the findings, the study provides recommendations for integrating physical activity into daily life to promote health and reduce the risk of diseases.*

Keywords: *physical activity, disease prevention, healthy lifestyle, health promotion.*

MODERN TECHNOLOGIES FOR DEVELOPING FLEXIBILITY IN WORKING WITH WOMAN IN MIDDLE ADULTHOOD

Protasova A.V., Shirokova E. A.

ABSTRACT. *In the article, the authors consider the concept of flexibility and the main methods of its development. Particular attention is paid to modern fitness technologies that allow developing flexibility among middle-aged women (yoga, pilates, stretching, port de bras,*

antigravity fitness), and studies are provided that prove their effectiveness. The authors conclude that there is insufficient information in modern literature about the antigravity system and the effectiveness of its implementation in health activities, which makes this area relevant for further research.

Keywords: *flexibility, stretching, middle-aged women, antigravity fitness.*

HYGIENIC ASSESSMENT OF THE NUTRITION OF STUDENT ATHLETES: MODERN CHALLENGES AND WAYS OF THEIR OPTIMIZATION

Bondarev V.A., Uvarova A.I.

ABSTRACT. *The article examines the issues of nutrition hygiene among students who combine academic activities with physical education or sports. The purpose of the work was to analyze the nutrition of students engaged in these activities and to identify its main violations from a hygienic point of view. During the study, a number of deviations from the principles of rational nutrition were identified, violations of the meal regime were recorded, and a low level of hygienic literacy in the issues of diet planning was observed.*

Keywords: *nutrition hygiene, healthy lifestyle, students, rational nutrition.*

THE POSSIBILITIES OF YOGA IN REGULATION OF METABOLISM

Paralienova D.V., Shchegoleva M. A.

ABSTRACT. *The article explores the effect of yoga on metabolism and metabolic processes in the human body. The paper considers data from domestic and foreign studies confirming the effectiveness of yoga in improving hormonal levels and normalizing metabolism. The results show that yoga is a promising tool in regulating metabolism and maintaining health.*

Keywords: *yoga, metabolism, metabolism, physical activity, disease prevention, physical health, stress, physical education*

CHARACTERISTICS OF NEURODYNAMIC AND COGNITIVE PROCESSES IN OLDER ADOLESCENTS STUDYING IN VARIOUS CONDITIONS

Nemolochnaya N.V., Varich L.A.

ABSTRACT. *This article presents the results of a study examining the neurodynamic and cognitive processes in older adolescents depending on the learning environment. It was found that in non-boarding school settings, specific differences emerged: high school students demonstrated superior working memory and attention span, while lyceum students demonstrated higher results in abstract thinking. In boarding school settings, the following differences emerged: lyceum students demonstrated higher information processing speed and brain function, but they demonstrated a predominance of excitation over inhibition; in contrast, gymnasium students demonstrated better results in attention span and working memory.*

Keywords: *older adolescents, educational conditions, neurodynamic characteristics, cognitive processes, memory, attention, brain performance.*

PHYSIOLOGICAL AND PSYCHOLOGICAL MECHANISMS OF EMOTION REGULATION IN COGNITIVE ACTIVITY DURING CRITICAL PERIODS OF ONTOGENESIS (ANALYTICAL REVIEW)

Ermakova I.V.

ABSTRACT. *This review examines current understanding of the physiological and psychological mechanisms that mediate the interaction of cognitive and emotional processes in children during critical periods of development (6-8 years and puberty). Three interconnected levels of regulation are analyzed: autonomic (heart rate variability, skin electrical activity), neuroendocrine (hypothalamic-pituitary-adrenal axis, cortisol), and psychological (emotional intelligence). It has been shown that an integrated assessment of these levels allows for an objective assessment of a child's adaptive capacity, the prediction of cognitive success, and the identification of maladaptation risks. Particular attention is paid to the age-related dynamics of regulatory mechanisms, their sensitivity to emotional and motivational influences, and the role of emotional intelligence as a factor mediating the influence of physiological systems on academic success and social adaptation.*

Keywords: *heart rate variability, skin electrical activity, cortisol, emotional intelligence, autonomic nervous system, cognitive activity, critical periods of ontogenesis, emotion regulation.*

PSYCHOLOGICAL AND PHYSIOLOGICAL MANIFESTATIONS OF STRESS IN DANCE SPORT: AN ANALYTICAL REVIEW

Konyaev I.D., Zakharyeva N.N.

ABSTRACT. *The paper presents an analytical review of current literature on psychological and physiological manifestations of stress in highly qualified athletes, using dance sport as an example. Classical and contemporary concepts of stress, major stressors in sports activity, the specific features of stress response in dance sport, and methodological approaches to assessing athletes' functional state are considered. Special attention is paid to heart rate variability, psychophysiological testing, and neuroendocrine mechanisms of stress regulation. The review shows that stress in dancers is shaped by the combined influence of competitive, interpersonal, and individual-typological factors and therefore requires an integrated assessment based on autonomic, psychophysiological, and hormonal indicators.*

Keywords: *stress, psychoemotional stress, dance sport, functional state, heart rate variability, autonomic regulation, cortisol, psychophysiological testing, adaptation*

CHANGES IN THE FUNCTIONS OF THE NEUROMUSCULAR AND VASCULAR SYSTEMS OF THE LOWER EXTREMITIES IN CHILDREN WITH FLAT FEET OF VARIOUS ETIOLOGIES

Vasko O.N., Ilyasevich I.A., Sakalouski O.A.

ABSTRACT. *This article presents a comparative study of the functional recovery of lower extremity physiological systems in two groups of children with flat feet following surgical*

correction. Group I included children with flat feet and no underlying structural spinal pathology; group II included children with flat feet and concomitant scoliotic spinal deformity. Surgical correction of flat feet in both groups resulted in restoration of impaired neuromuscular and vascular function in the lower extremities. However, in group II, even late after treatment, despite a general decline in motor and hemodynamic function in the lower leg and foot segments, signs of sensorimotor impairment of the spinal cord nerve tracts persisted.

Keywords: *flat feet, short achilles tendon, children, neurophysiological and doppler ultrasound examination, surgical correction, scoliotic spinal deformity*

PREDICTING THE PROGRESSION OF IDIOPATHIC SCOLIOSIS IN CHILDREN AND ADOLESCENTS USING ARTIFICIAL INTELLIGENCE

Belova A.N., Galova E.A., Vorobyova O.V.

ABSTRACT. *This narrative review provides a brief overview of "artificial intelligence" the concept and AI methods such as machine learning and its components (artificial neural networks and deep learning) in the context of idiopathic scoliosis (IS) prediction. Currently developed prediction models based on the results of routine orthopedic examinations, radio logical imaging spine data and non-radiological imaging data, such as surface spine topography, are discussed. The review also highlights the limitations associated with the wide spread implementation of predictive models in routine clinical practice. Conclusion is made that machine learning models have a high potential for predicting the IS progression, but it is necessary to create large datasets of standardized data that integrate clinical, demographic, and imaging indicators, with a focus on using the surface topography spine method.*

Keywords: *idiopathic scoliosis, prediction, progression, children, adolescents, artificial intelligence, machine learning*