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UNDERSTANDING THE OLYMPIC PHENOMENON THROUGH THE OLYMPIC CIRCLES AT SCHOOL LEVEL

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Why did we reinstate the Olympic Games? Coubertin asked himself, "To ennoble and strengthen sports, to ensure their independence and vitality and thus make them capable of better fulfilling their educational role in the modern world. For the glorification of the individual athlete, whose existence is necessary for the muscular activity of the collective and whose performances are indispensable for maintaining the general emulation." Olympism is neither a religion, nor an ideology, nor a political doctrine, nor a socio-economic system. It is a state of mind, a value of life. A vision of man: "A school of nobility and moral purity", a school of character; the cult of the disinterested ideal, the effort to raise our conception of honor and dignity to the altitude of physical vigor.

Olympism encourages the establishment of relationships of respect and friendship between people, in order to strengthen peace and understanding between peoples. Can it be a nobler ideal? Unfortunately, sports sometimes have a tendency to get out of control.

Violence in many stadiums has become a problem today. Complications of all kinds in international life affect sports competitions, which become a field of confrontation and a reason for crisis. Victory or defeat become causes with which entire communities identify, going up to the national level. The stadiums look more like volcano craters in full eruption; firecrackers are thrown, the decibels increase breaking the eardrums, there are fights that are difficult to moderate by the law enforcement officers; tribunes are set on fire or destroyed, streets become scenes of fights, people live nightmares. Olympism can penetrate the younger minds, can influence the behavior of students, establishing itself along with other social components as an educational factor, if the actions to promote and understand the Olympic spirit, would become a constant concern of physical education teachers.

Starting from these premises, the objective of the research was to carry out a number of four activities, through which to promote the Olympic spirit in the municipality of Bacău, with the support of the Bacău Branch of the Romanian Olympic Academy, the County School Inspectorate, the Traffic Police of the municipality of Bacău, as well as the Sports Directorate of Bacău County. The methods used in the research were the following: the method of studying the specialized bibliography, the historical method, the survey method and the mathematical statistical method of data recording and processing.

The proposed actions to achieve the proposed objective, respectively: The

establishment of Olympic Circles in schools, the Literature and Journalism Competition – „ *A pen called fair – play*”, *The painting competition - "Olympic Games in children's imagination"*, *the theoretical knowledge competition "Who knows Olympism, wins"*, and *the Cross-Country of the Olympic day, that have respected the registration and implementation regulations of the Romanian Olympic Academy.*

Following the study carried out, we can state that the objective was achieved by obtaining results on the basis of which we formulated the following conclusions:

- • the dynamism of the existing Olympic circles and the establishment of four new Olympic circles in schools, had the first effect of engaging a number of 115 students in the organized actions.

- The literature contest - "A pen called fair-play", was an action in which 85 students from schools in the municipality of Bacău participated. Organized by three age categories, the works of the participating students were corrected by Romanian language teachers (Specialist inspectors from ISJ Bacău).

- The theoretical knowledge contest "Who knows Olympism, wins", involved four educational units, by designating a crew made up of five students, who possess a good and very good general culture. This presupposed, on the one hand, the holding of competitions at school level, in order to select the best students, and on the other hand, the determination of a large number of teaching staff (not necessarily physical education) to get involved in the Olympic activity.

- The Olympic cross-country race held on May 28, 2023, gathered at the start over 550 students, from all the schools and high schools in the city, and only.

We also believe that we have managed to change the idea that Olympism only means sport and we propose to transform this initiative into a priority activity for the year 2024, especially since the holding of the Olympic Games in Paris in 2024 could constitute an important adjunct to our efforts.

Keywords: students, middle-school, Olympic spirit, Olympic circle.

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STUDY ON THE ROLE OF ROMANIAN OLYMPIC CHAMPIONS' MODELS IN ACHIEVING OLYMPIC EDUCATION

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"Olympic education" is a term with a history of about 50 years, which was proposed by N. Moller. It first appeared in sports education and Olympic research in the 1970s. Does "Olympic education" signify the revival of the educational ideals of ancient Greece, or is its purpose merely to lend credibility to the marketing of Olympic symbols? This question must be answered in terms of principles, and the answer delves deep into the history and concept of the modern Olympic Movement.

Its founder, the Frenchman Pierre de Coubertin, considered himself first and foremost an educator, and his primary goal was educational reform. His initial aim, limited to France and French schools, was to integrate modern sports into the school routine and thus introduce a sports education into that routine, encompassing both the body and the mind. He had learned from modern sports in England, and especially from his knowledge of public school education at Rugby, that the moral strength of young people could be critically developed through the individual experience of sports activities, and extended from there to life as a whole. Coubertin did not use the term "Olympic education," initially referring to it as "sports education," and indeed that was the title of the book he published in 1922, "Pedagogie Sportive" (Sport Pedagogy). As early as 1900, and not exclusively within schools, he encouraged the idea of making sports accessible to adolescents and even the elderly as a newly discovered component of comprehensive education (cf. Coubertin 1972).

Olympic education means different things to different people. The following section provides examples of the wide variety of programs that fall under the umbrella of Olympic education. These programs have different objectives and audiences, although with a significant overlap. The Foundations Manual is based on an "education through sport" approach.

Olympic education is a set of processes aimed at cultivating, through sports practice, the essential values of Olympism: self-improvement, respect for rules, equal opportunities, solidarity, brotherhood, tolerance, and peace. Sport must avoid promoting non-values, lack of fair play, doping, political influence, terrorism, etc.

Based on this definition of Olympic education, aspects necessary for defining and setting the objectives of the core curriculum and the school's discretionary curriculum can be identified, especially concerning formal education (teaching,

instruction).

Fundamental to understanding Olympism is the emphasis on the educational aspect, "the Olympic idea cannot be understood without an understanding of its educational mission" (Gessman, 1992).

Curriculum development related to values education can be traced back to the 1960s in the USA, with Lawrence Kohlberg's theory of moral development, which in his work "Fair Play for Kids" elaborated a pedagogical framework based on evolutionary approaches to morality.

Starting from these premises, we attempted to maximize the inclusion of the subject of sports and Olympic education in the students' curriculum, assuming that achieving excellent results in this subject would positively impact other disciplines in the curriculum. We believed that deepening the knowledge about the biographies and achievements of Romanian Olympic champions could contribute to a better understanding of the Olympic phenomenon, primarily, while also potentially making the studied Olympians sport and life role models for students.

Each student had to create a presentation about a Romanian Olympic champion based on thorough research, emphasizing primarily their contribution to the development of Romanian and international Olympism, focusing on their human qualities rather than just their athletic achievements.

The study included 55 graduate students from the FMSHS of Bacau, who, in addition to creating presentations, were asked to complete a questionnaire with 30 questions. At the end of the research, there were significant percentages of students who found life models in Olympic champions.

Keywords: olympism, curriculum, students, correlation.

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QUALITY PHYSICAL EDUCATION AND TANDEM TEACHING IN SLOVAK ACTIVE SCHOOLS

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Physical inactivity is today big problem with significant related health, economic and social consequences.

To eliminate crises in well-being, education and equality, sedentary lifestyle and physical inactivity UNESCO during MINEPS VII, held in 2023 in Baku, Azerbaijan, adopted new global initiative "Fit for Life". This global project is focused on:

- Driving Sustainable Development in and through Sport
- Youth Accelerator Programme
- Sport and Gender Equality Game Plan
- Tackling Violence Against Women and Girls in Sport
- Impact Investment in Sport
- Using Data to Drive Impact
- Sustainability of major Sport Events
- Quality Physical Education Policies and Practices

To achieve the goal of people to be more active due the recommendations of WHO from 2018 will require to implement a combination of effective policy actions organised around these strategic areas: creating an active society; creating active environments; creating active lives and creating active systems. These four strategic areas influence creating of important subsystem and it is "Active school".

Active school is school giving many opportunities for children and youth to be physically active in school environment. Active school open opportunities to be active before school, during school day and after school. Quality Physical Education as a part of Active school is influenced by internal and external factors. One of factors is implementation of new approaches in physical education teaching.

Tandem teaching is a form of management of the teaching process in which the process is conducted simultaneously by two educators, and which is implemented mainly in the first years of elementary school. In physical education, it can be the general class teacher in cooperation with PE teacher or coach. Both are actively involved in teaching and have clearly divided competences. Examples of tandem teaching in Slovakia are projects "Modules" and "Coaches in School", programs implemented in Slovak primary schools in the 1st, 2nd and 3th grades from the 2020/2021 school year. The programs, made up of varied movement activities from various sports, creates a relationship with movement activity and the student acquires basic movement habits. The programs are under the auspices of the Slovak government's representative for youth and sports and the Ministry of Education, Science, Research

and Sport of the SR. In the 2022/2023 school year 192 schools, 29 533 children, and 192 trained coaches were involved in the program “Coaches in School” and 595 schools, 2748 classes and 52 212 children in program “Modules”.

To better known *effects* of these programs it was realize also their scientific evaluation. We present basic results of pilot studies during first two years of implementation of project “Coaches in School” in praxis. The results of the pilot study carried out in the 2020/2021 school year show very positive responses from children. The participants of the study were 177 children (100 girls, 78 boys; 1st grade – 94, 2nd grade – 83) at three primary schools in Bratislava, where the project and tandem teaching was implemented during half a year. The results showed that at the end of the pilot evaluation, the number of children who ranked physical education among the three most popular school subjects increased, and the number of children who liked physical education more than at the beginning of the monitoring also increased.

The interim results monitored during the 2021/2022 school year, when the project was already fully underway, showed how the coaches and classroom general teachers themselves perceive the project. The participants of the study in this case were 29 coaches and 136 general class teachers in the 1st grade of primary schools who were involved in the project. Almost 80% of the class teachers rated the project as excellent, 82% of them rated the teaching content prepared by the coaches as extremely attractive for children, and 81% of the teachers would welcome such a teaching model to continue. The coaches stated that 14% of female teachers were actively involved in teaching in every lesson and 73% in most lessons. The majority of both groups also stated that they perceived an improvement in children's physical literacy, while the coaches perceived it a little more intensively.

Conclusion

To increase quality physical education teaching in schools it is necessary to start implementing new approaches, especially in primary schools, where physical education is thought by general teachers. Tandem teaching is one of the ways how to manage teaching of physical education to highest quality and research and experiences show positive impact to children's attitudes to physical activity and its positive evaluation also by general class teachers and parents.

The study is supported by VEGA Agency of the Ministry of Education, Science, Research and Sport of the SR with number 1/0213/23 and title “Tandem Teaching of Physical and Sports Education in Primary School and its Impact to Motor, Cognitive and Emotional Development of Pupils”.

Keywords: quality physical education, primary school, active school, tandem teaching.

WRESTLING ATHLETES TRAINING CHALLENGES (WATCH) – PREVENTION EXERCISES

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The Wrestling Athletes Training Challenges (WATCH) project is based on the interdisciplinary approach and its aim is to focus on the area of “protecting athletes – especially the youngest– from health and safety hazards by improving training and competition conditions” while is focusing on a European grass-root sport, the wrestling. The main goal of WATCH project is to create an open educational innovative approach for wrestling injury prevention strategies while fostering regulation skills for weight control related to wrestlers, providing key techniques for the modern wrestling athletes and exercise experts (wrestling trainers, athletic trainers, physiotherapists etc.) Therefore, the objectives of the WATCH project are to: Identify the most common wrestling injuries and the proposed injury prevention strategies. Identify the necessity of weight control counselling skills and incorporate them in wrestling injury prevention project. Design and develop the open WATCH course with multimedia content to support athletes’ and coaches’ understanding about the injury prevention strategies and weight control counselling skills. Create the WATCH community through the open educational course promoting open access, equity and quality. The WATCH project will make use of the technology in a way to both intrigue wrestling athletes from early ages to middle ones to interest and to disseminate the program in all Europe, through an open course with multimedia materials. The principle goal of the Web Platform will be to provide multimedia material containing learning and assessment tools suitable for wrestling athletes, athletic trainers, coaches, trainers, sport physiotherapists and public, as well as to guide them on how to integrate these strategies in their daily training processes.

Keywords: wrestling, training challenges, prevention exercises.

ANALYSIS OF THE LEVEL OF SOMATO-FUNCTIONAL DEVELOPMENT AMONG CHILDREN WITH CEREBRAL PALSY IN PRIMARY GRADES

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Actuality. Child development from birth to adulthood has been intensively studied over time from a physical, anthropometric, physiological, psychological, sociological and last but not least psychomotor point of view. In children with cerebral palsy, their development is affected in every way. The locomotor system is most affected, which will lead to a range of physical and psychomotor impairments. Because of the difficulties encountered in the early stages of neuro-motor development, the child with infantile cerebral palsy will have around 7-8 years of age multiple impairments in all components of psychomotor development: coordination, balance, spatial orientation, etc. Once children with infantile cerebral palsy enter school, the damage to their cognitive, psychological and social development also extends to their psychomotor impairments.

Purpose. An analysis of the somatic-functional development of children with infantile cerebral palsy is needed to focus on correcting early impairments and to minimise the negative impact that these impairments have on all aspects of children's general and complex development. The methodology of the physical education class is built for the healthy and normally developed child and cannot be successfully applied to the child with infantile cerebral palsy.

Methods of research. For this study, 48 first grade children, including 30 children with cerebral palsy, were observed and evaluated over the course of a school year during physical education lessons. Waist and body mass values were recorded for the analysis of somatic indicators and chest index, respiratory rate and resting heart rate for the analysis of functional indicators. Indicators were recorded at the beginning and at the end of the school year.

Findings and results. Results initially recorded at the beginning of the school year showed substantial differences between healthy children and children with infantile cerebral palsy in both somatic and functional indices. At the end of the year, both groups showed an increase in indicators from baseline, but the results for healthy children showed an average progress of about 36%, while the results for children with infantile cerebral palsy showed an average progress of about 31%.

Conclusions and recommendations. Analysing the results of all indicators and making a comparison between the initial and final stages, it can be seen that although the results are positive, it is noted that progress in children with infantile cerebral palsy is not fast enough for their age. The deficits that children with infantile cerebral palsy show at an early age not only have a negative impact on current indicators, but

will also influence future acquisition and development. Children with infantile cerebral palsy need special attention when it comes to psychomotor development and need an adapted physical education programme that on the one hand takes into account the level of deficit from which these children start, and on the other hand, focuses on the recovery of the deficit and to ensure a progress more in line with the average levels of healthy children of the same age. Optimising and making the physical education process more efficient in terms of psychomotor components should be a topical issue and a research topic of great interest in teaching practice.

Keywords: cerebral palsy, physical education, somatic development, functional development, psychomotricity.

THE EFFICIENCY OF MODULARIZATION IN PHYSICAL EDUCATION DISCIPLINE WITHIN HIGHER EDUCATION INSTITUTIONS

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Physical education in higher education institutions, mandatory for undergraduate students (Cycle I), serves as a component for developing general skills and competencies (code G). Its objective is to cultivate abilities such as learning, researching, analyzing, and effective oral and written communication, including the use of information technologies, within the context of professional preparation and diverse cultural settings [Curriculum Framework for University Education, 2015]. Achieving this objective through the physical education discipline requires educators within the university to adopt new content approaches and modern educational strategies. These approaches should simultaneously cultivate students' motor, physical, and aesthetic aptitudes.

Numerous researchers, both nationally and internationally, who have recently studied the issue of university physical education propose new approaches to the discipline. These include physical education based on individual interests, involvement in sports sections and extracurricular activities, and the application of binary methodology in physical education. These approaches also aim to motivate students towards independent and systematic engagement in physical activities.

Recent studies on university physical education, conducted at the Moldova State University, have highlighted several factors that impede the modernization of the discipline. Apart from economic, managerial, and infrastructural challenges, issues related to educational processes persist. These encompass curriculum design, the implementation of current teaching methods that align with the university discipline, and the evaluation process reflecting both general and specific competencies developed over a semester and the entire course.

The research aims to enhance the teaching-learning-assessment process of university physical education by modularizing the discipline and the curriculum. This modularization focuses on developing both general and specific competencies in students engaged in the educational process. The following research methods were employed: analysis of studies related to university physical education, examination of documents governing the educational process in the discipline, curriculum design, and the application of modular curriculum to first-year students at Moldova State University.

The modular curriculum for physical education at Moldova State University, approved by the Department of Physical Education and the Faculty Council, serves as a continuation of modules studied in general education. A module represents a unit

of integrated functionality that provides learning experiences (theoretical and practical) to achieve educational goals [Vasiliev, M., 2014. Modular Instruction - Didactic Technology Focused on Skill Development]. The choice of modules/sports trials lies with the academic group, which selects a module from the curriculum each semester, resulting in 4 modules over 4 semesters.

In the educational process, the implementation of the modular curriculum for physical education in the 2022-2023 academic year for first-year undergraduate students was initiated. The effectiveness of content application through modules was analyzed within the Literature Faculty student groups, who opted to study the badminton module.

The content of the badminton module encompasses general knowledge of physical education and sports, specific knowledge of badminton rules and gameplay, and motor skills specific to badminton. The teaching-learning-assessment process for the module, conducted over 30 hours (15 hours of direct contact and 15 hours of individual student work), focused on educational aspects such as the application of constructivist and interactive methods centered on students, inter- and transdisciplinary study of general and specific module content, and the use of principles like individualization, differentiation, and personalization in practical content learning.

The final assessment, achieving the "pass" grade at the end of the semester, which reflects the level of competencies developed by students who studied the badminton module, is based on points accumulated from two mandatory course assessments and individual student work (a minimum of 5 points for an assessment activity).

Of the two mandatory assessments, considered formative evaluations, one was conducted midway through the module using the "moodle" educational platform. Students completed a classic, digitized test covering general knowledge of physical education and specific knowledge of the badminton module. The second assessment, a practical one, conducted at the end of the semester/module, involved evaluating motor skills (psychomotor competencies) specific to badminton gameplay, developed during practical sessions.

Individual activity assessment was conducted through students presenting individual projects chosen from the curriculum (functional assessment of bodily systems; individual motor development/education program; analysis of movement structure in a specific technical element of the module; personal motor agenda for extracurricular motor activities; dietary program).

The application of modular content in physical education (the badminton module) among the five academic groups within the Literature Faculty yielded a 92.4% "pass" rate. Among students, 92.7% scored over 5 points in evaluating general and specific module knowledge (cognitive competencies), 92.5% scored more than or equal to 5 points in the specific badminton practical assessment (psychomotor competencies), and 92.4% successfully presented individual projects.

The outcomes of modular discipline instruction in Moldova State University and the analysis of students who participated in the badminton module indicate that

modular content ensures a systematic, staged acquisition of functional knowledge/competencies in physical education and sports. Module contents are presented to students in directed complexes, and their acquisition aligns with projected objectives. Modular content allows educators to adhere to principles of individualization and differentiation, aiding student monitoring by providing recommendations and instructions to enhance learning strategies. Modular instruction in physical education encourages individual work, self-organization, and self-monitoring, thereby fostering independent motor activity in line with individual capacities.

Keywords: physical education, modularization, students.

CONTEMPORARY ENVIRONMENTAL CHALLENGES IMPACTING THE OLYMPIC LEGACY

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Contemporary environmental challenges significantly impact the Olympic legacy, necessitating adaptations and sustainable policies. Climate change, manifested through rising global temperatures, reduced natural snowfall, and increased frequency of extreme weather events, affects both the organization of competitions and the viability of traditional host locations. The development of infrastructure required for the Games contributes to habitat degradation, deforestation, and biodiversity loss.

Air and water pollution, exacerbated by Olympic activities, along with massive waste generation, pose additional challenges, particularly in host cities with underdeveloped waste management systems. Intensive consumption of natural resources, such as water and construction materials, further worsens issues in ecologically vulnerable regions. Social and ecological inequalities also arise, including the displacement of local communities and the uneven distribution of environmental and economic costs.

To mitigate these effects, it is essential to integrate sustainability principles through the use of existing infrastructure, adoption of strict environmental standards, and implementation of carbon footprint reduction policies. Promoting ecological education and innovative solutions can transform the Olympic Games into a model of best practices for sustainable global events.

The modern visions promoted by National Olympic Committees (NOCs) reflect a growing commitment to organizing environmentally friendly Olympic Games, integrated into global sustainability strategies. These initiatives prioritize reducing the ecological impact of sporting events, aligning with international objectives for environmental protection and climate change mitigation.

Measures adopted include the use of existing infrastructure or temporary facilities to minimize habitat degradation and resource consumption. Sustainable planning involves transitioning to renewable energy sources for powering venues, reducing carbon emissions through green transportation, and efficiently managing waste through recycling and reuse.

Additionally, NOCs promote environmental education among athletes, officials, and the public, emphasizing the Games' role as a platform for global awareness. Circular economy principles are incorporated into organizational processes, while collaborations with private and public sector partners support the implementation of innovative, eco-friendly technologies.

These modern visions, reflected in initiatives such as the International Olympic Committee's Agenda 2020+5, reinforce the commitment to transforming the Olympic Games into a model of environmental leadership, contributing to a sustainable legacy for the long term.

Ensuring global ecological standards within the Olympic Movement requires the adoption and promotion of strategic and multidimensional actions with a long-term impact on global sustainability. Key identified measures:

✓ **Development of sustainable infrastructure**

Designing and utilizing facilities that adhere to ecological principles, such as reducing energy consumption, using recyclable materials, and constructing venues with minimal impact on ecosystems.

✓ **Reducing the carbon footprint**

Introducing eco-friendly transportation for delegations and spectators, utilizing renewable energy across all Olympic facilities, and offsetting emissions through ecological restoration projects and reforestation initiatives.

✓ **Efficient waste management**

Implementing advanced waste collection and recycling systems, reducing single-use materials, and promoting the circular economy at every stage of event organization.

✓ **Environmental education and awareness**

Conducting awareness campaigns for athletes, spectators, and host communities on the environmental impact of actions, while integrating sustainability as a core value of the Olympic Movement.

✓ **Adopting international environmental standards**

Aligning Olympic strategies with the United Nations Sustainable Development Goals (SDGs) and international climate agreements, such as the Paris Agreement.

✓ **Continuous monitoring and evaluation**

Establishing a transparent system for reporting environmental performance and implementing audit mechanisms to ensure compliance with established standards.

Through these actions, the Olympic Movement can position itself as a global leader in promoting sustainability, reinforcing its role as a model of ecological best practices, and actively contributing to environmental protection.

Olympic education serves as a strategic tool for promoting ecological sustainability within the Olympic Games, aiming to encourage behavioral and cultural changes necessary for environmental protection. This educational dimension, embedded in the values of Olympism, facilitates awareness of human activities' impact on ecosystems and promotes the adoption of sustainable practices in the long term.

Educational initiatives include programs targeted at athletes, organizers, spectators, and host communities, focusing on topics such as reducing carbon footprints, conserving natural resources, and managing waste. Awareness campaigns surrounding the Olympic Games leverage digital platforms, workshops, seminars, and partnerships with educational institutions to amplify ecological messages.

A central aspect is integrating concepts of circular economy and environmental responsibility into sporting and organizational activities, emphasizing sustainability across all stages, from planning to implementation. Additionally, Olympic educational programs aim to create a lasting legacy by fostering generations aware of their role in protecting the environment.

Through initiatives such as Agenda 2020+5, Olympic education becomes a cornerstone of transforming the Olympic Games into a model for sustainable events, contributing to global environmental goals and reinforcing the role of Olympism as a promoter of sustainable development.

Contemporary environmental challenges represent a significant threat to the Olympic legacy, influencing both the organization of the Olympic Games and their impact on the environment, economy, and the global community. Climate change, pollution, habitat degradation, and the intense consumption of resources put pressure on host regions, and addressing these issues requires an integrated and sustainable approach.

However, by implementing rigorous ecological policies, utilizing innovative technologies, and adopting a sustainable organizational model, the Olympic movement can become a leader in promoting environmental responsibility. Initiatives such as using existing infrastructure, reducing carbon emissions, and environmental education are essential for transforming the Olympic Games into a global example of best practices.

In conclusion, to ensure a positive Olympic legacy in the long term, organizers must address these environmental challenges with a strong commitment to sustainability. This approach can contribute not only to protecting the environment but also to strengthening the role of the Olympic Games as a global platform for positive ecological change.

Keywords: Olympic Movement, ecological sustainability, Olympic Games, Olympism, ecological environment, ecological policies.

MANAGERIAL BASES REGARDING THE COMBATING OF DOPING IN PERFORMANCE SPORTS

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Actuality. Among the many problems of modern sports, the problem of doping is becoming more and more important. It is extremely complex as it includes medical, legal, political, moral, organizational, social and pedagogical aspects that are appropriately interconnected.

The issue of doping also contains a moral aspect. The use of doping drugs is contrary to the essence of sport, creating unequal conditions in achieving sports results, damaging the prestige of the country and the team, and international sport as a whole.

The effectiveness of the fight against doping in sports largely depends on its organizational system. However, it should be noted that the organizational foundations of the fight against doping were practically not in the field of view of scientists. The main efforts of sports and medical science were aimed at studying the impact of doping on the athlete's body, finding methods for its detection, biochemical components, as well as reducing the costs of doping control procedures and finding the simplest and most effective procedures for it. In this sense, the study of the organizational foundations of the fight against doping is theoretically and practically relevant.

The purpose of the study. To analyze the management of the fight against doping in sports, to determine the effectiveness of the organization of this fight in modern sports.

The research methodology of this work includes both general scientific methods: historical, system-structural, logical and dialectical, as well as special methods of scientific knowledge: formal legal, comparative legal, legal dogmatic and others.

The use of these methods contributed to the study of the identified problems.

The results of the study to determine a reasonable assessment of the existing anti-doping system in sports, to identify the shortcomings and positive aspects of this system, its impact on the education of athletes, allowing us to establish ways to improve its pedagogical and social effectiveness, the materials, study can contribute to the formation of an understanding of the role of the fight against doping in sports, the main development trends and ways to increase its effectiveness among athletes, coaches, sports doctors, managers and specialists in the field of sports.

- the concept of "doping" should be considered much broader than it is currently accepted and encompass in a complex way medical, legal, organizational,

psychological, moral, social and pedagogical aspects;

- doping means drugs, other means and methods of influence that artificially increase those functions of the body on which the improvement of a sporting result depends; doping is associated with the possibility of causing moral damage to the sport and the athlete, damage to health, moral and genetic damage to society; legally, doping is determined by the list of drug groups prohibited by the IOC Medical Commission;

- the use of doping in modern sports began with its appearance; the legal foundations for the fight against doping in sports were laid in the 60s of the 20th century;

- the fight against doping is part of sports and humanistic education;

- the process of combating doping is negatively affected by a number of social factors, in particular, the commercialization of sports;

- the international and domestic systems for organizing the fight against doping have significant deficiencies (the high cost of analysis procedures, the possibility of manipulating the results of doping control, defective laboratory equipment, imperfect methods of determining doping, classification of groups of doping drugs, lack of quantitative analysis and other);

- the most effective means of "anti-doping education" are: imposing sanctions (temporary and lifetime disqualification, fines); lectures, conversations and periodical publications on the disqualification of athletes and various aspects of the doping problem.

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Conclusions

1. The use of doping in sports, as well as the fight against it, has their own history. In modern sports, the fight against doping began almost simultaneously with its appearance. With the organizational strengthening of the international sports movement, with the receipt of more and more new data about the harmful effects of doping on the athlete's body, public opinion (especially in the sports field) became more and more convinced of the need to combat it.

2. Legislative restriction of doping in sports began to take shape at the end of the last century due to the need to ensure a fair fight in sports. The basis of the legal anti-doping regulation is the International Anti-Doping Convention (2005) and the World Anti-Doping Code, which includes international standards as annexes (including the Prohibited List).

3. The current anti-doping system in international sports is not effective enough, it does not allow the complete eradication of the use of doping in elite sports, due to the presence of social and personal factors that stimulate the use of doping by athletes (commercialization of sports, insufficient funding of the system of doping control, sports leaders' disinterest in the effective fight against doping, athletes' desire for glory and others).

4. The form of organization of the fight against doping that exists in international sport is mainly focused on the use of sanctions. The international sanctions system provides for disqualification (temporary and for life); at the national level, in addition to disqualification, in some countries the deprivation of sports titles is resorted to, fines are resorted to; in several countries (England, USA), they can also be coaches, athletes, doctors, sports organizers, prosecuted for the use of doping by athletes.

5. Consolidation of the publicity of anti-doping control results with a wider involvement of public organizations, publication of a bulletin on the analysis of bioassays at all official international competitions.

Keywords: doping combating, performance sports, sports management, sports law.

SPECIFICITY OF ARBITRATION IN SPORTS LAW

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Abstract. Sport represents a social and economic phenomenon in continuous development, with an important contribution to the fulfillment of national strategic objectives, especially those regarding solidarity and prosperity. Being a dynamic sector in continuous growth, with a macro economic impact, however underestimated, sport can contribute to economic sustainability and job creation, thus serving as a tool for local and regional development, including urban or rural regeneration. At the same time, an increasing part of the economic value of sport is related to intellectual property rights, namely copyright, the right to communications and trademarks, and last but not least the right to the image and broadcasting rights. In this context, sport is seen as a business, in which the following can be involved: athletes, coaches, clubs, managers, sponsors, sports betting houses and which, through the exercise of contract obligations, are in close connection with direct consumers, respectively, with those who set in motion this whole mechanism. Along with the regulation of sports activity, the establishment of institutional and competitive rules, rights and obligations for its participating actors, of course, situations of conflict, regulatory violations and other disputes may also arise. Thus, the need for the existence of a sports jurisdiction has arisen which, through a judicial body, will resolve these disputes in the spirit of sports fairness and the legislation in force. As a result, these disputes can be resolved through the arbitration institution, independently of the state bodies (courts), so that the principle of the autonomy of sport is respected.

The purpose of the research is to present some scientific benchmarks regarding refereeing in sports.

The methods used in the research are those relevant to the scientific study of the scientific specialized research and enshrined in the legal methodology, respectively *analytical methods* (which will involve the study of some legal norms that regulate the criminalization framework of an act), *synthetically* (which will involve the establishment of some national/international and brief doctrinal jurisprudential knowledge and information), *logical* (using deductive reasoning), *quantitative* and *qualitative* (reflects the fact that the rules for carrying out certain operations or procedures are adopted precisely by assessing the number and type of cases encountered in jurisprudence).

Findings and results. *Arbitration Agreement* constitutes the starting point in the settlement of a sports dispute through the arbitration institution. Normally, in order for a dispute to be settled through sports arbitration, the parties must agree, which can be achieved through an arbitration agreement/clause. In sports, the arbitration clause is not consensual, but more hastily imposed. For example, the arbitration clause may or may not exist in a contract between an athlete and a club, but if it does not exist - *expressis verbis* – it does not mean that any dispute will necessarily be subject to national courts, but it will also be able to be resolved through arbitration. This is possible by referring to the statutes of the national federations, which include in the internal regulations express provisions regarding arbitration, in the sense that this is the only way to resolve disputes. The Sports Arbitration Institution recognized internationally and accredited by all international sports organizations to settle disputes in the field of sports is the Court of Sports Arbitration. This, also called the Court of Arbitration for Sport, represents an independent authority of the sports forums, which participates through *arbitration* or *mediation* in resolving disputes in the field of sports. In the context in which sport is not a field that is eminently linked to a certain jurisdiction (we are talking about international competitions and events) and as the conflicts resulting from the ever-increasing importance of this "business", it had to be found a possibility of solving them at the international level. This is how the Court of Arbitration for Sports from Lausanne (The Court of Arbitration for Sports) was born, in Loussanne, Switzerland, under the auspices of the International Olympic Committee, being the first arbitral tribunal specialized in sports disputes. Sports disputes have always been resolved by bodies with jurisdictional powers, internal bodies created by the federations through the statutory provisions and which prohibit any appeal before common law courts. These decisions adopted by the arbitral institutions are enforced, even if the decision is not pronounced by the court of common law, which highlights the power of the sports authority that can decide, without an actual trial taking place, but respecting the right to defense, according to the institutionalized rules. In this context, we can state that, *sports justice* presents itself today as a jurisdictional system based on both legal and sports norms, governed by the classic principles of the fair process and made up of all jurisdictional commissions with genuine competences in the sports juris - dictio. The organization of sports activity and its practice, like all human activities, is not without controversies, contestations or disputes. The sports movement has as its main objective the resolution of disputes within it, without the exposure of going "into the open".

Concluding, we can affirm that the risks of settling sports disputes outside the sports jurisdictions are obvious, and the reasons are multiple: understanding the nature and specifics of the dispute, the duration of the proceedings, avoiding court fees, the possibility of "choosing" the judge etc. Therefore, sports litigation includes two complementary facets, each with its own field of reference and its own stake, which call for different legitimate solutions in internal jurisdictional proceedings. The dynamics of the sports movement and the issues related to sports led to the need to

connect the federal statutory provisions with the evolution of the sports reality. Moreover, from the perspective of federal justice and the desire to maintain it within the intra-federal framework, the federations understood that it is imperative to ensure a fair justice so that affiliated members are induced with the idea of an impartial, professional and functional justice, eliminating the temptation " of going out into the open", that is, of seeking justice in common justice.

Keywords: sport, arbitration, autonomy, sports law.

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CORRECTNESS – DETERMINING FACTOR IN THE ACTIVITY OF TRAINING OF PHYSICAL EXERCISES

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Actuality of the problem addressed. In physical activities, correctness is an expression of performance, whereby the instruction and training process is aligned with the requirements of development and technical perfection. In the system of modern physical and sports education, highlighting the elements of correctness starts from raising the scientific-methodical level of training and training programs, achieved by implementing fundamental scientific concepts and ideas about efficiency and quality, and continues with changing the way of treating the acquisition of study material by athletes within the bio-psycho-motor potential. Also, the tendency to increase the degree of efficiency in training and development requires changing the structure, content and volume of the study material, where new methodological approaches are needed, based on the most effective ways of training physical execution.

Both for these considerations, as well as for other reasons, the idea of increasing the efficiency of the acquisition of motor actions by athletes is induced, highlighting the importance of the elements of correctness, which condition a greater degree of development and acquisition with a high efficiency of the technique execution of exercises, procedures and specific elements. Finally, it is found that the approach based on the elements of high correctness in performing motor actions becomes a primary condition in achieving the training objectives, and the correct course of movement activities can effectively contribute to the improvement of the teaching content by selecting the most effective forms, methods and means of training.

The purpose of the study is to determine and apply the progressive forms of correctness in training the execution technique of physical exercises and increasing their efficiency. (The elements of correctness here represent the efficient regulatory mechanisms of execution, being subordinated to the programmed algorithmic prescriptions of the technique of performance).

The objectives of the study reveal: 1. Generalization of documentary-factual materials that describe the situation in the field on the researched problem. 2.

Establishing the contents and progressive forms of correctness and regulatory mechanisms in exercise from the point of view of the methodology of training physical exercises. 3. Argumentation of the methodology based on forms of high correctness by correcting the exercise action in the categorical context of the requirements of the exercise performance technique.

The research methodology included: analysis and generalization of documentary materials and data, pedagogical observation, testing method, pedagogical experiment method, statistical-mathematical data processing. Within the research methodology, the fairness elements were based on: rigid and severe discipline; the selection of the most relevant principles of action; determining the anatomical-functional particularities of the movement; biomechanical and biokinematic analysis; the selection of optimal remedies in order to achieve separate objectives; appreciation of the mechanical characteristics of movement; establishing internal and external links to fulfill the motor chain of the movement; the athlete's ability to adapt and perform the motor actions expressed by the manifestation of different motor qualities; the motor content, the components of which reflect the biomechanical character of the movements and many other factors: perception, sensation and motor sense, the emotional side, volitional efforts, etc.;

It is necessary to mention that at the basis of the methodology of the correct approach to the acquisition of different movements is the complex systemic-structural approach determined by the wide variety of specific forms, methods, didactic principles and other requirements, which complete the arsenal of regulatory mechanisms for effective physical development in the complex system of current physical and sports education.

The experiment was carried out during three training lessons, with the exercises included in the program (exercises considered new and unusual according to the performance technique, carrying out the initial, intermediate and final evaluations, both at the beginning of the training hour, during the training hour, and at the end of it), making specific notes on the 7 evaluation series to determine the degree of correctness in the manifestation of the technique of performing these exercises during the proposed training period. At the end of the experiment, the respective differences that characterize the various levels of training on the studied correctional series were established.

Findings and results. The evaluation of the experimental results (according to the 10-point evaluation system) involved permanent checks of the correct acquisition of the technique of the proposed exercises during the training lessons.

For the subjects in the experimental group, a series of recommendations/indications were given, which aimed at the correct form of carrying out the chain of actions specific to the basic movement of the exercise, as a result of which the following results were found (in the example of the exercise: Performing decline push-ups on uneven elevated surfaces while touching the support point with the back of the head).

Table 1. Average results when performing the exercise: Performing decline push-ups on uneven elevated surfaces while touching the support point with the back of the head (final stage)

Nr.	The series of rating	$X \pm s_x$ (grade)		Criteria	
		Control Gr. n=15	Experim. Gr. n =12	t	P
1	1st Series	6,39± 0,54	6,80±0,65	0,39	>0,05
2	2nd Series	6,44± 0,18	6,95 ± 0,74	0,59	>0,05
3	3rd Series	6,61 ±0,43	7,50 ± 0,72	1,61	>0,05
4	4th Series	6,88 ±0,54	7,88 ± 0,39	1,72	>0,05
5	5th Series	7,02 ±0,68	8,27 ± 0,54	2,66	<0,01
6	6th Series	7,11±0,29	8,60 ± 0,84	2,89	<0,01
7	7th Series	7,30± 0,80	9,06±0,35	3,19	<0,001

When assessing the level of mastery of the exercise technique: "Performing decline push-ups on uneven elevated surfaces while touching the support point with the back of the head", the results of the subjects of the experimental group record a pronounced superiority, especially in the last series of evaluations, where it is observed statistical differences of $P < 0.01$; < 0.001 . It can be stated that the formulas for organizing the training process by applying elements of high correctness can be applied to various exercises with any degree of difficulty.

Conclusions. 1. In order to acquire the physical exercises with high accuracy, it is necessary to intervene with the application of the recommendations related to the reality of the technique of performing the actual exercise. The correct learning of the technique can also take place through the biomechanical analysis of the exercise, computer learning, etc., but the most effective conviction in this regard is the approach of methodological indications. 2. The elements of correctness can contribute to the increase in the quality of performing the practice actions. They will establish the measures for urgent improvement of execution and effective achievement of results. 3. The effectiveness of the training activity depends on the correctness of the practice, which contributes to the formulation of decisions to continue the practice activity.

For the effective practice of physical exercises, it is proposed to take into account the following **recommendations**: - the correctness elements must be selected with great rigor and be part of the same structural group and of the motor action performed; - the correct execution of the movement is obtained as a result of the training according to the programmed action schemes, these being elaborated preventively; - the correctness of performing the physical exercise is a component of the technique, by which the precision of the movement is increased, the rhythm is perfected, and the execution time of the action as a whole is reduced. Every athlete must achieve the real possible. It is requested that all the established requirements be respected, that the minimum necessary efforts be applied, the selection of the most effective structure of the exercise scheme, the differentiated and individual approach

(resulting from the typical differences in memory, the abilities to acquire exercises, etc.).

Thus, we conclude that the approach to the elements of correctness in the educational and training process can become the guarantor of the training of physical exercises with any degree of difficulty.

Keywords: correctness, effectiveness, physical exercises, training process.

PREPARATION OF THE PHYSICAL EDUCATION AND SPORT FACULTY STUDENTS FOR THE SCIENTIFIC RESEARCH ACTIVITY

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Actuality. The research was based on an extensive study of the literature and methodologies regarding the specifics of training specialists in physical education and sports for scientific research, as well as the hypothesis that assumed that the development of the methodology for a specific purpose, oriented towards the specifics of the scientific research activity of the physical education teacher, which includes acquaintance with its content and practical learning in the integrative pedagogical system of lessons, allowed to improve the level of theoretical knowledge and professional pedagogical skills necessary for students to carry out scientific research at the level of the study programs.

Methodological aspects of the research:

The purpose of research is to improve the process of training the pedagogical skills specific to the scientific research activity of the of the physical education and sports faculty students.

In order to achieve the proposed goal, the following objectives have been established:

1. To study the structure and content of the scientific research activity of physical education teachers within the process of teaching school physical education.
2. To evaluate the initial level of theoretical and practical training of the physical education and sports faculty students for the scientific research activity.
3. To establish in stages the structure and content of the students training program for scientific research.
4. Experimental validation of the methodology for preparation with determined purpose of the students for the scientific research activity within the instructive-educational process.

Methods of research. There was used a complex approach in the paper, in order to study the multiple aspects of preparing students of Physical education and sports faculties for scientific research. The analysis of the pedagogical literature, curricula and educational programs allowed us to establish and argue the basic aspects of the content of the scientific research activity of the physical education teacher at the initial stage, as well as the necessary knowledge for it. The difficulties faced by the beginner teachers in the practical activity were established, the system and the level of preparation the Physical education and sports faculty students for the scientific

research activity within the integrative lesson system were analyzed. The conditions of the training process, which contributes to the increase of the effectiveness of professional-pedagogical training, were determined. There were also established the criteria for evaluating student training and developed the program of the special course "Methodology of preparing students of Physical education and sports faculties for the scientific research activity", which was implemented in the educational program, the 5th semester.

Findings and results. At the final stage of the research, the preparation levels of the students for the scientific research activity were established based on the results demonstrated during the current evaluation of the theoretical knowledge, the practical skills within the "Pedagogical training practices" and, respectively, by the method of quality analysis of the actual theses for the discipline „The theory of physical education and sports”, including the Theses presented by graduate students upon completion of studies.

The results of the pedagogical experiment carried out allowed us to establish three preparation levels of the students for research activity: *1. Reproductive level; 2. The productive level; 3. The productive level with research elements.*

The results obtained in the research allow us to conclude that the program developed and proposed to prepare students of the physical education and sports faculties for the scientific research activity is effective because it has the potential to form the knowledge and integrative skills specific to scientific research in the field of physical culture.

Conclusions and recommendations. The following conclusions can be drawn from the undertaken research:

1. The research materials allow us to state that 72% of teachers encounter difficulties in carrying out scientific research activities, the main reasons being the insufficiencies of the scientific training system of the future physical education teachers within the faculties.

2. The evaluation of the theoretical and practical training level of the students from the faculties of Physical education and sports within the reproduction of the integrative scientific research activity, regarding the realization of the projects of the course works (the 5th sem.), shows us that this activity is realized, first of all, by the skills of the reproductive level - 56%, the productive level - 27% and only -17 % of the works are characterized by the skills of the productive level with elements of integrative research, and the theme of the works is presented in most of them (75%) by subjects, which conditional examination can be performed through the 4th level of the scientific research methods.

3. The instructive-formative pedagogical experiment (in the classroom) and the practical-methodical one (carried out in natural conditions) prove the effectiveness of the methodology developed by different levels of the students' preparation for scientific research activity (based on evaluating the content of the courses and bachelor's theses):

* reproductive level (low) - students of the control group - 49.4% - overall grade

- 7.9;

* productive level (medium) - students of experimental group 2, who passed only the theoretical compartment of the program - 72%, overall grade - 8.1;

* the productive level with elements of integrative scientific research for the students of the experimental group 1 - 64%, the general grade - 1 point and 27% of bachelor's theses, compared to both groups - 5.5% with a grade of 9.0.

It is also recommended:

1. To include the special course "Methodology of preparing students of physical education and sports faculties for the scientific research activity" as an instructional discipline for the respective faculties, as well as for the requalification faculties of teachers in the field.

2. To use the system of selective objectives with determined purpose for the independent work of the students as a product, which would contribute to the consolidation of the necessary research skills in the process of elaboration of the bachelor theses and scientific publications.

3. The elaborated methodology, regarding the scientific research activity of the specialists in the field of physical education and sports, can be also applied in the work of the Commissions for teachers' attestation for evaluating the research competences.

Keywords: students, physical education, sport, science, research activity, research competences.

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MODERN TECHNOLOGIES FOR PROGRAMMING HEALTH CLASSES FOR STUDENTS WITH EXCESS BODY WEIGHT

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Abstract. The article theoretically and experimentally substantiates the peculiarities of modern technologies of programming of health classes aimed at normalizing body weight in the studied persons. The main goal of the proposed method was to normalize the weight of female students, strengthen their health, increase interest and involve female students in regular physical education and health classes through the use of modern tools of shaping. Health classes were aimed at correcting defects in physical appearance caused by deficiencies in the body structure, due to a purposeful selection of physical exercises, the mode of their performance, diet and nutrition.

The structure of classes consisted of three parts - preparatory, main and final. The preparatory part of the classes took place in the form of aerobic gymnastics and lasted 10–15 minutes. Individual and simple complex exercises for large muscle groups performed while standing were used. The task of this part of the training was to prepare the body for the next physical activity. The main part of the classes lasted 30–40 minutes and aimed at the development of various muscle groups and physical qualities. The physical activity intensity is high. Static exercises were combined with dynamic ones. The final part lasted 5 minutes and aimed at reducing the physical activity and restoring body functions. Exercises for relaxation, recovery of breathing, separate yoga asanas and psychoregulatory training were performed.

The need to make certain corrections in the diet of female students, considering the physiological needs of their bodies, observing the hygienic requirements for the rational nutrition of the subjects, was established. An own version of the correction of the actual diet of the researched subjects is given, using the example of the daily diet of female students, taking into account the identified shortcomings.

A comparative analysis of the anthropometric indicators of the studied female students was carried out. The anthropometric research data obtained at the beginning of the experiment, namely the determination and analysis of body weight, body mass index, waist-thigh index, abdominal circumference, body fat content by body mass index level, revealed the presence of excess body weight in the studied female students.

The analysis of the data obtained in the course of scientific research made it possible to draw the following conclusions. Deficiencies in the nutrition of the studied

girls were revealed. The need to make certain corrections in the diet of female students, considering the physiological needs of their bodies, observing the hygienic requirements for the rational nutrition of the subjects, was established.

An own version of the correction of the actual diet of the researched subjects is presented, using the example of the daily diet of female students, considering the identified shortcomings.

The effectiveness of the author's program of shaping classes with the observance of nutritional correction for female students who have excess body weight has been confirmed experimentally, which was manifested in positive dynamics in the anthropometric indicators of the girls. We observe positive changes in indicators: body weight – by 9,94%; the body mass index – 15,14%; the waist-thigh index – by 9,38%; total thickness of subcutaneous fat folds – 7,5%; body fat content by body mass index – 6,58%.

Keywords: excess body weight, female students, health classes, modern technology, shaping.

CLASSIFICATION OF GAME ACTIONS OF FOOTBALL PLAYERS ON THE POST OF GOALKEEPER

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Actuality. The goalkeeper is one of the most important figures in the game of football, his role being one that can lead to winning or losing a match. Although he rarely comes into contact with the ball, his intervention is decisive in the defense of the goal where the opponents try to score.

A modern goalkeeper must be clearly superior to other playing positions in all components of sports training, such as physical training, technical training, tactical and psychological training.

The purpose of the research consists in making a classification of the playing actions of the footballers in the position of Goalkeeper.

Goalkeepers, like players in other playing positions, are usually analyzed through the lens of the four factors of sports training such as: physical training, technical training, tactical training and psychological training.

Talking about the physical training, the goalkeeper, first of all must differ from the other players by the somatic parameters. They will often have a waist of 190-200 centimeters and an excellent level of development of the most important motor qualities in the game of football, such as be strength, speed, in all forms of manifestation (reaction speed, repetition speed, execution speed and movement speed), general and specific skill and others.

Tactically, the goalkeeper must have the ability to anticipate the actions of the opponent, but also of his teammates regarding the game in attack and defense. He is the first player to start an attack from his own goal. The ability of the goalkeeper to position himself correctly, to leave the goal in time, to communicate with his playing partners is very important.

There are several classifications in the specialized literature regarding the playing actions of the footballers in the position of goalkeeper, each being argued from several points of view.

In the given research we aimed to analyze all the actions of goalkeepers in the game of football and come up with a detailed classification, where all their game actions, both in defense and in attack, will be described.

Research methods. Modern research methods such as: video method, theoretical analysis method, questionnaire method, theoretical analysis, graphic method and

others were used in the given research.

Findings and results. Analyzing the actions of football players in the position of Goalkeeper, we made a general classification of them, which in the foreground highlights two types of actions. Depending on the game situations, these being actions in attack and actions in defense. Both types of actions are focused, depending on their displacement, on the fundamental position and displacement in the field.

There are several actions are characteristic for the goalkeeper's attacking ball play, such as:

- Putting the ball back into the field.

- o Reset by hand

- o Returning with the foot

For playing with the ball in defense, several actions are characteristic such as:

- Catching the ball.

- Boxing the ball.

- Ball deflection.

- Blocking the ball.

All these actions or game elements are classified into several procedures of their execution. The goalkeeper will apply one or another element, depending on the game situations, like the team's level of preparation, as well as the score of the match at one stage or another, where the goalkeepers often act improvised, using different methods improvised by them.

Conclusions and recommendations. A classification of the goalkeeper's actions was carried out as a result of the organized research, and its results can be used as scientific-didactic material for the training of the goalkeeper's footballers at different stages of training.

Keywords: football, seniors, goalkeeper, game actions, classification.

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STUDY OF THE PROCESS OF TECHNICAL TRAINING OF JUNIOR WOMEN IN VOLLEYBALL

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Relevance of the research topic. To date, the priority directions in the scientific and methodological substantiation and training of volleyball players are the search for innovative means and methods of training at various stages of the training process.

However, the analysis of the scientific and methodological literature allows us to conclude that in practice many coaches adhere to outdated views on the issues of planning and organizing the improvement of technical training. In our opinion, this is associated with lack of methodological developments of training sessions in different periods of the training process.

To solve the tasks set, the following set of scientific research methods was used: theoretical analysis and generalization of literary sources, questioning; pedagogical observations; control measurements; pedagogical experiment; statistical processing of the received data.

The objective of pedagogical observations was to study the process of planning, implementation and control of technical training among juniors in volleyball.

Control tests were carried out in order to determine the level of technical readiness of volleyball players throughout the study.

The current registration was carried out by the coach at the end of the pre-competitive period at the training sessions and the competitive period during the games of the Championship of Moldova among women's teams.

For registration, methods were used, as well as other means developed by the coach, considering specific working conditions: special videos of games and training sessions that make it possible to judge the degree of technical preparedness of the player and the team as a whole, the effectiveness of the application of techniques.

In the process of training work, control should be carried out systematically by periods and cycles of training. In the practice of volleyball, such control involves three types of assessment of technical readiness: assessment of the sports technique itself; determination of the result achieved through the use of this technique; assessment of the effectiveness of the technique in a specific game situation.

The study was carried out in several stages and consisted in conducting control tests to determine the level of technical readiness in the junior teams participating in the Championship of the Republic of Moldova in volleyball. The study was conducted in order to determine the dynamics of the growth of indicators of the level of technical readiness at the pre-competitive stage of the training process based on the results of control tests. Also, during the pedagogical experiment, we analyzed the technical

actions in the process of official competitions.

In the course of training sessions in the experimental group, we used a set of game exercises of a technical and tactical nature, and also used specialized simulators that increase the individual level of technical training of juniors. The combination of these means of the training process took place according to a certain model: the method of circular training, where exercises of a game nature are performed in a limited space, so that 2-3 volleyball players participate in the exercise, and then the performance of one or more technical elements in conjunction on the simulator (reception- attacking blow; transfer-attacking blow, etc.). The possibility of using special game exercises and specialized simulators allowed us to significantly increase the motor density of the training session, as well as increase the game interaction between volleyball players.

The effectiveness of the developed technique of technical training of juniors in volleyball using the experimental program was confirmed in a statistically significant increase in these indicators of technical and competitive readiness obtained during the pedagogical experiment. It should also be noted that the good progress in the quality and stability of the performance of technical elements and their types during the application of the experimental training methodology.

According to the results of the control of competitive games, it can be seen that there was a significant increase in performance in the competitive activities of both teams, the growth was approximately 10.1%, and in training sessions - about 20%. This suggests that the training process is built correctly and the applied training methodology is rational. Since the shifts in the qualitative performance of technical methods are palpable.

The results of the study indicate that the experimental methodology allows to objectively evaluate the quality of the execution of techniques and determine their effectiveness, both in competitive games and in training sessions. As the results of the control showed, the use of a special set of game exercises aimed at improving the technical skills developed by us turned out to be effective. Along with a pronounced training effect, special exercises are an effective means for developing special physical qualities of volleyball players, so these exercises can be recommended for training both with beginners and high-class athletes.

Keywords: volleyball, motor skills, technique, juniors, training, competitions.

THE IMPORTANCE OF THE ARTISTIC COMPONENT IN THE PREPARATION OF COMPETITIVE COMPOSITIONS IN RHYTHMIC GYMNASTICS

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Actuality. Rhythmic gymnastics gives athletes the opportunity to demonstrate their body skills through elegant movements, difficult elements and beautiful compositions with music. Rhythmic gymnastics is a complex discipline that manages to combine art, sport, music and dance movements combined with portable objects (rope, hoop, ball, sticks, ribbon). The purpose of rhythmic gymnastics worldwide is to express through movement the expressiveness of thoughts and feelings, executed at a high technical level. As a result, gymnasts tend to demonstrate a good performance from a technical point of view, ignoring the artistic component. The process of composing a competitive composition requires time, imagination, musical hearing, plasticity and expressiveness of movements. This is why we capitalize on the importance of developing a methodology to properly integrate the artistic into gymnasts' competitive compositions.

In the international arena, we notice impressive compositions with significant value that contribute to creating an elegant image of this sport. In recent years, gymnasts from all countries of the world have become very well trained from a technical and physical point of view, and what differentiates and ranks gymnasts on the podium is the high-level artistic evolution demonstrated through grace and show

The purpose of the research is to capitalize on the importance of the artistic component in the preparation of competitive compositions in rhythmic gymnastics.

Research objectives: Study and analysis of the methodological-scientific literature, regarding the determination of the importance of the artistic component in the preparation of competitive compositions in rhythmic gymnastics. The development and application of the sociological survey on the issue of capitalizing on the importance of the artistic component in the preparation of competitive compositions in rhythmic gymnastics. Establishing the importance of the artistic component in the preparation of competitive compositions in rhythmic gymnastics based on the results received from the sociological survey.

Research methods: theoretical analysis and generalization of methodical-scientific literature sources; pedagogical observation; the sociological survey; the mathematical-statistical method of data processing. Our research was carried out between September 2022 and March 2023, at the base of the Speranța Sports School, the SUPES sports complex and at competitions abroad such as Poland, Greece, Romania. 50 rhythmic gymnastics coaches/referees were included in the research, the questionnaire had 12 questions.

Findings and results. As a result of the analysis and synthesis of the fundamental theoretical-methodological research on the issue of the importance of the artistic component in competitive compositions in rhythmic gymnastics, it can be concluded that the coaches have the necessary information to develop and improve the artistic criterion. At the same time, we must mention that internationally gymnasts stand out with interesting and unique compositions from an artistic point of view, which puts them on the podium at European or world level competitions. In the FIG Scoring Code (2022-2024) the specific requirements for the development of the artistic component in competitive compositions are fully provided for. Coaches have the opportunity to improve the artistic skills of gymnasts, to change the vision of the artistic component and to implement the artistic criteria in the competitive compositions of gymnasts. The data obtained allow us to highlight the fact that 40% of those surveyed consider that the best age to develop artistic skills is 7-8 years, 26% choose to develop artistic skills from the age of 6-7, 16% choose 5-6 years, 10% - 8-9 years and 8% choose the age of 9-10 years. After reflecting on the opinions of the professionals-coaches, referees and choreographers, we can notice that the development of artistic skills should be started at the age of 6-8, that is the time when the child has a physical and technical basis, understands the requirements of the coach and can improve his artistic performance. If we are talking about the age of 8-10 years, then we consider it a late age to start this development of artistic skills. We recommend, following the research and analysis of the answers, the development of the artistic component from a conscious age of the gymnasts.

The question "The artistic components from the point of view of the Scoring Code (2022-2024) are: character of movements, dance steps, expressiveness of the body, dynamic changes of movement, connections and rhythm. Do you know them?" The result of this question is a positive one, as 90% of the coaches answered "Yes", which means that they know the artistic components listed by us in the question, and only 10% answered "I do not know at all", which means that they have something to aim for and should improve their knowledge in the field they teach. The answer "No" was not chosen by any of the respondents.

The question "What is the artistic component that you develop the most during a training?" Those surveyed answered the majority with 40% for all components, 22% of coaches develop dance steps, 10% answered with body expressiveness and connections and rhythm, 14% chose the character of movements, and only 4% choose the artistic component-changes movement dynamics. This question helps us to notice the importance of developing all the artistic components, because only in this way we will get a much desired result.

To the question "When you choose the music for a future composition, what is the primary criterion?", 60% of specialists give priority to the temperament possessed by the gymnast while choosing the music for it, 20% choose the artistic criterion, equal to 10% the physical criterion and technique of gymnastics. As a result of this question, the coaches expressed their opinion that the important criterion they emphasize during the choice of music is the temperament of the gymnast. Others responded with

the artistic criterion, although it does not entirely embody the choice of music. And the other respondents emphasize the technical and physical criterion of the gymnast, which means that the level of training is important for these specialists in choosing music, as a result we find the opinion of the specialists – not all music suits all gymnasts, each one is individual and must be approached in his own way.

In conclusion, the elaboration of the sociological survey aimed to capitalize on the problem of the importance of the artistic component in competitive compositions from the point of view of specialists in this field. The results of the questionnaire analysis allow the formulation of some recommendations, the training and development of the gymnasts' artistic skills during the training by the coaches, only by applying the requirements of the Scoring Code and capitalizing on the important artistic elements, will lead to the improvement of the level of artistic training in the competitive compositions of the gymnasts.

Keywords: rhythmic gymnastics, artistic skills, choreography, music, artistic criteria, scoring code FIG.

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THE IMPORTANCE OF THE VITAMIN D AND ITS EFFECTS ON THE HUMAN ORGANISM

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The human body needs a variety of nutrients, for a normal functionality, and a major one of them is the fat-soluble Vitamin D. This vitamin can be found in several forms, but the most important for human body is Vitamin D2 and D3. The D2 form, named ergocalciferol, is produced by plants and mushrooms. It is also spread in different types of grains – rye, oat, wheat, barley.

The Vitamin D3 („The vitamin of the sun”), also named - cholecalciferol, of animal origin, is synthesized by the organism in 80-90% proportions. It is due to the contact of the B ultraviolet rays and the specific receptors on the skin. The D3 form is contained in some fish species: mackerel, herring, sardine, seafood, as well as liver, beef, milk and egg yolk. Vitamin D3 has superior properties, compared to the D2 form, because it increases the total level of vitamin D in the body, thus its action is long lasting.

The researches in the physical education and sports domains, put in evidence the necessity of maintaining in a good norm the concentration of the D vitamin in the organism of a sportsman, due to the fact that it supports the performance development and its keeping. After the ingestion, then absorption in the small intestine, the vitamin D3 is transported to the liver and kidneys, where it is activated and doing its beneficial actions:

- helps the assimilation of the calcium and phosphorus in the small intestine. After they are attached to the bones, teeth, as a response there is the effective skeletal mineralization. This way there are prevented a lot of pathologies: rickets, osteomalacia, osteoporosis, bone fracture;

- improves the neurocognitive processes, reduces the risk of depression, schizophrenia, Alzheimer’s disease;

- prevents some form of cancer of the mammary glands, of the pancreas, colon and prostate;

- contributes to the normal endocrine of the glands: pituitary, thyroid, parathyroids, stimulates insulin secretion, thus preventing the diabete;

- diminishes the risk of cardiovascular diseases, adjusts the heart rate and prevents the myocardial infarction;

- keeps the muscular function;

- stimulates the immunity.

The necessary concentration of the vitamin D in the organism is 20 - 100 ng/ml. In case the level is below these indicators, it is reported a severe deficit of vitamin D. The deficiency of this important vitamin is caused by a series of factors, as: the insufficient exposure to the sunlight, intestinal absorption disorders of vitamin D, a reduced food intake, medication (steroids, laxatives, medicine for weight loss or lowering the cholesterol level).

The symptoms of the deficiency of vitamin D are the following: fatigue, weakness, fragile bones, muscle pain, inflammation, the delayed wound healing, hair loss, as well as teeth loss. It is very necessary to maintain the vitamin D level in the limits of norm, because the excess of it can lead to hypercalcemia, manifested by nausea, vomiting, weakness, excessive thirst, frequent urination, stomach pain etc. Intoxication with vitamin D is recognizable when the level of this vitamin in the blood is above the norms.

In present, there is estimated a vitamin D deficiency all over the world, which has reached epidemical proportions, so the meaning of this work is to assess the vitamin D3 in adolescents' body, during puberty.

The research objectives:

- assessment of vitamin D3 concentration in the teenager's body;
- fulfilling the necessary amount of vitamin D3 in the form food supplements.

Research materials and methods. After estimating the concentration of vitamin D3 of the 7 tested young people, there was determined the reserve of vitamin D3, which is produced subcutaneous, as well as the concentration obtained after the food ingestion. After the gained results and after the recognition of the results at the lower limit, or even below the lower limit, the young people got the vitamin D as a natural food supplement, in proportion of 1000 UI/day for 2 months.

The results of the testings and their analysis. Nowadays a marginalization beyond children is felt about their deprivation of free time spent outdoors. Recent researches made by britanic scientists show that a child spends less time outdoors than a prisoner, which is sitting in a highly secured prison.

Actually a lot of children, and even adults manifest symptoms of vitamin D insufficiency. This thing lead us to appreciate the level of vitamin D of young teens, to prevent some disorders, especially in the puberty period. After the administration of a natural supplement of vitamin D (100UI), we got the following results, exposed in the Table 1.

Table 1. The concentration of vitamin D3 in the body of adolescents before/after taking the food supplement

<i>Nr. ord.</i>	<i>Vitamin D concentration (I) (ng/ml)</i>	<i>Vitamin D concentration (II) (ng/ml)</i>
1.	20	35
2.	19	31
3.	29	40
4.	20	40

5.	21	39
6.	21	44
7.	24	42
<i>M±m</i>	<i>22,00 ± 2,46</i>	<i>38,71 ± 4,38</i>

After testing the concentration of vitamin D3, it was determined that the food intake, as well as sunlight exposure do not fulfill the necessary vitamin D norm in the young people's organisms.

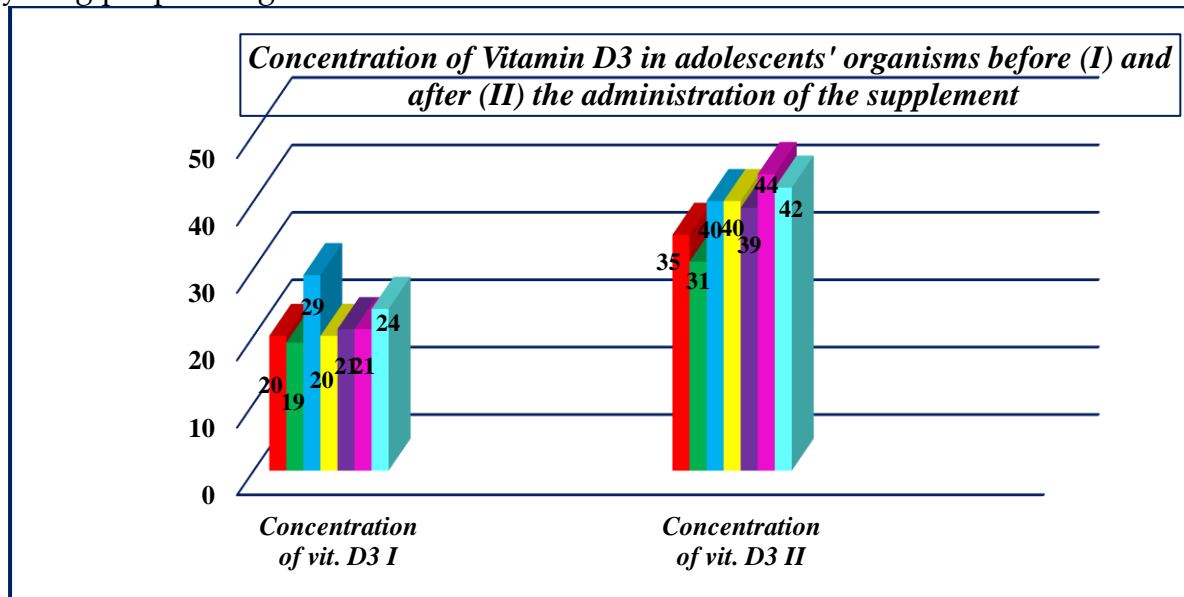


Figure 1. Concentration of vitamin D3 in adolescents' organisms (ng/ml).

This way, it was necessary to get an additional intake by taking the natural vitamin D3 supplement, the daily dose being 1000 UI. After 2 months of regularly administration the vitamin D3, it has got a noticeable and favorable increasing in the blood. This was also marked by the young people tested, who felt a much higher physical and mental potential.

Conclusions and recommendations:

- the testing of Vitamin D3 in the adolescents' bodies has shown a subnormal level (average $22.00 \pm 2,46$ ng/ml);
- the supplementay administration of Vitamin D3, in case of deficiency is primordial, because the insufficiency causes a series of pathologies and disorders;
- fulfilling the intake of Vitamin D3 by taking the food supplement has increased the concentration of the vitamin (average $38,71 \pm 4,38$ ng/ml), which had an positive impact on the general state of the body, and especially on the physical form;
- we recommend a periodic checking of the Vitamin D3 concentration in the blood, for preventing the risk of metabolic disorders.

Keywords: vitamin D, organism, teenagers, food supplements, physical potential.

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ANTI-DOPING CONTROL IN SPORT

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Anti-doping control encountered complicated problems, such as obtaining a consensus on the definition of doping, distinguishing doping from legitimate medical treatment, establishing the evidence of a doping case. At the same time, the proposals for solving these problems often conflicted with national or international laws, so that a lack of standardization in the procedures was manifested. In 1990, the Council of Europe adopted the Anti-Doping Convention, in which 28 EU member countries participate. The main achievement of the convention is that it obliges governments to adopt minimum standards for the organization of anti-doping control.

There is no doubt that the abuse of prohibited substances is a major social and health problem. A study by Donati shows that the global market of doping products can be compared to the drug market. But we are talking about a lack of available data, which could give us a precise picture of the problems and measure the socio-economic costs. The authorities do not keep records of sick people or deaths caused by doping, so deaths due to health problems caused by doping are not recorded. There is also no data to show how often perpetrators of violent crimes are under the influence of steroids, and there are no estimates of the amount of money that organized crime makes from the production and sale of steroids. In order to better understand the purpose of the problem and to set the priorities correctly, it is necessary to develop standards and statistics in the field.

One way to estimate the extent of the phenomenon is represented by the figures related to the trade in banned substances in sports. However, these figures do not differentiate between sporting and non-sporting users. Steroids can also be consumed by amateur bodybuilders. Thus, Weinhold states that in the USA between 400-500 million dollars are spent every year for these substances. An American publication entitled "Underground steroids handbook" which informed athletes how to obtain and use banned substances, sold hundreds of thousands of copies in the past decade. At the beginning of the anti-doping activity, the responsible bodies in sports compiled their own lists of "prohibited substances" (doping lists), which led to confusing situations. That is why, on January 13, 1994, the International Olympic Committee, the international sports federations and the National Olympic Committees agreed in Lausanne to agree on the various doping lists and their respective definitions. This list contained the classes of prohibited substances and related substances, as well as

general information about each class of prohibited substances and prohibited methods.

The Prohibited List will include those Prohibited Substances and Prohibited Methods that are prohibited, as doping (both in-competition and out-of-competition), due to the possibility of enhancing sports performance in future competitions, or their masking action, as those substances and methods that are prohibited only in competition. The banned list can be extended by WADA for a specific sport.

Athletes have tried to avoid the detection of stimulants in several ways:

- Handling of urine samples. To falsify testing procedures, condoms with clean urine were introduced into testing laboratories, large amounts of water were drunk prior to testing, or toilet water was introduced into the athlete's sample. These methods were used in the absence of insufficiently supervised collection procedures.

- The use of drugs, such as diuretics and promenecide. These drugs, now banned, were used to falsify test results and mask banned substances.

- Giving up medicines before the tests. This method is used especially when tests are carried out during competitions.

- Preventive tests before competitions. Some countries have ignored or encouraged doping among their own athletes. For fear of bad publicity, these countries organize testing sessions before participating in international competitions and prohibit the participation of athletes tested positive.

Such tactics have led to the improvement and sophistication of anti-doping control methods. In response, athletes and their medical advisers had to adopt new tactics to avoid detection of the consumption of prohibited substances. Thus, drugs with much faster action, but with much more toxic effects, were used. Another trend was the use of human growth hormones, which are much harder to detect.

Conclusions:

- The abuse of stimulant substances has become a recognized problem in sports, with a strong social and health impact.

- Because it is a secret practice, the global consumption of banned substances by athletes is difficult to estimate.

- After a long period of trials and difficulties, an attempt is being made to introduce clear standards for the organization of anti-doping control.

- The sophistication of doping means leads to the sophistication of anti-doping tests and vice versa.

Keywords: prohibited substances and methods, doping, anti-doping control.

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**OVERVIEW OF THE LEVEL OF FORMATION OF SWIMMING SKILLS
AMONG THE WINNERS OF THE XX WORLD AQUATICS CHAMPIONSHIPS
(FUKUOKA-2023)**

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Actuality. As the experience of theory and practice shows, the World Aquatics Championships are the largest international competition held since 1973 under the control of FINA (International Swimming Federation). They include swimming in the pool and open water – marathon swimming, starting in 1991, as well as diving, water polo, and synchronized swimming. The swimming program was gradually supplemented and expanded, ranging from 29 to 34 species by 1991 and to 49 species in total among women and men by the present stage. Therefore, the capabilities of swimmers are expanding to testify to the personal parameters of a more reliable formation of motor skills in sports and marathon swimming.

Analysis of recent research and publications. Specific information on the state of modern parameters of differences in the formation of swimming skills among young people and adults, taking into account their sex, occurs in a very sporadic and fragmentary manner, as evidenced by the literature on the theory and methodology of physical education and sport (Ganchar, 2015, 2017, 2018). There are also quite

convincing publications on the specifics of training women and men of similar opportunities for training swimming skills as national authors (Korop, Kononenko, 1983; Platonov, 2002), and widely reported in foreign sources of literature and practice (Maglischo, 2003, Hannula, 2001, Schubert, 1990, www.fina.org, www.swimrankings.net, www.omegatiming.com).

The purpose of the research is to determine the level and degree of parameters of the formation of swimming motor skills in prize-winning swimmers based on the observation of the dynamics of the results of the prize-winners of the final swims at the XX World Aquatics Championships, which took place on July 14-30, 2023. **The objectives of the study were:** 1) to determine the differences in the levels of the parameters of the formation of swimming motor skills among elite swimmers-prize-winners before the practice of holding prestigious competitions at the XX World Swimming Championships in Fukuoka-2023; 2) the application of the most significant results of the conducted research in modern practical experience for the possible improvement of the formation of the motor skill of swimming in different age groups.

The main research methods were: theoretical analysis of literary sources and practical experience, monitoring, ascertaining experiment, generalization of documentary materials, mathematical statistics. Research methods: theoretical analysis of the literature related to the problem (15 sources of literature and practical experience, well-known specialists and specialists), synthesis of documentary materials: (analysis of 45 official protocols with the participation of winning swimmers at the XX World Championships in Japan, Fukuoka-2023, which are posted on the following sites: comparative ascertaining experiment: with its help, data were obtained that made it possible to compare the indicators of average speed in achievements prize-winning swimmers among 112 men and 111 women at all 45 distances of sports and marathon swimming, who received gold, silver and bronze medals from 22 countries; mathematical statistics (this is necessary to determine the average indicators to calculate their reliability at the significance level: $p = < > 0.05$ achievements of swimmers at different distances).

Research results and their discussion. Examining the final starts of the XXX World Championship-2023 allows us to study the state of formation of swimming motor skills of the strongest prize-winning swimmers, as these indicators testify to the highest level of formation of swimming skills of elite swimmers at these prestigious competitions.

So, it was found that the most successful performance of the athletes of the USA - 38+1 medal in marathon swimming, Australia-25+2, China-16, Italy-6+3, Great Britain-8, Germany-1+5, France-6, Canada-6, the Netherlands-3+1, Tunisia-3 medals. The second top ten team ranking includes Hungary-1+2 medals, Sweden-2, Lithuania-2, South Africa-South Africa-2, and Japan-2 medals. Meanwhile, the following countries received 1 medal each: Poland, Portugal, Hong Kong, Switzerland, South Korea, Brazil, and New Zealand. Therefore, the general summary of the performance rating of the world's strongest swimmers was the indicator of the awards received both in terms of their number and quality among the prize-winning swimmers at the XX World

Championships-2023 in Fukuoka, Japan. Among men swimmers, the most successful athletes were: USA-18 medals, Australia-10, Great Britain-7, China-6, Italy-4+2 marathon, France-6, Germany-1+3, Tunisia-3. Women swimmers were also distinguished by athletes: USA-20+1 medal in marathon swimming, Australia-16+2, China-10, Canada-5, Netherlands-2+1 medal.

As shown in, the largest age difference between male and female participants was found in 11 cases in the range of 1-6 years: 50-100-200 m backstroke, 50-100 m breaststroke, 200-400 m medley, relay 4×200 m freestyle, medley 4×100 m and mixed relay, as well as 10,000 m marathon swimming. The lack of age difference between men and women was observed in 3 cases: in 100-200 m freestyle and 4×100 m freestyle relay. Meanwhile, the age predominance of women over men also occurred in 11 cases (1-6 years), namely: in 50-400-800-1500 m freestyle, 200 m breaststroke, 50-100-200 m butterfly, in marathon swimming at 5000 m and mixed 4×100 m freestyle relays, as well mixed 4×1500 m marathon swimming (men, $x\pm m=23,85\pm 1,65$; women, $x\pm m=22,64\pm 2,23$; $t=0,039$; $p>0,05$).

The biggest difference between the results of men and women in terms of average swimming speed is most noticeable at sprint distances of 50-100-200 m, freestyle - 0.21 m/s, then at swimming distances butterfly at 50-100-200 m - 0.20 m/s, further in breaststroke at 50-100-200 m - 0.19 m/s and relay swimming at 4×100 m, 4×200 m freestyle and medley relay 4×100 m. Then this is noted at backstroke distances of 50-100-200 m and medley swimming 200-400 m – 0.18 m/s. Although the smallest difference between the performances of men and women concerns, first of all, the overcoming of the long distances of marathon swimming at 5000-10000 m and the mixed relay 4×1500 m - 0,14 m/s, as well as the stayer swimming 400-800-1500 m freestyle - 0,12 m/s, and the mixed relay races 4×100 m freestyle and 4×100 m in the medley relay - 0,10 m/s. So, the general difference between the average swimming speed for men and women in these prestigious competitions of our time is: over 0,17 m/s (men, $x\pm m=1,86\pm 0,17$; women, $x\pm m= 1,69\pm 0,15$; $t = 6,676$, $p<0,05$).

The data obtained allow us to draw the following general conclusions and recommendations:

1. The results of the winning swimmers at the XX World Swimming Championships (Fukuoka-2023, Japan) show that among the 22 medalist countries, the performance of the teams of athletes was the most successful: USA-38+1 medal in marathon swimming, Australia-25+2, China-16, Italy-6+3, Great Britain-8, Germany-1+5, France-6, Canada-6, Netherlands-3+1, Tunisia-3 medals. The second ten team classifications include Hungary-1+2 medals, Sweden-2, Lithuania-2, South Africa-South Africa-2, and Japan-2 medals. Meanwhile, the following countries received 1 medal each: Poland, Portugal, Hong Kong, Switzerland, South Korea, Brazil, and New Zealand. Therefore, the overall result of the ranking of the performance of the strongest swimmers in the world is the indicator of the awards received both in their quantity and quality among the winning swimmers at the XX World Championships-2023 in Fukuoka, Japan. Among the men swimmers, the most successful athletes were: USA-18 medals, Australia-10, Great Britain-7, China-6, Italy-4+2 Marathon, France-6, Germany-

1+3, Tunisia-3. The swimmers also shone among the women athletes: USA-20+1 medaled in marathon swimming, Australia-16+2, China-10, Canada-5, and Netherlands-2+1 medal, although the second countries received only 2-1.

2. The dynamics of such gender differences of the winning swimmers by age are illustrated in detail, which accompanies the level of development of motor swimming skills through the possibilities of overcoming distances in various ways (men, $x \pm m = 23.96 \pm 1.48$; women, $x \pm m = 23.36 \pm 1.55$; $t = 0.090$; $p > 0.05$) in the final starts of the XX World Aquatics Championships 2023. According to the indicators of these competitions, the largest age difference between male participants and women was noted in 11 cases aged 1-6 years: 50-100-200 m backstroke, 50-100 m breaststroke, complex swimming at 200-400 m, relay 4×200 m freestyle, combined 4×100 m and combined, as well as 10000 m marathon swimming. The absence of an age difference between males and females was observed in 3 cases: 100-200 m freestyle and 4×100 m freestyle relay. Meanwhile, the age of women also outweighed men in 11 cases (1-6 years), namely: 50-400-800-1500 m freestyle, 200 m breaststroke, 50-100-200 m butterfly, marathon 5000 m and joint relay 4×100 m freestyle and 4×1500 m marathon swimming (men, $x \pm m = 23.85 \pm 1.65$; women, $x \pm m = 22.64 \pm 2.23$; $t = 0.039$; $p > 0.05$).

3. A significant difference was noted in the indicators of average swimming speed between men and women at all distances of sports and marathon swimming. Thus, the biggest difference between the results of men and women in terms of dynamics of average speed is typical in freestyle swimming for short and medium distances-0.21 m/s, butterfly-0.20 m/s, relay-0.19 m/s and breaststroke-0.19 m/s, distance in backstroke-0.18 m/s and complex swimming-0.18 m/s, Although the smallest difference in the distances of marathon swimming - 0.14 m/s and the standing freestyle swimming-0.12 m/s, and the articulated relay-0.10 m/s. Thus, the general difference between the average swimming speed of men and women at all distances of the sport and marathon swimming according to the program of these prestigious competitions is more than-0.17 m/s (men, $x \pm m = 1.86 \pm 0.17$; women, $x \pm m = 1.69 \pm 0.15$; $t = 6.676$, $p < 0.05$).

4. The latest data obtained will make a significant informational contribution to the further improvement of the existing system of appropriate support for physical education and sports based on the application of a gender approach to the process of education and rehabilitation of young people of different ages and genders. This will be needed to find out the various possibilities of the performance of the strongest swimmers on the example of indicators at the final swimming starts at all world championships for 1973-1999, both at the first stage of their holding and at the second stage held in 2001-2023 from past times to the extreme challenges of our time.

Keywords: World Swimming Championships, team ranking, swimming distance, men swimmers, women swimmers, achievements of winners, average speed, difference of achievements.

THE UNIQUE INTERACTION BETWEEN VIRTUAL REALITY AND PHYSICAL THERAPY IN RECOVERY OF THE ADHESIVE CAPSULE

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Introduction. With the passage of time, medicine advances, as does technology. The latest medical innovations were through the creation of surgical robots that made possible surgical interventions that were dreamed of 10 years ago. At the same time, the physical therapy department also had to "suffer" through the development of feedback robots for gait recovery, robots for upper limb recovery and more. The pioneer in this directive is Virtual Reality (VR), which aims to move to an environment that is much easier to work with and control.

Virtual reality is: "a way for humans to visualize, manipulate and interact with computers and extremely complex data" [Aukstakalnis & Blatner, 1992] (the way through which people can visualize, manipulate and interact with computers and complex data) more precisely it can be an advanced form of a human-computer, an interface that allows the user to interact in an environment generated by an almost real, natural computer, just like in airplane, train, car simulators in which pilots train for the development skills. The same environment can be created to develop and recover cognitive and functional abilities, bringing interactive scenarios designed to meet the needs of patients or create tasks similar to the real world.

Adhesive capsulitis, also known as frozen shoulder, is a condition that causes a significant loss of both active and passive range of motion of the shoulder that occurs in the absence of preceding pathology.

There are two types of frozen shoulder, primary and secondary. In the first type, patients have no findings on clinical examination, radiography or in their history that would explain the loss of range of motion. Primary frozen shoulder is the most common type and is idiopathic in nature. The Secondary Type develops after events such as upper extremity surgery or trauma. The limb is constantly unused and held in a position of internal rotation, shoulder adduction with elbow flexion. Consequently, the anteroinferior aspect of the joint approximates and shortens, resulting in a restriction of movement.

Adhesive capsulitis recovery (frozen shoulder) causes limitation of movement in the shoulder joint through contraction and scarring of the joint capsule. the latest studies show that it affects approximately 2% of the world's population, especially people between 40 and 60 years old.

Signs and symptoms usually start gradually, get worse over time, and then resolve, usually within one to three years. Your risk of developing frozen shoulder increases if you are recovering from a medical condition or procedure that prevents

you from move your arm - such as a stroke or mastectomy.

Treatment for frozen shoulder involves range of motion exercises, physical therapy, and sometimes corticosteroids and numbing medications injected into the joint capsule. In a small percentage of cases, arthroscopic surgery may be indicated to loosen the joint capsule so that it can move more freely.

The objectives of using virtual reality in physical therapy are to combat pain, increase joint mobility, increase muscle mass and correct body postures according to each phase. Phase 1 or the painful phase is characterized by pain through the appearance of diffuse pain that lasts for a period of 2 to 9 months and nocturnal pain and progressive limitation of movement. The second phase or blocking phase is evident by limitation of movement, with constant pain, with the pains increasing when self-exceeding the limits imposed by immobilization. It is between 4 and 12 months. Phase 3 or the resolution phase in which symptoms improve and joint mobility is gained, is between 5 and 26 months

The aim of the research is to highlight the involvement of the virtual space in the physiotherapy programs of the adhesive capsulitis, to help the physiotherapist and to create a much safer and easier working space, with real-time feedback for both him and the patient

Research objectives

- Analysis and appreciation of physical therapy means combined with Virtual Reality in physical therapy programs for the painful shoulder
- Studying theory and practice in the field of adhesive capsulitis
- Elaboration of the structure and content of the recovery program by combining physical therapy means with Virtual Reality in an adhesive capsule
- Experimental validation of the effectiveness of the recovery process through physical therapy based on Virtual Reality in the adhesive capsule

Scientific novelty. The most important question is: Why use virtual reality? Does it help us create a more complex program of physical therapy?, and most importantly, does it help the PATIENT to recover faster and maintain the best possible condition after the treatment?

Virtual reality gives us the opportunity to bring the complexity of the physical world into the controlled environment of our office. VR offers the possibility to create a totally new and ecological world, with better control and curation due to real-time computer generated feedback plus an independent practice modification

Scientific problem solved. We can mention quite a large number of advantages of using virtual reality in our daily practice compared to "classic" physical therapy programs:

- a more natural or realistic environment in which the patient can forget about everyday problems and focus better on the physical therapy program

- The involvement of the virtual space in the development of the kinetptherapy program for adhesive capsulitis, creating/finding an appropriate environment so that patients can be in a state of comfort in which the sensation of pain decreases, since the somatosensory cortex is less active when patients use virtual reality (studio) and the

more intense and interactive the activity in VR is, the perception of time and the perceived pain sensation change.

1. On 15.09. 2019 – 01.07. 2021 on a number of 20 volunteers with adhesive capsules, we conducted a study published in the Journal of Physical Rehabilitation and Sports Medicine: Volume III (October 30, 2021).

The group of volunteers receive the same joint mobilization techniques for 7 minutes because the RV scenario lasts 7 minutes, the pain threshold is measured in the real environment as well as in the virtual environment by pressing a dynamometer in the deltoid mass and submerging the upper limbs in ice water observing the duration of resistance in the real doctor as well as in the virtual one, the perception of the duration of the time spent in VR was also observed. The patients presented a reduced perception of the time spent in the virtual environment by approximately 35% compared to reality and a decrease in the absence of pain during joint mobilizations depending on each work scenario. The dolphin group reporting almost the same sensation with a slight decrease in pain compared to the control group. The biggest changes observed in the mountain rousse group by approximately 50% compared to the control group because the subjects' minds being preoccupied with the virtual environment did not think about the problem area and this led to a lower perception of pain and a lower perception of time.

2. Is virtual reality effective in orthopedic rehabilitation? A systematic review and meta-analysis of research conducted by Mohammed Gumaa and Aliaa Rehan Youssef reported that Virtual Reality (VR) is an interactive technology that allows personalization of treatment and can help achieve effective person-centered rehabilitation. The aim of this review was to systematically review and critically evaluate controlled clinical trials that investigated the effectiveness of VR in orthopedic rehabilitation. Data sources were Pubmed, CINAHL, Embase, PEDro, REHABDATA and Sage publications were searched up to September 2018. In addition, hand searching and the use of Scopus and Web of Science snowballs were performed. Selection of studies. Two reviewers screened studies for eligibility first by title and abstract and then full text. Articles were classified as general or region-specific (upper limb, lower limb and spine) orthopedic disorders. Study quality was assessed using the Assessment Guidelines for the Assessment of the Quality of an Intervention Study score. The meta-analysis quantified the effectiveness of VR, compared with no treatment, in low back pain. Nineteen studies were included in the quality assessment. Most of the studies were of moderate quality. Fourteen studies showed that VR was no different compared to exercise. Compared to no treatment control, 5 studies favored VR and another 3 studies showed no difference. For back pain, the meta-analysis revealed no significant difference between VR and no treatment control (n = 116; standardized mean difference = -0.21; 95% confidence interval = -0.58 to 0.15). Limitations included the heterogeneity of interventions and outcome measures of the reviewed studies. Only articles in English were included. Conclusion. Evidence for the effectiveness of VR is promising in chronic neck pain and shoulder impingement syndrome. VR and exercise have similar effects in

rheumatoid arthritis, knee arthritis, ankle instability, and post-anterior cruciate reconstruction. For fibromyalgia and back pain, as well as after knee replacements

3. In 2004 Heidi Sveistrup, Joan McComas, Marianne Thornton, Shawn Marshall, Hillel Finestone, Anna McCormick, Kevin Babulic and Alain Mayhew published the work: "Experimental studies of virtual reality delivered compared to conventional exercise programs for rehabilitation". This paper presents preliminary data from two ongoing clinical trials using flat screen virtual reality (VR) technology for physical rehabilitation. In the first study, we compare a VR-delivered exercise program with a conventional exercise program for rehabilitation of shoulder joint range of motion in patients with chronic frozen shoulder. In the second study, we compare two exercise programs, VR and conventional, for balance retraining in subjects with post-traumatic brain injury. Effective VR-based rehabilitation, which is easily adapted by individuals to use in both inpatient, outpatient and at-home settings, could be used as a supplement or alternative to conventional therapy. If this new treatment approach proves to be effective, it could provide a way to encourage exercise and treatment adherence, provide safe and motivating therapy, and lead to the ability to provide exercise to clients in remote locations via telehealth applications of VR treatment. VR is a new technology and the rehabilitation possibilities are just beginning to be evaluated.

4. In 2022, the work published by- Pinar Tokgöz, Susanne Stampa, Dirk Wähnert, Thomas Vordemvenne and Christoph Dockweiler with the title "Virtual Reality in the Rehabilitation of Patients with Injuries and Diseases of Upper Extremities" in which they reported the Injuries and diseases at the level upper extremity disorders rarely have life-threatening consequences, but failure to manage them properly can lead to severe dysfunction. This article presents the current state of the use of virtual reality to support the rehabilitation process of patients with upper extremity injuries and diseases and highlights its effects on upper extremity functions. A scoping review was conducted to provide a comprehensive overview of the field of virtual reality for upper extremity rehabilitation. PubMed, Web of Science and the Cochrane Library were searched by two independent researchers between April and May 2021 to identify relevant publications and screened against inclusion and exclusion criteria. As a result of the literature review, 11 studies of different target groups were identified. Virtual reality technologies have been classified into high-end multisensory systems and game-based systems. In terms of functional recovery, technologies based on virtual reality were not inferior to traditional rehabilitation. In addition, users were highly motivated and satisfied. The results highlight the need for more powerful, evidence-based virtual reality technologies for the rehabilitation of upper extremity injuries and diseases.

Conclusions

1. Physiotherapy cannot be replaced, but if it is associated with other work methods, such as Virtual Reality, its effects are very good.

2. Tracking the quality and quantity of movements. One of the most important objectives in the exercise program is the quality and quantity of movements. In Virtual

Reality we can track these two things much more easily and provide real-time feedback to our patients. As for the exercises done at home, we all know that they are not performed properly, because several factors intervene: the children, the dog, household chores, that's why the exercises performed in VR are always supervised by an avatar, your own virtual physiotherapist who will correct your every movement and help you reach the desired goals. Much more fun in VR. It is much more fun to do the exercises in virtual reality than in reality. As a physiotherapist, I found that it is much more difficult for patients to do the exercises at the moment when they are bored, and a longer recovery program can become very boring for the patient. This is where virtual reality comes in, creating a much friendlier workspace, where time can pass faster and doing exercises is "a game".

3. Carrying out and tracking the exercises at home. From my own practice, I found that approximately 10-20% of patients continue their exercise program at home. Monotony, daily activities, fatigue, daily routine are some of the things that prevent exercising at home, the exercise program in VR creates your own gym and your own physiotherapist in the proximity of your home. With a program that tracks your progress and a virtual office, patients could disconnect from the living space and focus on the exercises much better.

4. Adverse reactions and general precautions. Some people may experience dizziness, headaches, convulsions, uncontrolled muscle or eye movements, flashes or patterns of light, and this may occur while watching TV, playing video games or experiencing virtual reality. . A very important thing is that the objects seen in the virtual environment do not exist in the real environment.

5. Use - 10 to 15 minute break every 30 minutes. Listening to sound at high volume can cause irreparable hearing damage. Background noise, as well as continuous exposure to high volume levels, can make sounds seem quieter than they actually are. Due to the immersive nature of the virtual reality experience, there is no need to use loud headphones so that awareness of your surroundings can be maintained and the risk of hearing damage reduced.

THE USE OF VIRTUAL REALITY IN JOIN MOVEMENT OF ADHESIVE CAPSULITES

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Virtual reality is: "a way for humans to visualize, manipulate and interact with computers and extremely complex data" [Aukstakalnis & Blatner, 1992] (the way through which people can visualize, manipulate and interact with computers and complex data) more precisely it can be an advanced form of a human-computer, an interface that allows the user to interact in an environment generated by an almost real, natural computer, just like in airplane, train, car simulators in which pilots train for the development skills. The same environment can be created to develop and recover cognitive and functional abilities, bringing interactive scenarios designed to meet the needs of patients or create tasks similar to the real world.

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The objectives of using virtual reality in physical therapy are to combat pain, increase joint mobility, increase muscle mass and correct body postures depending on each phase. Phase 1 or painful phase is characterized by pain by the appearance of diffuse pain lasting over a period of 2 to 9 months and nocturnal pain and progressive limitation of movement. The second phase or the blocking phase is highlighted by limitation of movement, with constant pain, with accentuation of pain when overcoming the limits imposed by immobilization. It is between 4 and 12 months. Phase 3 or resolution phase in which the relief of symptoms and the gain of joint mobility takes place, is between 5 and 26 months.

Research design and hypothesis. Involvement of virtual space in the development of the adhesive capsulitis physiotherapy program, creating / finding a suitable environment so that patients can be in a state of comfort in which the sensation of pain decreases, because the somatosensory cortex is less active when patients use reality virtual (studio) and the more intense and interactive the activity

in VR, the more the perception of time and the sensation of perceived pain change.

Duration of the experimental physiotherapy program 15 .09. 2019 - 01.07. 2021 on a number of 20 volunteers with adhesive capsule

The group of volunteers receive the same joint mobilization techniques for 7 minutes because the RV scenario lasts 7 minutes, the pain threshold is measured in real and virtual environment by pressing a dynamometer in the deltoid mass and the upper limbs are immersed in ice water. Observing the duration of resistance in the real doctor as well as in the virtual one, it was also observed the perception of the duration of the time spent in VR

Conclusions and Result

The use of RV showed a real benefit during joint mobilizations and during tests performed on the shoulder joint:

Patients reported the following

Control group without VR

Subject 1 female 45 years: - during joint mobilizations a VAS 5. The maximum force of pressing the dynamometer until the appearance of maximum pain was 2.4kg / cm² Resistance to cold stimulus was 40s

Subject 2 females 39 years: - during joint mobilizations a VAS 5, the maximum force of pressing the dynamometer until the appearance of maximum pain was 2.7kg / cm² Resistance to cold stimulus was 1m.25 s

Subject 3 male 50 years: - during joint mobilizations a VAS 6, the maximum force of pressing the dynamometer until the appearance of maximum pain was 3.8kg / cm². Resistance to cold stimulus was 2.36 s

Subject 4 female 55 years: - during joint mobilizations a VAS 6, the maximum force of pressing the dynamometer until the appearance of maximum pain was 2.1kg / cm². Resistance to cold stimulus was 1m.01 s

Subject 5 male 42 years: - during joint mobilizations a VAS 6, the maximum force of pressing the dynamometer until the appearance of maximum pain was 2.9kg / cm². Resistance to cold stimulus was 1m.21 s

VR group dolphins

Subject 1 female 55 years: - during the joint mobilizations VAS 5, the maximum force of pressing the dynamometer until the appearance of the maximum pain was 2.6kg / cm². Resistance to cold stimulus was 1m.15s

Subject 2 males 37 years old: - during joint mobilizations VAS 4 the maximum force of pressing the dynamometer until the appearance of the maximum pain was 4.0kg / cm². Resistance to cold stimulus was 2.6s

Subject 3 male 48 years: - during joint mobilizations a VAS 4, the maximum force of pressing the dynamometer until the appearance of maximum pain was 4.7kg / cm². The resistance to the cold stimulus was 2m

Subject 4 females 70 years: - during joint mobilizations a VAS 6, the maximum force of pressing the dynamometer until the appearance of maximum pain was 1.1kg / cm². Resistance to cold stimulus was 30s

Subject 5 female sex 39 years: - during joint mobilizations a VAS 5. The maximum

force of pressing the dynamometer until the appearance of maximum pain was 2.8 / cm² and in. Resistance to cold stimulus was 1.25 s

Dinosaur VR group

Subject 1 male sex 52 years: - during the joint mobilizations VAS 3, the maximum force of pressing the dynamometer until the appearance of the maximum pain was 3kg / cm². Resistance to cold stimulus was 2m.17s

Subject 2 male 41 years: - during joint mobilizations VAS 2 The maximum force of pressing the dynamometer until the appearance of maximum pain was 4.1kg / cm². Resistance to the cold stimulus was 3.26s

Subject 3 male 60 years: - during joint mobilizations a VAS 4, the maximum force of pressing the dynamometer until the appearance of maximum pain was 2.9kg / cm². The resistance to the cold stimulus was 2.48m

Subject 4 female 64 years: - did not resist in the virtual environment, he was scared

Subject 5 female 44 years: - during joint mobilizations a VAS 4. The maximum force of pressing the dynamometer until the appearance of maximum pain was 2.6 / cm². Resistance to cold stimulus was 2m.42 s

VR mountain rousse group

Subject 1 female 60 years: - during joint mobilizations VAS 2, the maximum force of pressing the dynamometer until the appearance of maximum pain was 3.6kg / cm². Resistance to cold stimulus was 2m53.s

Subject 2 males 55 years old: - during the joint mobilizations VAS 3 The maximum force of pressing the dynamometer until the appearance of the maximum pain was 4.4kg / cm². Resistance to the cold stimulus was 3.33s

Subject 3 males 48 years: - during joint mobilizations a VAS 2, the maximum force of pressing the dynamometer until the appearance of maximum pain was 3.8kg / cm². Resistance to cold stimulus was 2m37s

Subject 4 male 52 years: - during joint mobilizations a VAS 2, the maximum force of pressing the dynamometer until the appearance of maximum pain was 3.3kg / cm². Resistance to cold stimulus was 2m48s

Subject 5 male 62 years: - during joint mobilizations a VAS 2. The maximum force of pressing the dynamometer until the appearance of maximum pain was 4.2 / cm² and in. Resistance to cold stimulus was 3m49s

Patients had a lower perception of time spent in the virtual environment by about 35% compared to reality and a decrease in pain relief during joint mobilizations depending on each work scenario. The dolphin group reported almost the same sensation with a slight decrease in pain compared to the control group. The biggest changes were observed in the mountain rousse group with about 50% compared to the control group because the minds of the subjects being concerned with the virtual environment did not think about the problem area and this led to a lower perception of pain and a lower perception of time

THE EPISTEMIC FIELD OF THE SCIENCE ART OF MUSCULAR AND ENERGY-INFORMATION TESTING IN PHYSICAL EDUCATION AND SPORTS

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The actuality of the topic. Human eand energetic existence is a natural given. Both have causal phenomena in time and integral dynamics. The existence of informational energy has electrical charges as material support. Living matter works through the circulation of electrical charges, through cells, so this phenomenon is present in the human body. The current study in this field presents many unknowns, and consequently, it is a vast field of scientific studies of the neuromuscular phenomenon and bioelectromagnetism. The integration of bioenergetic-informational science and scientific information on the morphofunctional changes in the human body determined by physical activities according to their specifics can confirm the finality of coexistence. It marks the existence of coupled interactions as a source for mutual interdependencies. Informational bioenergy testing and changes in the neuromuscular system under the influence of effort determine unitary results, theoretically and scientifically substantiated.

The above statement presents us with two aspects of the truth in the sphere of scientific knowledge: we test the bioenergetic - informational phenomena or the muscular ones, both experimentally argued.

The purpose of the research: to determine trends in the evolution of the art and science of bioenergetic – informational and muscular testing; to elucidate and analyze the particularities of the information process under the conditions of scientific testing in terms of compatibility.

Scientific research methodology. The theoretical-scientific and methodological support, applied in achieving the presence of the research, was determined by the complex and multidisciplinary character of the investigated theme. The systematic approach allowed the complex examination of the scientific testing system through the combined application of various methods, such as: the bibliographic method of the theoretical-conceptual, methodological and practical essences exposed in the specialized scientific-methodological literature; the method of muscle and bioenergetic testing; observation method; statistical processing of information; the comparative method as well as the structural-functional method of the bioenergetic and neuromuscular phenomenon.

Findings and results.

Research has found that in the natural development of the individual, energy and muscle strength possibilities are reached at the age of 6-7 years, 10-11 years and 15-16 years. At these ages, the highest levels of maximal oxygen consumption (CMO₂),

the highest relative strength, which corresponds to the anaerobic threshold? The cardiovascular and respiratory systems work in a balanced and coordinated manner, which also influences the increase of aerobic possibilities.

These ages represent the "bioenergetic peak" - the main stage of the development of all organs and systems, the period of the flowering of motor possibilities and the biopsychoelectromagnetic field with indices 1.267 - 1.416 of the magnetic component depending on time.

At the age of 8-9, energy deficit is observed, regarding quality and not the quantity. The amount of energy of an organism is a constant specific to each individual organism. It does not decrease, but it can accumulate in certain areas of the body, other areas remaining deficient. A stressful, aggressive, psychic blocking, failure activity, energy channels and centers are in dynamic interaction.

The wave of the bioelectromagnetic component and the muscle strength indices of the predominant hand prove the presence of disturbances at the level of neuromuscular propagation.

The decrease in amplitude represents not so much the supply of "force" but the energetic functional capacity to produce "power" illustrating the amount of physical work energy and the strong or weak electromagnetic interaction. The intensity and duration of the activity is dependent on the amount of energy delivered, and this is achieved by the body's "energy systems".

At the age of 12-13, the puberty period begins, and some changes and irregularities occur in the child's body. The anaerobic threshold is reduced, the maximum energy consumption is lower, and there is an imbalance between blood circulation and breathing. New biochemical qualities occur in the muscles, related to the rapid development of the anaerobic-glycogenous source of energy supply. The value of the magnetic component decreases from 0.522 to 0.144 indices. At 14 years, the aerobic energy supply capacity increases again, while the anaerobic one gradually ceases for some time. The bioenergetic capacity gradually increases at 14 years to 0.633 indices, at the age of 15 – to 1.396 indices.

Dean Radin has conducted 12 experiments and over 100 studies, cited by Donna Eden (2009) in the context of energy testing, not muscle testing, as the test is really an assessment of energy circulation through the body's meridians, rather than an assessment of muscle strength involved in the test. Dean Radin concluded that this method is statistically valid. Energy testing strengthens the connection between the brain and the subtle energies in the head, establishing new levels of internal communication.

The studies addressed by the author I. Morosan (2013) in the elucidation of the annual dynamics of the muscle strength of the predominant hand in students aged 7-14 depending on their morphological (somatic) type, confirm through research that the indices of muscle strength at the end of the school year, compared to the indices of the initial testing, in 7-year-old students the strength indices increased by 23%, in 8-year-old pupils by 14%, in 9-year-old pupils by 13%, in 14-year-old pupils by 25%.

The data of the study demonstrate that the annual dynamics in pupils aged 7-14

depending on the morphological type, differ both according to the absolute value of the prevailing hand strength and according to the pace of development of this quality during the school year.

A major goal of research is to find the "common ground" that will unite all these scattered conceptions of probability into an integrated theory of everything, in which all other conceptions, known laws would become special cases in scientific research.

The verification of research results is not only a method but also one of ethics, of the art of research – phenomena of energetic self-reproducibility, respectively of information types. The concordances or inconsistencies of the results of muscle testing or energy testing represented a serious and thorough analysis, making a final decision, in our research.

The biological laws that govern the neuromuscular changes and the energetic phenomenon have been extracted, which, at first sight, are incompatible. According to the way it is done, the connections that characterize a system were taken "the process of operation" of the epistemic system from a scientific point of view. In reactions of mutual implication within the testing technology, in the comparative context, energy testing and muscle testing, depending on the information, have recognized themselves as compatible, not mutually exclusive.

General conclusions and recommendations.

1. The science of human existence highlights its own laws, but scientific research cannot be carried out without knowing the particularities of the psychophysiological and energetic-informational potential.

2. The analysis of various approaches to the information regarding the changes in the neuromuscular and functional system under the influence of effort and the stimulatory effect of the magnetic field on the human body have determined the current model of the transition phenomenon in research.

3. The decisive factor that determines the results of neuromuscular system activity testing is the activity of the central nervous system. In the same sense, energy testing is related to the electrical activity of the central nervous system, so the information gathered during an energy test reflects brain activity, not just muscle condition.

4. The research showed that the potential value of the muscle testing of the dominant hand strength compared to the value of the magnetic component of 7-14 year-old pupils have the same action characteristics, based on brain activity.

5. The data of the study demonstrate the need to develop new testing models, seeking to scientifically substantiate the integrity of the concept of "energetic-informational testing" and "neuromuscular system testing" of contracting certain muscle groups that produce identical electrical and neuromuscular changes.

Keywords: pupils, scientific research, muscle testing, energy testing, bioelectromagnetic - informational resources, compatibility of muscle testing and energy testing, muscle strength of the dominant hand.

ANALYSIS OF THE MOTIVATION FACTORS OF THE PRACTICE OF TOURIST ACTIVITIES BY ADOLESCENTS

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Adolescence is an essential period in the life of every individual, characterized by significant transitions and accelerated personal development. At this stage, young people are motivated by the need for exploration, the desire to socialize and develop their identity. Tourist activities thus become a perfect opportunity to satisfy these needs. In this article, we aim to analyze some key aspects of teenagers' motivation in tourism activities.

At the present moment, most studies continue to highlight the importance of the motivational factors of teenagers in the practice of tourism activities. The interests and desires of this age group are evolving rapidly, and the tourism industry is trying to adapt to the new demands of society's evolution, which will influence the satisfaction of tastes and preferences among teenagers.

Following the in-depth study of the specialized scientific-methodical literature, we reveal that adolescence is a privileged and controversial subject of psychologists, pedagogues and sociologists: Albu E., Anastasiu I., Birch A., Blajco V., Blandu V., Bradea A. and others.

Thus, adolescence represents a period of self-discovery, exploration and personal growth. In this context, tourism activities become unique opportunities for young people to satisfy their curiosity, connect with the world around them and develop their skills.

The analysis of current trends regarding the motivation of teenagers in the practice of tourism activities remains an issue of interest today, because young people are an important category of consumers in the tourism industry.

Therefore, motivations such as seeking new experiences, connecting with friends, personal development and exploring different cultures remain significant factors in their travel decisions.

Rivera M. states that the increase in the demand for tourism in the last period was due to the expansion of various types of motivations of the participants, such as: searching for new emotions, carrying out various sports activities, experiencing

various leisure activities, which contribute to personal development.

Taking into account the above, we conclude that the analysis of the reference scientific literature demonstrates the importance of practicing tourist activities and their contribution to the development and formation of the adolescent personality.

The need to practice tourist activities was born from the desire of the young generation to take advantage of the advantages of modern life and to restore their physical strength, to communicate, socialize and relate with people of the same age. The success of tourist activities depends to a great extent on the way they are organized. Preparations are an important aspect, which emphasize: choosing the area, the route, checking the equipment, arranging the backpack, etc., which, as a whole, involves the process of motivation and involvement in tourist activities

Thus, in the context of digitization and technology development, the social and media impact becomes a significant factor in motivating teenagers for tourism activities. Social networks, travel blogs and online platforms influence young people's preferences and lead them to explore popular places or participate in activities considered trendy.

The purpose of the research is to analyze the motivational potential of teenagers in the practice of tourist activities.

Research methods. To achieve the goal and achieve the objectives, the following research methods were proposed and established as: analysis and synthesis, scientific research and documentation, generalization and systematization, abstraction and theoretical modeling regarding the launched research problem.

Results and discussion. The tourism industry has become an essential part of contemporary society, offering a wide range of experiences and destinations for all age groups, especially teenagers. Among them, teenagers play a significant role, due to their desire to explore, socialize and integrate into the social environment.

Currently, the motivation of teenagers in the practice of tourist activities remains a relevant and current topic, considering the evolution of modern society. Therefore, a number of factors and trends influence the way young people approach travel and excursions, and understanding these aspects is essential to adapt and promote tourism activities suitable for this age group.

Teenagers' motivation to participate in tourism activities remains complex and influenced by several factors. More and more specialists in the field of tourism pay special attention to researching the psychological aspects of consumer motivations when launching and marketing tourist products

In the context of social, technological and environmental changes, there are several significant aspects that influence the motivation of adolescents to engage in tourism activities.

The desire for adventure and exploration continues to be strong as young people seek unique and authentic experiences in an increasingly digitally connected world.

The desire for adventure and exploration continues to be strong as young people seek unique and authentic experiences in an increasingly digitally connected world.

Social interactions have increased relevance in the age of technology, and

teenagers want to strengthen their connections with their group of friends by traveling together, which gives them opportunities for emotional connection and psychological development.

In a globalized context, teenagers are more exposed to cultural diversity and this can motivate their desire to participate in tourism activities. Cross-cultural experiences can help them understand the world better and develop as tolerant individuals open to new perspectives.

Also, in an era where technology dominates, the reasons to travel to disconnect and truly experience remain relevant.

One of the main aspects of teenagers' motivation in tourism activities is related to the desire for exploration and adventure. In a globalized and interconnected world, young people have access to a variety of information and images about tourist destinations, which motivates them to expand their horizons and experience different cultures and landscapes where travel becomes a way to escape the monotony of life everyday and to connect with the world in an authentic way.

So the motivational factors of personal development remain strong, fueled by the desire to acquire new skills, overcome challenges and build self-confidence.

Tourism activities provide the perfect setting to test one's limits and develop in unexpected ways.

Conclusions. In conclusion, the motivational factors that influence the practice of tourism activities by teenagers are variable and complex. These include the desire to explore new places, to socialize and integrate with the group of friends, to gain unique and memorable experiences, and to develop personally by learning from tourism experiences.

Understanding these reasons can help the tourism industry adapt offers and strategies to attract and satisfy the specific needs and preferences of teenagers, thereby contributing to increasing their participation in tourism activities and developing a richer and more engaging tourism experience for this age group.

Keywords: motivational factors, tourist activities, teenagers, integration, socialization.

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THE EFFECT OF CROSSFIT ENGAGEMENT ON THE BODY MASS OF MATURE MEN

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Actuality. CrossFit was developed as a universal method capable of increasing the overall functionality of the body as soon as possible. Due to its simplicity, accessibility and real effectiveness, this functional training has earned worldwide popularity among different population groups.

CrossFit circuit training uses cyclical exercises (cardio), exercises with your own weight and with weights. A large selection of basic exercises allows you to make interesting complexes (WOD) depending on the place and the equipment that is available. CrossFit exercises involve large muscle groups, so regular sessions, even if you only work with your own body weight, can soon significantly improve your overall physical condition and pull the body..

Despite the large number of studies carried out in recent years by domestic and foreign authors, regarding the use of various means of improving fitness and recreation in the process of classes with persons of mature age, issues related to the use and evaluation of the effectiveness of various forms and means of CrossFit training for mature men remain without sufficient attention.

Currently, the commercialization of the field of sports and health services has contributed to the appearance of a wide variety of author's programs, which are often very difficult to evaluate due to the lack of information about their scientific basis. The study of this issue is especially relevant in the organization of improving fitness classes using CrossFit for mature men.

Purpose of the research – theoretical substantiation and development of the methodology of health classes with CrossFit elements for men aged 40-49.

Methods of research: analysis, summarization of materials; anthropometry; dynamometry; cardiointervalometry method; pedagogical testing; pedagogical experiment; mathematical and statistical methods.

The duration of the developed program of the cycle of improving fitness classes with elements of CrossFit for mature men was one calendar year. According to the program, men practiced 3 times a week, the duration of the classes was 90 minutes. The program included fitness classes with CrossFit elements, aimed at increasing the aerobic capacity of the body, the level of general and special physical preparedness,

technical mastery of performing CrossFit exercises, functional state, normalization of body weight. Also, the program included control of physical state, consisting of assessment of general and specific physical preparedness, functional state.

At the end of each month, the functional state was examined. Four times a year, after every three months of improving health classes, an assessment of physical preparedness was conducted, which included testing of general and special physical preparedness and evaluation of the obtained test results using developed evaluation scales taking into consideration the age of men.

In the program of the cycle of health classes with elements of CrossFit for men aged 40-49 years, the emphasis was more on improving the functional state of those who engage in. During which CrossFit elements were used and combined with other physical exercises (aerobic and anaerobic, aimed at developing strength, agility, speed, coordination, general endurance).

With the purpose to find out the effectiveness of the developed program of improving health classes with CrossFit elements, studies were conducted aimed at determining anthropometric indicators, physical indicators of preparedness and functional state of mature men (aged 40-49), representatives of experimental and control groups.

The distribution of participants was carried out by random distribution, as the respondents had the same initial data on the health state, physical preparedness and experience of classes. 60 men aged 40-49 were involved in the developed cycle of health-oriented programs with CrossFit elements for persons of mature age, who made up the experimental and control groups, including the same number of people (n=30). Pedagogical experiment lasted for one year. The men who participated in the testing provided medical certificates stating that they are in good health and can attend health-oriented classes, and have no contraindications to physical activity.

Findings and results. As the pedagogical experiment showed, these classes had a positive effect on body weight and body mass index indicators. Before the pedagogical experiment, in both research groups there were equally overweight men whose BMI was in the range of 25.0 c.u. to 29.9 c.u. and obesity of the first degree, their BMI was equal to 30 - 34 c.u.

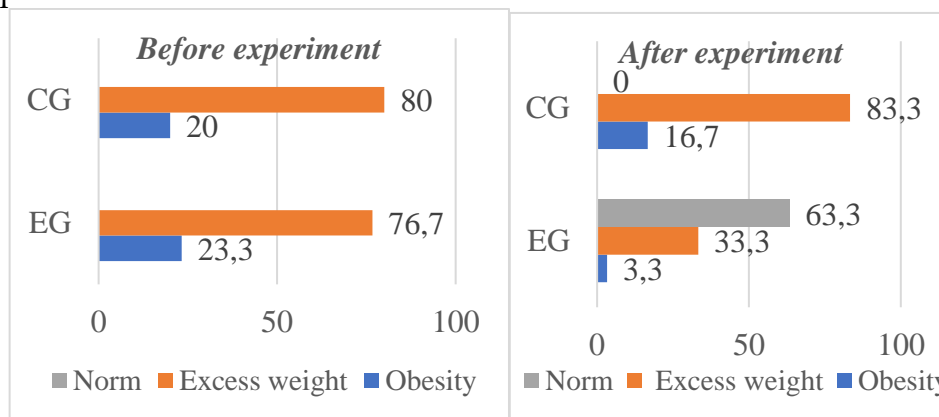


Fig. 1. Distribution of mature men with normal and overweight body weight before and after the pedagogical experiment

After the pedagogical experiment, the percentage ratio changed (Fig. 1). In the experimental group, 63.3% of the participants were already of normal weight. The number of men with obesity decreased from 23.3 to 3.3%. Obviously, the share of those who exercise remained overweight - 33.3%. But if we pay attention to the fact that the classes were not aimed at reducing body weight, and the normalization of weight depends not only on motor activity, but on the whole complex - quality, quantity, nutrition, drinking regime, taking pharmaceuticals, etc., then the positive effect of the developed complex of health-improving class with CrossFit elements is obvious. In the control group, no positive changes were noted. On the contrary, after the experiment, the percentage of men with obesity of the first degree increased slightly.

Conclusions and recommendations. As a result of our research, we came to the conclusion that CrossFit classes have a positive effect on the physical state of mature men, directly on the normalization of body weight. After all, CrossFit is a high-intensity fitness program that combines elements of strength training, cardiovascular exercises and functional movements. Further studies will be aimed at investigating the impact of CrossFit classes on the psycho-physiological indicators of mature men.

Keywords: CrossFit, mature men, physical state.

DEVELOPMENT OF SPEED MOTOR QUALITY IN THE SPORTS TRAINING PROGRAM FOR HIGH SCHOOL STUDENTS THROUGH THE GAME OF HANDBALL

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The modern game of handball is played at full speed, at a fast pace, which requires intense physical effort. The speed of execution, movement and reaction, the specific physical strength, the precision of execution of lunges and changes of direction, the general mobility and suppleness required in the execution of the most complicated movements, the strength in throwing the ball, the coordination and balance, the feel for the ball, which gives security in catching, throwing, the precision in making passes and throwing at goal. It is necessary to master technical procedures so that they can be applied during the game in conditions of combat and speed with the opponent. The aim of the research is to identify and use methods to develop motor skills such as strength, stamina, skill and, in particular, speed, which is the basis of the game of handball. In the second phase of the research, during the period 01.09.2023-30.05.2024, we have set the objective to implement the model training program for the development and improvement of the motor quality speed. The sample consists of the control group (30 students from the Bucovina Forest College, Romania) and the experimental group (30 students from the Technological High School No.1 Campulung Moldovenesc, Romania). Methods used in the research: literature review, documentation, observation, test method, pedagogical experiment, mathematical-statistical method. The stages of implementation of the pedagogical experiment include the following:

Stage 1. 01.09.2023-10.09.2023 - anthropometric measurements.

Stage 2. 10.09.2023 - 20.09.2023 - initial testing.

Stage 3. 20.09.2023 - 30.04.2024 - implementation of the model training programme (technical procedures, tactical actions, game systems, etc.) in the experimental group with the students of the Technological High School No.1 Campulung Moldovenesc: 2-3 training sessions per week (2 hours for each training session).

Stage 4. 30.04.2024 - 15.05.2024 - final testing.

Stage 5. 15.05.2024 - 30.05.2024 - analysis and final processing of the data obtained.

The expected results relate to the effectiveness of the experimental training program, applied to high school students, in terms of developing speed quality through the game of handball.

Keywords: handball game, speed, motor skills.

FUNCTIONAL STATE IN YOUNG WRESTLERS

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Actuality. The modern stage of sports science is characterized by the development of studies of adaptation processes in athletes during intensive physical and emotional competitive activity. The main problems in sports training are the control of functional state of athletes. Modern young sport characterized of healthy and sport orientations. Non adequate loads without taking into account the age-related characteristics of morpho-functional and psychophysiological development provoke of deterioration of mood and well-being. Wrestling has a great popularity among youth all over the world. The researches of morphological and functional properties, psychological diagnostics and preparedness of young wrestlers are presented. But there are lack criteria for the functional state of young wrestlers.

Purpose was the study of functional state in young wrestlers.

Methods of research

Were examined 31 young wrestlers, members of the Sport Club in Kremenchuk (age 15.85±2.15). All athletes agreed in writing to those received for participation in research in accordance with the recommendations of the ethical standards of the Declaration of Helsinki. To assess the functional state, a "Fazagraf" cardiomonitor was used. HR, NN, SDNN, Stress Index were evaluated. Functional mobility and balance of the nervous process were studied using "Multipsychometry-05". "Statistica 10" package was used for statistical analysis.

Findings and results

According to study of heart rate variability we calculated the indicator of Stress Index. This is parameter indicates the ability of athletes to stress resistant. All of

athletes were separated by Stress Index: with low level of tension of autonomic nervous system (17 persons) and with high level tension of autonomic nervous system (14 persons).

Wrestlers with a high Stress Index have tachycardia. A decrease in the SDNN value in wrestlers with a higher level of Stress Index is associated with an increasing activation of the sympathetic tone. This result is associated with a high level of stress.

The study of the balance of the nervous process revealed differences between the groups of athletes in all values

According to the results obtained, wrestlers with a high level of Stress Index exhibit arousal of the nervous system. In wrestlers with a low level of Stress Index, the nervous system is characterized by a balance between the processes of arousal and inhibition. Thus, a high level of tension of the regulation of the autonomic system corresponds to the arousal of the nervous system.

The results show the functional mobility of the nervous processes in young wrestlers with different levels of Stress Index. This obtained indicate a decrease in decision-making time in wrestlers with a high level of Stress Index. This is due to better decision-making abilities with increasing tension in the autonomic nervous system. The presence of significant differences in the parameter of impulsiveness between both groups indicates the predominance of uncontrolled movements in wrestlers with a high Stress Index. In fact, an increase in the tension of the autonomic regulatory system leads to stochastic, uncontrolled movements in young wrestlers. The revealed fact indicates the mechanisms of stress management, which increase the ability to optimize the functional state of wrestlers.

Conclusions and recommendations

The main topic of our study was the research of the functional state of young wrestlers. Functional state including some links that support the ability of athletes to the effectiveness of competitive activity. One of the important properties of athletes' preparedness is heart rate variability. No less impossible for development of results in wrestling is the psychophysiological state. Some links of the psychophysiological state of wrestlers contribute to the improvement of perception and processing of information from the external environment. An increase in the tension of autonomic regulation leads to a predominance of arousal. In wrestlers with a low level of Stress Index, the nervous system is characterized by a balance between the processes of arousal and inhibition. When studying the functional mobility of the nervous process, it was found that against the background of an increase in the Stress Index, additional uncontrolled movements are a mechanism for stimulating stress in young wrestlers.

Keywords: functional state, wrestlers, Stress Index, psychophysiological state.

**THE CULTURAL HERITAGE OF THE OLYMPIC MOVEMENT AS AN
IMAGINARY AND MEANINGFUL SUPPORT IN THE SYSTEM OF TEACHING
HUMANITIES SUBJECTS AT SECONDARY SCHOOL**

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The article substantiates the expediency of using the cultural heritage of the Olympic movement in the process of educational work of the school. Most teachers believe that the use of world cultural assets should take place in the educational process of a general secondary education institution. It is proved that the implementation of practical recommendations do not violate the usual teaching of the relevant topic, but supplement it, contribute to the interest of students in the subject, the arts in general, expanding and enriching the outlook of adolescents, significantly affecting the level of development of valuable orientations, enhancing the orientation, enhancing, creative activity, involvement in the Olympic movement and its values, sports.

Actuality. There is no doubt that the harmonious development of a personality involves the influence of various types of art on a child, thanks to which the formation of the moral qualities of an individual is possible. The involvement of learners in the rich traditions of world and national culture, in which the cultural heritage of the international Olympic movement occupies a significant place, is of particular importance [2].

The analysis of literary sources shows that many scientists (A. B. Sunik, 1994; M. Krüger, 2009; V. M. Platonov, 2009; R. Naul, 2010; D. L. Binder, 2010, 2012; V. M. Yermolova, 2011; M. M. Bulatova, 2012, 2020; K. Georgiadis, 2014; A. O. Bondar, 2016; L. O. Radchenko, 2021, etc.) summarize information about the origins of the cultural heritage of the Olympic movement, its reflection in works of art in different historical eras and its role as an integral component of universal human culture and the modern Olympic movement.

The dynamism inherent in modern society, the growth of social activity and the role of an individual require new approaches and educational technologies as a guarantor of

personal development. The cultural heritage of the Olympic movement - an integral part of the heritage of world culture - in the Olympic education system is an effective factor in the formation of the Olympic mentality of modern society and, above all, in children and youth.

Purpose. To determine the effectiveness of using the cultural heritage of the Olympic movement in the system of teaching humanitarian subjects in general secondary education institutions.

Methods of research. Analysis of scientific literature and normative documents, questionnaires, methods of mathematical statistics.

Findings and results. One of the main directions of the dissemination of Olympic ideals and values in the conditions of the general secondary education institution is the use of the cultural heritage of the Olympic movement within the framework of the context model of Olympic education in the process of teaching academic subjects, i.e. through the integration of Olympic-themed issues into the content of academic subjects, without disturbing their natural structure.

K. Strong draws attention to the importance of inclusion in the education system of schoolchildren: the study of the activities of artists, poets, sculptors, orators, dancers during ritual ceremonies, architects and musicians related to the field of sports and the Olympic Games; study of buildings in competition venues; production of dramatic plays and theatrical scenes from the history of the Olympic past and events from the life of the ancients; study of parallels between the ideals of antiquity and many aspects of modern Olympism, problems of morality.

It is not for nothing that D. Binder emphasizes the importance of figurative and semantic support for the development of adolescent concepts not as an abstract concept but in the form of a real image of a hero, which is especially important in adolescence. The secret of the effectiveness of this method lies in the fact that a child directly and casually encounters the inner world of the individual on a non-verbal level.

In the educational process, visibility, namely, the constant use in the system of educational disciplines of the creative potential of works of fine art and other types of art, is traditionally considered as one of the effective means designed to positively influence the development of learners, the formation of their moral and aesthetic views. The use of works of art has a positive effect on the implementation of educational, developmental and educational tasks facing the modern education.

Teachers play a significant role in this process. That is why, in the course of the ascertaining study, we conducted a survey of 148 subject-teachers of general secondary education institutions, including 125 women and 25 men from five regions of Ukraine, regarding their awareness of the cultural heritage of the Olympic movement and its place in the content of general education subjects.

It is worth noting the fact that 100% of the surveyed teachers consider it appropriate to involve children in cultural values from early childhood.

The survey found that 93.24% of teachers see the sense in using the heritage of world culture in the process of educating the younger generation.

In order to introduce schoolchildren to the cultural heritage of the Olympic movement, teachers must have certain knowledge and be familiar with the relevant works of art. Therefore, we were interested in the state of their awareness of this issue. The analysis of teachers' answers established that only 68.92% of them are familiar with works of art about sports.

The results of the research shows that teachers differently see the optimal benefit of using works of art related to the history of the Olympic movement and the values of the Olympic philosophy in the process of studying educational subjects. Their choice is characterized by the experience of pedagogical activity, which is determined by different quantity of years of work at the school. Since teachers were asked to identify several subjects, the total does not add up to 100%.

The analysis of the teachers' questionnaire gives reason to assert that, in their opinion, the greatest educational impact from the use of works of art of this topic will be observed during the teaching of the subjects "Physical Culture" - 76.35%, "Fine Art" - 75.68%, "Art culture" - 68.92%.

Analyzing the results of the teachers' survey, we determined that most of them believe that the use of world cultural heritage should take place in the educational process of a general secondary education institution.

In the modern world, the Olympic idea is aimed at spiritual growth and the development of physical abilities, the ultimate goal of which is the harmonious growth and perfection of the individual, has exclusively pedagogical and educational content.

On the basis of a thorough study of the educational programs in the subjects "Foreign Literature", "History", "Geography", "Physical Culture" and the integrated course "Art", which are part of the typical curricula for students of the 8th grade of the Secondary School of Education of Ukraine, it was carried out selection and systematization of works of various types of art (painting, architecture, sculpture, poetry, photography) related to the history of the Olympic movement and the Olympic Games.

To conduct the creative and transformative stage of the research, we chose the educational process of 8th grade schoolchildren, which is due to the period of active physiological and psychological changes of adolescents.

During the entire period of the formation of the theoretical reflexive thought of the future, there is a rapid development of the visual, which gives an impetus to creativity. The main motivational line of the transition to this age is manifested in active exercise to a special self-perfection, both physical and intellectual, and their psychological changes are brought closer to a mature life.

Our hypothesis conveyed that the very knowledge of the works of art, tied to the Olympic history and its values, to accept the near future of the political crisis.

One of the initial directions of the expansion of the Olympic ideals and values in the minds of the activity of laying the foundations of the global middle education is the stage of achieving the cultural succession of the Olympic movement in the process of laying the primary objects in the context of the context models of Olympic

education, as transferring the transfer of Olympic knowledge in regular activities through the integration of nutrition of Olympic subjects in objects without damaging their natural structure.

Using systematized works of art on the subjects of educational subjects, practical recommendations for teachers of general secondary education institutions were developed, theoretically substantiated and implemented in order to use them in the process of teaching the above-mentioned subjects. The recommendations contain reproductions of works of art related to the cultural heritage of the Olympic movement and information about their involvement in significant events of this most popular phenomenon - a peculiar phenomenon of the social life of the world community.

Methodical materials offered to teachers for implementation are a visual and semantic support during the study of a particular topic in the form of a real image of a hero or event. This, in turn, contributes to the formation of value-semantic, general cultural, educational-cognitive competence and the competence of personal self-improvement in schoolchildren, which is especially important in adolescence.

The use of works of art related to the Olympic movement in the process of teaching humanitarian subjects become the object of the spiritual needs of schoolchildren and contributes to the growth of their general cultural development.

Conclusions and recommendations.

Saturation of the educational process of general educational institutions with the values of world culture, in particular the cultural heritage of the Olympic movement, expands and enriches the possibilities of schoolchildren of adolescent age for self-development, creative activity, involvement in the Olympic movement and its values.

The conducted study proved that the use of the cultural heritage of the Olympic movement in the educational process of general secondary education institutions of Ukraine contributes to the involvement of a wider audience of schoolchildren in the humanistic ideals and values of Olympism, Olympic heritage, physical culture and sports activities, and a healthy lifestyle.

The implementation of practical recommendations does not disrupt the usual teaching of the relevant topic, but complements it, contributes to increasing the interest of schoolchildren in the subject, in art in general, expanding and enriching the worldview of teenagers, significantly influencing the level of development of value orientations, improving general culture, stimulating schoolchildren to self-development, creative activity, involvement in the Olympic movement and its values, sports activities.

Keywords: Olympic education, Olympic movement cultural heritage, Olympism, schoolchildren.

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ATTITUDE OF PARENTS AND SCHOOL-AGE STUDENTS TOWARDS PHYSICAL EDUCATION AND HEALTHY LIFESTYLE

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The attitude of parents and students towards physical education and a healthy lifestyle is crucial for the harmonious development and good health of children and young people. First, parents play a key role in promoting a healthy family lifestyle. If they are involved and aware of the importance of physical activity and a balanced diet, children are more likely to adopt the same habits. By transmitting the values of a healthy lifestyle, parents can contribute to the formation of sustainable health habits and to the prevention of diseases related to sedentary lifestyle or inadequate nutrition. Equally important is the attitude of students towards physical education and a healthy lifestyle. They should be aware that regular physical activity and a balanced diet are fundamental to maintaining optimal health. Active involvement in sports and physical activities brings unprecedented benefits, such as improving physical endurance, developing motor skills and strengthening social relationships through teamwork.

It is important that physical education is considered not just a school subject, but an integral part of everyday life. The positive attitude and active involvement of parents and students in promoting physical education and a healthy lifestyle contribute to the formation of healthy habits that will have a long-term positive impact on overall health and well-being.

The purpose of the research is to study the attitude of parents and children of small school age towards physical education.

Methods of research. In the framework of the research, research was carried out by interviewing parents and students of small school age based on a specially designed questionnaire, conducting the interview, observation. The survey took place at the G. Meniuc Theoretical High School in Chisinau. In total, 150 students and their parents were surveyed.

Findings and results. Following the application of the questionnaire on the impact of physical education activities in the families of students of small school age, we separated the problems that parents and students face in physical education. According to the parents, the reasons why children do not participate in various sports activities are: the large volume of curricular activities, the lack of sports equipment, favorite sports sections, the desire to practice a sports test, but also the necessary knowledge about their benefits. At the same time, it was found that the difficulties that can block the normal functioning of the school-family relationship are also the wrong behavior of some teachers. The main reserve in strengthening children's health

and forming a healthy lifestyle with the help of physical education, remains the joint activities of the family and the school. It is important to mention that parents play the main role in the education of children of young school age, namely they must be the ones who cultivate children's love for physical activities and sports.

Conclusions and recommendations. The attitude of parents and students towards physical education and a healthy lifestyle is essential for harmonious development and maintaining optimal health. By promoting these values, we will contribute to the formation of a healthy and balanced generation, with a positive attitude and concerned about their own health. From the recorded results, it can be seen that parents consider physical education a necessary element of the individual's general education. They are interested in ways and means of optimizing physical education, they give preference to those forms of physical activity, which involve joint activities of parents, teachers and children. But at the same time, a small percentage of parents have an indifferent or even negative attitude towards physical education and sports, a fact explained by the low level of knowledge in the field of physical education - this is an important pedagogical problem that requires an urgent scientific and practical solution.

Keywords: physical education, healthy lifestyle, family, school-age students, school-family partnership.

INTERDISCIPLINARY APPROACHES IN DEVELOPPING STRENGHT OF PRIMARY LEVEL STUDENTS

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Actuality. Today's knowledge society orients the role of the teacher and the subjects of study in a radically changed education system based more on the transformation and formation of the future adult than on the simple transmission of information. The implications of the physical education discipline can be found from the student's school debut, helping him to develop harmoniously on several levels: motor, cognitive, social and emotional. The training and development of key competences take place against the background of interdisciplinarity, transforming physical education lessons into the place where the student capitalizes on his personal strengths by solving situations that will implicitly develop the ability to cope with other subjects of study and stimulating adapted and permanent learning. The interest of the physical education teacher aims at adopting an integrative model, focused on maintaining a healthy lifestyle, engaging the student in physical activities as diverse as possible to permanently arouse his desire to exercise both in formal, informal or non-formal activities. For this age period, particular emphasis should be placed on developing segmental strength to provide the background for strengthening fundamental movement skills in both boys and girls. The research emphasizes the importance of using a diversified and modern range of playful means that maintain permanent attractiveness over physical education lessons, but can also be used as a way of spending free time, thus providing optimal muscle tone for harmonious physical development, with contributions to the cognitive and socio-emotional development of the student.

The purpose of this research aims to capitalize on the contents of the physical education curriculum for grades III and IV using integrative means necessary for the development of segmental dynamic force, having finality on the formation of key, general and specific competences as well as on the multilateral development of young school age students.

The research methods used to implement the proposed study are: bibliographic study method, observation method, experiment method, statistical-mathematical method and graph-computerized method.

Findings and results. The research was conducted during the 2022-2023 school year, at Secondary School nr. 1 Hiliseu-Horia, Botosani, Romania, involving third and fourth grade students divided into: control group (12 third graders and 15 fourth

graders) and experimental group (12 third graders and 15 fourth graders). Starting from the school curriculum, the experimental group went through the contents for the development of force motor quality using means approached in an integrated manner by solving requirements (thematic games) or by using means of information and communication technology (the word wall platform, online programs), compared to the control group that went through force circuits respecting the individual particularities of students. In order to validate the proposed study, students went through two tests that check the abdominal and lower limb strength of students: trunk lifts and long jump from place. The experiment group achieved greater differences between tests than the control group, which demonstrates that students in this group made better progress in developing the strength and power of the lower body part. The obtained results confirm the improvement of strength for the abdomen and lower limbs in primary school students involved in the implemented program and validate the means with integrated specificity applied. Also, the students of the experimental group showed an increased interest in the proposed activities than practicing the classic force circuits, demonstrating a desire for involvement, enthusiasm, socialization and good mood.

Conclusions and recommendations. The teaching of physical education from the beginning of school to the completion of compulsory studies demonstrates the high percentage of skills intake necessary for the student's total preparation, thus helping him to integrate as quickly as possible into the labour market and to permanently maintain a healthy lifestyle by practicing physical activities. The motor basis offered through the discipline of physical education will guide the student towards practicing activities in his free time, either individually or in specialized institutions. The current time requires the physical education teacher to succeed in instilling in students the desire to move, and the development of strength indices is an important factor for engaging them in performing various motor activities, providing them with the necessary support for easy and correct execution, thus shaping their personality by developing self-confidence.

METROLOGICAL EVALUATION OF TWO METHODS FOR DETERMINING THE INDICATORS OF PHYSICAL FITNESS OF WRESTLERS

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Relevance. In the process of testing wrestlers using motional tasks of a specific nature, the results can be evaluated based on the use of two methods: impulsemetry (registration of the number of repetitions of a test task for a certain period of time) and intervalometry - registration of the duration of not only a certain number of repetitions test task (full throw cycles), and a separate throw cycle. When offering intervalometry during testing, especially with the use of loads of a specific nature, it is recommended to record test results not only by the number of full throw cycles, but also by their duration (Karpman V.L. et al., 1984, Manolachi V.V., Mruț I., Manolachi V.G., Postolachi A., 2021, 2022) with subsequent recalculation for the number of repetitions in 15, 30 or 60 seconds.

Purpose of the study. All of the above indicates the need to give a metrological assessment of the two methods and to substantiate the advantages and disadvantages of pulsemetry and intervalometry when recording test results.

Research methods. Analysis of scientific and methodological literature, pedagogical testing, questioning, mathematical and statistical data processing

Research results. A questionnaire survey of the coaching and teaching staff showed that more often until now, the results of testing were carried out with the use of impulsemetry, and in terms of simplicity and convenience of practical application, intervalometry is inferior to impulsemetry. On the other hand, intervalometry does not require visual control of the stopwatch hand or the chronometer display dial, but requires the mandatory use of two chronometers, if, in addition to the duration of testing - the total number of repetitions of full throwing cycles, other indicators are simultaneously recorded (for example, the duration of each individual throwing cycle at permanent chronometer). In addition, the presence of an auxiliary table, which presents pre-calculated data on the recalculation of intervals for the number of throwing cycles per minute with an accuracy of 0.01 cycles per minute according to the formula given above, which greatly facilitates the work of the researcher. Being simpler and, most importantly, familiar in practice, the method of impulsemetry still

remains the main one. Its lower accuracy, which was mentioned above, satisfies some researchers (especially if the calculation is carried out over a series of consecutive 30 or 60 second segments), while others are simply overlooked. Selective single counts, for example, when conducting a test with natural physical activity of a specific nature, the expediency of switching from impulsemetry to intervalometry is completely obvious.

The higher accuracy of intervalometry is determined by both objective (from the point of view of the principle of measurement) and subjective (from the point of view of the researcher's error) factors.

As a result of our research, it was determined that the number of discrete values of the recorded results in the range from 4 to 23 throws, depending on the weight category, (in the range from 46 to 83 kg) using the usual method of determining test results, the indicator has 8 discrete values. This does not take into account the fact that almost always coaches and researchers take into account not only fully completed throwing cycles, but also incomplete ones.

In this case, even a completely incomplete cycle was recorded as completed, which significantly distorted the final result. . And as a result, depending on the technique of performing throws, weight category, sports qualification, as well as the level of physical and functional fitness of an athlete, the speed of performing throw cycles by the final part of testing decreases from 5-7 to 25-28%. Moreover, the spread of indicators can cover the range from 8-10 to 15-17%.

And, if we take into account the physical work performed (or not performed) by the athlete during one throwing cycle, the difference is only 0.1 throwing cycle, depending on the style of wrestling and the technique of throwing, it can be from 14.5 to 22, 5 kg/min.

At the same time, the use of intervalometry makes it possible to take into account only fully completed throwing cycles, even if they took a little more than 15, 30 or 60 seconds (but not more than the time spent on the fastest throwing cycle).

Conclusions. The objective advantages of using intervalometry are related to two points:

1. This measurement method has a higher resolution. The scale contains a larger number of discrete values, covering indicators in the range from 6 to 7 throwing cycles, when the total duration of one throwing cycle can be from 2.5 to 4.5 seconds, which, with a chronometer "step" of 0.1 seconds, in the named range, makes it possible to determine 96 discrete values;

2. With an increase in its current values, the accuracy of the results obtained by the two compared methods changes in opposite directions when using intervalometry, with its constant limit for the entire scale of time measurement accuracy (0.1 sec. or 0.05 sec. - when using an electronic chronometer), the relative accuracy is 0.67 of the throw cycle, respectively - i.e. 1.4% of the measured value. During testing with a duration of 60 seconds, the scale has 28 discrete values, and with intervalometry for the same 30 seconds - 152 discrete values. At the same time, it is important to take into account the fact that in the latter case, full throwing cycles are

counted, each of which is performed in a very short period of time - from 2.5 to 3 seconds. If we measure here the total time of 20 cycles, i.e. take a comparable measurement time (the duration of one cycle is from 2.5 to 4.5 seconds), then the resolution of intervalometry increases significantly.

3. Intervalometry, by its very principle, gives a smaller error in measurements. It allows you to take into account a certain number of full throw cycles, while with impulsemetry, the measurement period (for 30 or 60 seconds) includes “unfulfilled” parts of the last of the registered throw cycles, i.e. the final result is overestimated. Summarizing all the above, we can conclude that intervalometry is more than an order of magnitude superior to impulsemetry in accuracy, and can become the main way to quickly evaluate test results.

Keywords. Impulsometry, intervalometry, resolution, discrete value, test error.

FOUNDATIONS FOR STUDY OF ADAPTATION OF CHILDREN AGED 3-6 YEARS IN THE SYSTEM OF RECREATIVE AND HEALTHY SWIMMING

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The main foundation for study of recreational swimming for children aged 3-6 years are considered, which include: methods, features and structure of training.

Research objectives:

1. Studying the theory, practice and characteristics of adaptation of children aged 3-6 years.
2. Determination of adequate forms, principles, organizational measures, means and methods of the content of recreational swimming lessons, aimed at the adaptation of children aged 3-6 years.

The foundations for studying the adaptation of children in the system of recreational swimming, which were based on a certain understanding of the concept of "adaptation of children aged 3-6 years", National Standards for the education and development of children from birth to 7 years old, which are structured by 4 areas of development and phenomenality of recreational swimming in the process of adaptation of children. Therefore, the process of adaptation of children is considered at 4 levels (Figure 1):

- physical development and health;
- physical fitness;
- social and emotional development;
- ability and attitude to learning.

Analysis of the adaptation of children aged 3-6 years for significant characteristics showed that there are systemic features at each level of adaptation of a child from 3 to 6 years old.

At "Level 1: Physical development and health", these features are that the growth and weight indicators for boys and girls within the age periods of 3-4 and 5-6 years do not significantly differ, the heart rate values for boys and girls within the age range periods 3-4 and 5-6 years do not reliably differ, data on VC in children 3-4 are practically absent, there is a final differentiation of the bronchopulmonary system and that there is a tendency to various respiratory diseases.

At "Level 2: Physical fitness" these features are that starting from 4 years old the possibility of purposeful formation of movements in the process of teaching a child is revealed, from 4 to 6 years old the number of exercises necessary for the formation

of a new motor action decreases.

At "Level 3: Social and emotional development", these features consist in the fact that there is a growth spurt in the development of memory and visual-figurative thinking, the indicators of the development of the motivational-need sphere at 3-4 years old differ in comparison with the indicators of children 5-6 years old , the characteristics of communication at 3-4 years old are different compared to the characteristics of communication at 5-6 years old and therefore has two forms for 3-6 years, self-awareness and self-esteem is formed in two stages: from 3 to 4 years old and from 5 to 7 years old, the characteristics of the main activity differ in 3-4 years and 5-6 years and are defined as a plot-role-playing game with an external orientation and a plot-role-playing game with a personal orientation.

At "Level 4: Ability and attitude to learning", the peculiarity lies in the fact that in order to foster a positive and effective ability and attitude to learning in children of 3-6 years old, it is important in the learning process to determine and reach the zone of proximal development, which are different in 3- 4 years old compared to children aged 5-6.

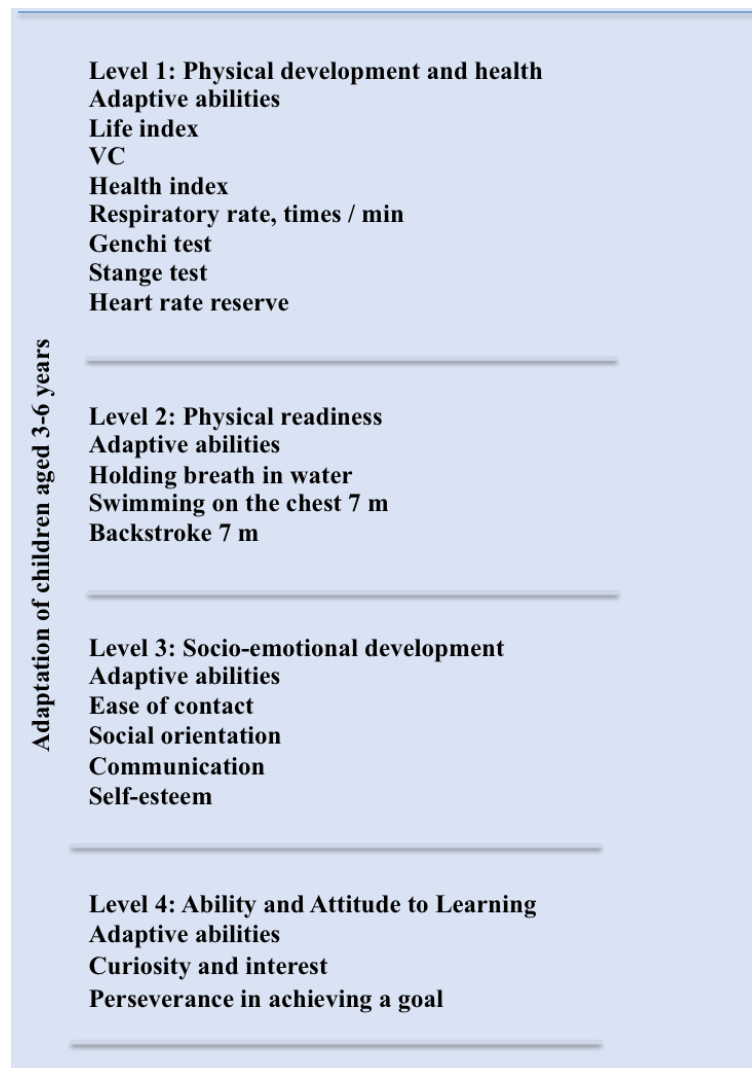


Figure 1. The content of the concept "Adaptation of children aged 3-6 years".

Taking into account the above-mentioned systemic age characteristics of adaptation, we decided to divide all children who took part in the experiment into 2 age groups: 3-4 years old and 5-6 years old.

Further analysis of the available classical and modern information sources for the adequacy of the existing methods and programs in the field of children's physical culture for adaptation, showed that swimming is the most specific requirements for physical development, health and physical fitness.

In addition, the analysis revealed that in the system of physical culture there is a pedagogical system for children 3-6 years old, which meets all systemic age characteristics and contains opportunities for optimization of adaptation - this is recreational physical culture or physical recreation.

Keywords: adaptation, recreational swimming, children aged 3-4 and 5-6 years.

DEVELOPMENT OF COORDINATION SKILLS IN THE FRAMEWORK OF THE PHYSICAL EDUCATION AND SPORTS LESSON

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The purpose of this article is to find out the importance of developing coordinative capacities in the physical education and sports lesson. The lesson of physical education and sports is a unitary process, which is carried out according to certain rules and concepts, depending on certain internal or external factors, in order to achieve the proposed objectives.

The study was based on the application of methods and means specific to the lesson of physical education and sports in order to develop coordination capacities in a sample of 30 students, 18 boys and 12 girls, aged between 12 and 14 years. The development of the established program was influenced by the level of motor skills, intellectual capacities, psychomotor traits of each individual, being major differences between the results obtained by boys and the results obtained by girls in the applied tests.

In order to achieve the proposed objectives, at the beginning of the program we applied an initial test with a set of 3 tests to evaluate the coordination capabilities, namely, the Flamingo Test, the Matorin Test and the Shark Skill Coordination Test, then we designed a training program specific to the development of coordination capabilities based on methods and means specific to the physical education and sports lesson that took place over a period of 30 days, I chose the materials necessary to carry out the activities, and at the end, to evaluate the performance, I applied the final testing. By applying the Flamingo Test, the aim was to test the general balance, by maintaining a balance position for one minute on one leg (of your choice), with the sole placed on a 10 cm beam, the other leg is bent and attached to the sole of the foot with hand from the same side, and the free arm is flexed at the elbow joint. The purpose of the Matorin test is to test general coordination and balance by measuring the angle of the turn achieved by jumping. The Shark Skill Coordination test is used to test coordination and agility by timing the time required to jump across one leg of nine equal 30cm squares. The initial and final tests were completed by all students, the results being recorded and analyzed.

After analyzing the final tests compared to the initial tests, it was found that the program initially established was an effective one for all participants, with significant progress being recorded among both girls and boys, but the greatest progress was recorded by boys, showing a much higher assimilation of information and acquisition of coordination, in a shorter time than girls. All the students responded positively, being consciously and actively involved in the instructive-educational process, the spirit of fair play and the desire to belong to an organized group developed, being

appropriated certain moral values and ethical aspects.

In conclusion, we can say that the objectives proposed at the beginning of the study have been achieved, all the steps to achieve the set goal have been completed. The training program was efficient, useful, useful, operative and practical, responding to the needs of the students, as evidenced by the achievement of progress from the initial tests to the final tests.

It is recommended to use the tests regarding the development of the coordination capacities of students between the ages of 12 and 14, but also to the other ages and the application of the methods and means specific to the lesson of physical education and sports in order to develop the coordination and skills of all students.

Keywords: coordinative abilities, skill, coordination, physical education lesson and sport.

THEORETICAL AND METHODOLOGICAL FOUNDATIONS OF TRAINING HIGHLY QUALIFIED FEMALE TABLE TENNIS ATHLETES BASED ON OPTIMAL SELECTION OF TRAINING INFLUENCES

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The relevance: Table tennis is a complex analytical sport with versatile techniques, a variety of specific solutions, which has long outgrown the period of mass enthusiasm. To achieve sports results by athletes, general physical, special and psychological training is now necessary. Modern requirements for the level of special, technical, tactical and physical fitness of female athletes, for the entire system of their training are extremely high. In this regard, the importance of specialized factors of sports training of female table tennis players increases significantly. In the long-term training of highly qualified female table tennis players, a number of important stages are investigated, which in their structure have specific tasks and a meaningful focus on their implementation. Tendencies in the development of high-performance sport currently require a systematic improvement of the scientific, theoretical and technological foundations of long-term sports training. However, the lack of fundamental scientific developments that provide coaches and specialists with new scientific knowledge and technological innovations are of insufficiently progressive importance in table tennis. In this regard, the scientific problem of the theoretical and experimental search for the features of the systemic organization of long-term specialized training of table tennis players, in which modern approaches to their necessary sports and technical improvement are leading, is relevant. Based on the great practical coaching experience with the female contingent in table tennis, as well as on scientific achievements in pedagogy of sports, we have formulated the following scientific categorical apparatus.

The purpose of the research: to develop the theoretical and methodological foundations for the training of highly qualified female table tennis athletes based on optimal selection of training influences.

Research objectives:

1. To study the modern aspects of the development of table tennis, the system of the training process of highly qualified female table tennis athletes, the nature and structural forms of long-term training.
2. To scientifically substantiate the main directions of a systematic approach to the long-term training process in table tennis.
3. To study the state of morphological characteristics of female table tennis players, intellectual potential, the state of psychomotor abilities, technical readiness of female table tennis players in long-term of sports improvement.

4. To form directed game movements of highly qualified female table tennis players for their successful competitive rivalry.

5. To develop an experimental training Program for the training of highly qualified female table tennis athletes based on optimal selection of training effects.

6. To experimentally substantiate the effectiveness of the Training Program for the training of highly qualified female table tennis athletes based on optimal selection of training effects.

Scientific novelty and originality of the research:

1. A new scientific direction was developed within the framework of pedagogy of sports: theoretical and methodological substantiation of the training of highly qualified female table tennis athletes based on optimal selection of training influences.

2. A scientific concept of training highly qualified female table tennis athletes was developed and substantiated, which includes a system of psychological, physical and pedagogical factors, as well as a system of methodological foundations: principles, macrocycles, forms and stages of training female athletes and mechanisms of training influences.

3. Theoretically substantiated and implemented in practice a systematic approach to the selection of training effects, including the relationship of various mechanisms, forms and methods, depending on individual characteristics and individual rhythm, the dynamics of mastering the technical and tactical skills of table tennis, which in turn acts as the basis and criterion for optimal selection of training effects.

4. For the first time in theory and practice, the method of game movements was substantiated and applied, accompanied by a complex of musical compositions and considered as an effective means of developing coordination and motor abilities in female athletes.

5. A model of annual macrocycles and a structure for constructing periods of the training process was developed, which includes all types of technical, tactical and psychological training of high-class female table tennis players.

Implementation of scientific research results. Theoretical and practical results of the research were presented at international and national scientific conferences, congresses in the field of physical culture and sport. Published in a number of scientific articles, monographs, as well as introduced into the sports – educational and training process of sports schools and table tennis departments in the Republic of Moldova, professional table tennis clubs in Spain, Germany, Turkey, in the Sports Lyceum “Nicolae Rotaru” and the Center for the Olympic Training in table tennis in Constanta (Romania), as well as in the training process of the Table Tennis Federation of the Republic of Uzbekistan, in the training programs of the Faculty of Sport and the Department for Advanced Training of Sports Workers and Coaches of the State University of Physical Education and Sport of the Republic of Moldova.

Conclusions: 1. Table tennis as an “object” of research in the system of theory and practice of pedagogy of sport occupies a modest place. So far, the scientific concept of training high-level female table tennis players through the optimal

selection of training influences has not been developed. Known studies of this problem are mainly devoted to certain aspects of the organization and conduct of the table tennis training process. In this regard, we have theoretically studied various factors that predetermine the development of table tennis: social (in part), psychological, physical, general pedagogical and methodological, which acted as conceptual prerequisites for developing our approach to training high-class female table tennis players through the optimal selection of training influences. Therefore, this approach should be based on modern theories and knowledge about the structural, content and procedural aspects of the training of highly qualified female table tennis players, and first of all about the patterns of the functional-motor development of female athletes, the patterns of mutual influence and the relationship of psychological, physical, pedagogical and methodological factors, which in many respects predetermines the optimality of training influences.

2. The developed and substantiated theoretical foundations for the training of high-class female table tennis players through the optimal selection of training effects constitute the basic component of our approach and predetermine its methodological and procedural components. Thus, the concept of training high-level female table tennis players through the optimal selection of training influences includes theoretical and methodological foundations, derived and formed in accordance with the relationship of psychological, physical, pedagogical and methodological factors.

3. The classification and structuring of the mechanisms of training effects open up wide opportunities for creativity and variable organization of the training of high-level female table tennis players. Thus, in the individual game sports training of female table tennis players, the leading factor of success is their technical and tactical skills, which are supported by other significant factors of the training process: features of the formation of game movements; development and control of general motor, intellectual, psychomotor, coordination and sports and technical abilities.

4. In order to train highly qualified female table tennis athletes, the entire training process from the first to the eighth stage must be provided with the use of general, special and specialized training tools that allow you to effectively master the technique and tactics of the game, subsequently realizing high sporting excellence at the most prestigious international competitive levels.

5. Conducted scientific studies indicated that the introduction of innovative means and methods of sports training into the structure and content of the training process already at the first 4-year macrocycle contributes to the optimal age-related progression of sports results, mastery and the growth of qualifying achievements among female table tennis players from the Republic of Moldova.

6. An original method of the training process was developed, based on optimal selection of training effects in the process of long-term training of high-class female table tennis players.

7. Theoretical and applied results can act as interdisciplinary knowledge and are transferred through adaptation for the training of high-class female athletes in other sports games.

Recommendations. 1. Step-by-step training from a beginner to a high-class athlete in the long-term training process of female table tennis players should become a single preparatory system, the main goal of which is the health of a female athlete and her sports results.

2. In improving the long-term planning of the training process, taking into account the age characteristics of female table tennis players, both in terms of the main and interconnected structural blocks, and in terms of sports qualification, the system of distribution of the training program by years, stages and weekly microcycles is extremely important.

3. On the basis of this study, it is possible to design a targeted, system-forming program of long-term sports training of female table tennis athletes, for all interested sports organizations in table tennis in the Republic of Moldova, with the obligatory holding of methodological seminars for the coaching staff.

4. We recommend that practitioners include in the planning of a long-term training process a special preparatory period with the distribution of volumes of training influences of various predominant directions, designed for the months of June, July and August of the annual sports improvement of female table tennis players, designed for September, October and August are the months of the annual macrocycle from 29 to 40 weeks, with the aim of steadily acquiring the highest sports excellence and the necessary qualifications in table tennis.

Keywords: table tennis, functionality, qualifying and sporting achievements, methods, intellectual abilities, highly qualified female athletes.

COMPARATIVE ANALYSIS OF THE RESULTS OF THE REPUBLICAN PHYSICAL EDUCATION OLYMPIAD, 2022, 2023 EDITIONS

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The Physical Education Republican Olympiad is an important component of the instructive-educational process that allows both teachers and students to evaluate the learning results but also the level of intellectual, physical, and functional training in relation to the best students in the country. Participation in this large-scale event that is held annually generates a multitude of positive effects on the students' personality: it develops the participant's positive behavioral qualities, forms team action capacities and integration into society, brings real success to the best students, bears a socializing effect and of communication, etc.

School competitions and Olympiads are held in accordance with the annual program on activities to support pupils capable of high performances and aim to achieve the following objectives:

- Development of the competitive spirit, volitional, physical and intellectual qualities of the pupils;
- Stimulating pupils' interest in the discipline of Physical Education;
- Identifying, stimulating and promoting pupils capable of high performances;
- Developing the skills to mobilize the will, the intellectual faculties and the competitive spirit;
- Favoring the exchange of opinions/experience, with reference to the study subjects;
- Support and encouragement of teachers in work activities with pupils capable of high performances.

The purpose of the article consists in analyzing and interpreting of the final results obtained by students in the Physical Education Republican Olympiad, editions of the years 2022, 2023.

Research objectives:

1. The study of specialized literature regarding the forms of practicing physical education and sports in school.
2. Analysis and interpretation of the results obtained by the pupils at the Physical Education Republican Olympiad, 2022, 2023 editions (ninth, twelfth grade).

Research methods: 1. – theoretical analysis and generalization of scientific-methodical literature data; 2. – observation; 3. - the mathematical-statistical method of data processing; 4. – the comparative data method.

Research results. Starting from the above-mentioned, we conducted a study that provides the analysis of the results obtained by the pupils in the 9th and 12th grades

(girls and boys) in the Physical Education Republican Olympiad during the years 2022 and 2023. The Physical Education Republican Olympiad in 2022 included 4 tests, and the one in 2023 - 5 competition tests: the theory test; general endurance test - running 800 m (girls), 1000 m (boys); gymnastics test - combination of acrobatic elements; sports games test; general physical training test (held only in 2023). In total, more than 1300 results of participants from all districts and municipalities of the Republic of Moldova were examined.

Thus, after determining the score obtained by the participants in the theoretical test, a low level of achievement of the degree of training/development of the general/conceptual and special cognitive skills of the pupils was established. However, in 2023, participants from both classes demonstrated an improvement in scores compared to 2022, which implies the idea that teachers and pupils began to have a much more responsible attitude towards the preparation process for the competition, drawing increased attention to the cognitive aspect reflected in the curricular contents of the Physical Education discipline.

Carefully examining the results obtained by the competitors in the general endurance test (800m - girls and 1000m - boys) we conclude that in both classes the best performances were highlighted in the year 2022. This fact is due, in our opinion, the conditions in which the contest was held, namely the fact that in 2022 the test was held at the stadium, and in 2023 the students competed on varied terrain.

Referring to the correctness of performing acrobatic combinations, it can be stated that the participants confirmed a better level of training at the secondary school level in 2023. Thus, the average results obtained by girls and boys from the 9th grade in the Gymnastics test shows the best scores at the last edition of the Olympiad (8.85 and 8.25 points respectively). On the other hand, in the Gymnastics exam, in 2022, both female and male 12th grade students managed to obtain a higher average result, this being 7.10 points (girls) and 7.21 points (boys) compared to the year 2023 when the following values were obtained (6.29 points for girls and 7.13 points for boys).

Following the analysis and interpretation of the results of the test of sports games, 3 component indexes were evaluated: the accumulated score, the penalties obtained and the time needed to complete the test. Thus, following the totalization of the data obtained for the 9th and 12th grades, both boys and girls demonstrated good sports results. However, in the year 2023 the average score obtained by the participants is higher compared to the year 2022, and the mistakes made by the pupils are less.

Conclusions and recommendations.

1. The Republican Olympiad represents an important component of the instructive-educational process in physical education that generates a multitude of positive effects on pupils and teachers;

2. The results of the study proved a progressive improvement in the results of the Olympiads in theory tests in the year 2023 constituting an average between 33.95 and 36.71 points compared to the year 2022 - in which they were between 24.16 and 29, 88 points.

3. The practical tests did not show major differences in the results of the competitions in the years 2022 and 2023.

Keywords. Physical Education Republican Olympiad; competition tests, pupils of the 9th and 12th grades.

EVALUATION OF THE ANNUAL DYNAMICS OF THE INDICATORS PHYSICAL DEVELOPMENT OF 10-11 YEAR - OLD STUDENTS

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Actuality. Physical education lessons in school have several objectives, but among the basic ones are the provision of the harmonious physical development of the body, the preservation and strengthening of the students' health, the prevention of fatigue and hypokineses, etc.

The systematic and consistent implementation of a well-thought-out educational program can bring certain benefits to the body's physical well-being and its external appearance. Physical education serves as the main source of improving health and the level of physical development of the body. Physical education lessons are an inseparable part of the instructional-educational process, which contribute to improving the level of physical development of students and improving the functionality of the body. They positively influence the functions of the motor analyzer. These effects appear not only in students - athletes, but also in students who actively practice physical exercises during physical education lessons, in the process of individual activities.

Unfortunately, contemporary students lead a sedentary way of life, and the lack of movement leaves a bad mark on the physical well-being and harmony of the body's development. Depending on their general motor skills, on their way of life, students can have a harmonious, disharmonious or acutely disharmonious physical development. The harmonious physical growth and development of students is an indicator of their physical well-being, health status, and Hypothesis: we assumed that physical education lessons in which different training methods are used, which differ in content, can have a different impact on the annual dynamics of the indicators of physical development of students and the degree of harmony in their somatic development.

The purpose of the research: establishing the annual dynamics of the physical development indicators of 10-11-year-old students through the prism of different methods of organizing physical education lessons.

Objectives of the study:

1. Establishing indicators of the physical development of 10-11 year old students and assessing their annual dynamics.
2. Appreciation of the harmony of the physical development of the students' body.
3. Comparative analysis of the results obtained depending on the method of

organizing physical education lessons.

Research methodology. The research was carried out in school no. 152 in the municipality of Chisinau on a sample of 30 students aged 10-11 years, selected from the fourth grade students. The students from the control group (boys) (n=14) participated in the physical education lessons organized according to the school curriculum, and the students from the experimental group (boys) (n=14) - in the lessons in which the circuit training method was used .

In order to assess the physical development of students in the 4th grade, we used the data from the student's Health Passport, and in some cases (absence of data) they were established in the following way: disharmony is a risk factor for the individual.

During the year, the body mass of the students in the experimental group increased by 1,41 kg, and those in the control group by 3,22 kg ($P < 0,05$), which is 1,8 kg more. From the above, we can assume that the physical education lessons conducted according to the circuit training method contribute to the intensification of the metabolic processes in the students' body and to the maintenance of lower body mass values, compared to those established in the control group.

Body waist. The values recorded during the initial testing of the boys from the control and experimental groups were, respectively, $135,25 \pm 1,92$ and $134,54 \pm 1,33$ cm, which does not represent a significant difference from a mathematical-statistical point of view ($P > 0,05$). They confirm that both groups did not differ significantly by body waist level. Towards the end of the year, the average value of body waist was $137,81 \pm 1,17$ cm in the control group and $138,85 \pm 1,71$ cm in the experimental group, which is, respectively, 2,56 and 4,31 cm more, compared with the initial values. For the control group, this increase is statistically insignificant ($P > 0,05$), and for the experimental group it means an essential increase in the researched index ($P < 0,05$), which is probably due to the stimulating influence of physical education lessons organized based on the method of circuit training on the increase in length of long tubular bones, including the lower limbs. According to the bibliographic data, physical exercises corresponding to the physiological possibilities of the body stimulate the division of cartilaginous cells from the epiphyses of long tubular bones and positively influences body size.

Chest girth. At the initial testing, the average values of the respective indicator were, respectively, $60,20 \pm 1,55$ and $61,21 \pm 1,93$ cm for the control group and the experimental group, which did not differ significantly ($P > 0,05$) in terms of mathematical-statistical point of view. At the final testing, the group mean values for both groups registered significant progress, reaching figures of $64,5 \pm 1,88$ cm in the control group and $67,61 \pm 1,54$ cm in the experimental group. These values are, respectively, 4,3 cm ($P < 0,01$) and 6,4 cm ($P < 0,001$) higher than the initial figures, which indicates that the chest circumference of the boys in the experimental group increased more, compared to that of the students in the control group, a fact that can be explained by the beneficial effect of training lessons on chest development. We could assume that these changes occurred as a result of the development of the respiratory system, including due to the increase in the vital capacity of the lungs, but also thanks

to the development of the chest muscles, which were involved in performing various motor acts.

Chest elasticity results from the difference in the values of the chest circumference during a deep inspiration and expiration. The higher it is, the better the morphological and functional state of the respiratory and neuromuscular system. Starting from this finding and analyzing the average values of this index at the initial testing, we determined that in the control group it was $5,45 \pm 1,13$ cm, and in the experimental group $5,12 \pm 1,08$ cm, the difference being statistically insignificant ($P > 0,05$). At the end of the school year, the respective values improved, but in a different way: in the control group the increase was 0,55 cm, being insignificant, compared to the initial data ($P > 0,05$), and in the experimental group it reached to the figure of 2,86cm, which is significantly more ($t=2,65$; $P < 0,05$) in relation to the average figures established at the initial testing. There is a true difference between the results of the control group and the experimental group, established at the final test ($t=2,06$; $P < 0,05$), which indicates that chest elasticity is an informative index for assessing the biological influence of the lessons organized based on circuit training method on 10-11 year old students. We believe that the progress of the physical development of the students in the experimental group is the result of the effective physical activity of the students in the physical education lesson organized according to the circuit training method.

Harmony of physical development. At the beginning of the school year, the distribution of the boys in the control group in terms of the harmony of the physical development of the body is uneven. Thus, the share of harmoniously developed students is only 48%, and the rest, 52%, have an inharmonious or acutely inharmonious development. At the end of the experiment, which coincides with the end of the school year, the share of harmoniously developed boys from the control group reaches 50%, and the share of acutely inharmoniously developed boys reaches 21%, being 3% higher than at the beginning of the year.

At the beginning of the school year, the structure of the experimental group does not differ significantly from that of the control group.

Harmony of physical development, demonstrates that the circuit training method used in physical education lessons has a beneficial role in the harmonious somatic development of students.

Conclusions and recommendations:

1. Analyzing as a whole the physical development indicators of the boys from both groups in annual dynamics, we find that the physical development of the boys from the experimental group, who participated in the physical education lessons organized according to the circuit training method, presents certain advantages compared to that of the students from the control group, organized according to the school curriculum. They are expressed by the significant increase in the average values of the investigated indicators at the end of the school year, compared to the initial data, which refers to the indices of body waist, chest circumference and chest elasticity.

2. Thoracic elasticity is an informative index for assessing the biological influence of physical education lessons organized based on the circuit training method on the physical development of 10-11 year old students.

3. At the end of the school year, the share of harmoniously developed students in the experimental group is 60%, and in the control group - only 50%, being correspondingly increased by 13 and 2%, in relation to the initial figures, for which reason we recommend the inclusion of lessons with training character in the instructional-didactic process with 10-11 year old students.

Keywords: students, physical education lesson, physical development, harmony of physical development, annual dynamics of indicators.

THE ROLE OF THE CONTRAST SHOWER IN ADAPTATION TO THE BODY IN THE COLD

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Actuality. Low temperatures stimulate the mechanisms of human immunity, which is due to the influence of the pituitary gland on the thymus and adrenal glands, responsible for cellular and humoral immunity. For people who work outdoors, the prolonged action of moderate cold on the body is the most widespread form of hardening from a practical point of view. At the same time, cold air currents, directed towards certain segments of the body, such as the neck, shoulders, legs, present risk factors for human health, and it is necessary to avoid them.

The procedures for hardening the body with the cold, correctly organized from a methodical point of view, are especially necessary for athletes, who, by virtue of the specific activity they carry out, are forced to permanently change their living environment, which requires high adaptation capabilities of the body to environmental conditions.

Systematic hardening of the body could ensure the body's resistance to cold and better adaptation to environmental conditions, maintaining the health of the body. Hardening is not a long stay in a cold environment, but a short shock effect of external cold on the body, which stimulates the immune system and intensifies its activity. The effect of tempering the body with a certain factor is specific, that is, when systematically exposed to cold it becomes more resistant to cold, and under the influence of heat - to heat. Simultaneously with the specific effects, the non-specific ones are manifested, expressed by improving the functional state of the organ systems, increasing the intellectual and physical work capacity, improving the neuropsychic balance, etc. The non-specific effect of hardening is expressed by increasing the general (non-specific) resistance of the organism to the action of a wide range of factors of the external and internal environment of the organism.

The contrast shower is an effective method of stimulating metabolic processes in the body. These procedures increase the body's physical and intellectual work capacity, improve its physical and emotional state, and strengthen the state of health. Thus, under the action of hot water, the blood vessels of the skin dilate, and under the action of cold water - they narrow, that is, a permanent gymnastics of the peripheral arterioles takes place, which contributes to maintaining the tone of their muscular wall, to the prevention and treatment of neuroses vascular and hypertensive disease.

Especially valuable are cold hardening procedures for students - athletes of USEFS who participate in practical sports lessons in specialized halls and in the open

air, do swimming and tourism, which could positively influence their resistance to cold and effective adaptation to environmental conditions.

The hypothesis of the work. We assumed that the students of the Faculty of Physical Education and Sports, who systematically take contrast showers, have a higher level of hardening of the body with the cold, compared to the students of the Faculty of Kinetotherapy, who do not harden with water, but attend sports classes.

The purpose of the work: hygienic assessment of the effectiveness of the contrast shower in the adaptation of the students' bodies to the cold.

Research methodology: 24 boys, of the same age, divided into 12 each, from the faculties of Kinetotherapy and Physical Education and Sport participated in the research;

The researches were organized within the laboratory works at Hygiene, between October 10 and December 10;

The boys from the Faculty of Physical Education and Sport (EFS) during this period took a contrast shower every morning, 3-7 min each;

Organization of the contrast shower: the procedure starts with warm water pleasant to the body (38 - 40°C), so that it warms up well. We ensure the gradual increase in water temperature, staying under the hot shower for 1 min. Next, we make a sudden transition to cold water with a temperature of 12 - 15°C, for a duration of 5-10 seconds. Then we turn on the hot water again. The procedures must be repeated no more than 5 times, and for beginners - 2 times. In all this time it is necessary to move actively. After the procedure, the body is intensively rubbed with a dry towel.

To assess the body's resistance to cold and colds, as an indicator of health, we used M. Marşak's test. The result of the test allows to appreciate the dynamism of the adaptation reaction to different environmental conditions and, first of all, to low air temperature.

After determining the duration of restoration of the initial temperature of the skin of the covered sector, we also fixed the frequency of cardiac contractions (FCC) of each student for 1 min.

FCC information was obtained by palpating the radial artery for 15 sec, recalculating every minute.

These results were used to establish the adaptive potential (PA) of students to the action of low temperatures.

Working method. The examinee undresses to the waist and adapts to the room temperature for 20-30 min. Uncovered (for example: hands) and covered (back or chest) sectors of the body are chosen for investigation. The initial temperature of the skin on these sectors is determined, and then on them, successively, a metal bowl with a diameter of 3-4 cm and a height of 8-10 cm, filled with crushed ice, is applied. After 20-30 sec, the bowl is removed and the skin temperature is measured after applying ice. Skin temperature measurements are repeated until the initial skin temperature is restored. Determination of skin temperature was carried out with the electric thermometer ETII - 3M.

The method of evaluating the results. The restoration of the initial temperature

of the skin for 5 min after the application of ice denotes a good adaptation of the body to the cold; for 10 min – a satisfactory adaptation to the cold; over 10 min – lack of body adaptation to low temperatures.

Adaptation is one of the main qualities of the human body, based on the available functional reserves, which, being raised, ensure the interaction between the body and the external environment.

The activity of the cardiovascular system considerably limits the possibilities of adaptation to the conditions of existence, therefore we also determined the adaptive potential (PA) of each student, according to the formula:

$$PA \text{ (conventional units)} = 1,239 + 0,09 \times FCC$$

where: FCC - frequency of heart contractions / min;

1,239 and 0,09 – coefficients

The results were processed mathematically - statistically, establishing according to the formulas: the value of the arithmetic mean of the group - M; mean square deviation - sigma; the standard deviation of the mean values –m; parametric criterion: Student's t (for comparative analysis of experimental data).

The results obtained: the dynamics of the results obtained during the testing of the students of the Faculties of Kinetotherapy and Physical Education and Sports (EFS), denotes that at the initial testing - the time to restore the initial body temperature on the covered sectors, in both groups of students does not differ substantially, constituting accordingly in the environment $6,23 \pm 0,52$ min (Physiotherapy) and $6,14 \pm 0,59$ min (Sport), ($t=0,11$; $P>0.05$), which can be appreciated as a satisfactory adaptation to the cold.

At the final testing, after 3 months of water tempering using the contrast shower, the students from the Faculty of Physical Education and Sport (EFS) demonstrated an improvement in results, which is manifested by reducing the time to restore the initial temperature - from $6,14 \pm 0,59$ min to $4,29 \pm 0,48$ min, the difference being mathematically and statistically true at the threshold of significance $t=3,91$, $P<0,01$. This result expresses a good adaptation to the cold.

At the final testing of the batch from the Faculty of Physical Therapy, the time to restore the initial temperature was $6,04 \pm 0,37$ min, which does not differ significantly from the results of the initial testing $6,23 \pm 0,52$ min ($t=0,11$; $P > 0,05$). In our opinion, the dynamics of the change in the duration of the restoration of the initial body temperature, in the direction of its reduction, in the batch of the Faculty of Sports, denotes the importance of the contrast shower in the adaptation of the body to the cold.

At the initial testing, the boys from the Faculty of Kinetotherapy had an average level of adaptability, which was on average $6,99 \pm 0,14$ u.c. (conventional units), which denotes a satisfactory adaptability of the organism to the conditions of existence. But at the final test the numbers increased, reaching the value of $7,36 \pm 0,19$ u.c., which expresses the tension of the mechanisms of adaptation to the conditions of the living environment.

The boys from the EFS faculty registered at the initial test the average value of

7,20± 0, 29 u.c., which can be qualified as a satisfactory adaptation. But at the final testing, the group mean values decreased to 6,27± 0,29 u.c., ($t=3,88$; $P<0,01$), which, in our opinion, denotes the improvement of the body's adaptability to conditions of existence.

Thus, we determined that the students of the EFS faculty adapt better to the cold, compared to those of the Kinetotherapy faculty, which, in our view, is due to the systematic practice of the contrast shower.

Conclusions and recommendations:

1. Students of the Faculty of Physical Education and Sport (EFS) show interest in hardening the body with cold, practicing the contrast shower, which distinguishes them from their peers, who do not practice such procedures.

2. By experimentally assessing the body's resistance to cold, we determined that the students from the EFS faculty, who practiced the contrast shower for 3 months, have a good resistance to the cold, and those from the Physiotherapy faculty, who do not exercise, have a resistance satisfying.

3. At the initial testing, both groups of students (EFS, Kinetotherapy) had a satisfactory level of adaptability to the environment. At the final testing, the students of the Faculty of Kinetotherapy showed average group values that mean the straining of the adaptation mechanisms to the conditions of the living environment, and those from the EFS faculty - average values that mean the improvement of the body's adaptability to the living conditions.

5. Contrast shower - used in the morning, it is effective for increasing the body's resistance to cold and its effective adaptation to the environmental conditions. We do not recommend practicing the contrast shower during sports competitions and exam sessions, due to the psycho-emotional tension of the students.

Keywords: students, body tempering, contrast shower, body resistance to cold, adaptability to environmental conditions.

INFLUENCE OF MOTOR CAPACITIES THROUGH MINIHANDBALL TRAINING IN PRIMARY SCHOOL CHILDREN SELECTED IN THE REPRESENTATIVE TEAM OF THE SCHOOL

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"Influencing motor skills through minihandball training in primary school children selected in the representative team of the school", is a study that wants to become a source of information, development, applicability in life for both students and teachers.

The research approach was carried out by Moroşanu Angelica, titular teacher of Secondary School no. 96 Bucharest, as a third-year student at the Doctoral School of the State University of Physical Education and Sport of the Republic of Moldova. Doctoral supervisor is Mr. University Professor, PhD Ion Carp.

The purpose of the basic research started from the premise that general coordination, a motor quality of particular importance in everyday activities, but especially in the practice of performance sports, is a real topic both for school physical education and for current sports training, being the one that "regulates the ability to rationally perform different motor skills, regardless of sports specialization" being "in close correlation with speed, strength, resistance and mobility." The purpose of our research consists in the design and experimental implementation of a system of means of action focused on improving the coordinative capacity of minihandball practitioners in school, which leads to the optimization of motor performance and, implicitly, of sports performance in this age category 8- 9 years.

The preliminary research was carried out in order to determine a somatic and motor model at the age of 8-9 years, as well as in order to investigate the opinions of specialists who work at the basic echelon of juvenile handball, regarding the role, importance and ways of developing motor skills in this age, in order to carry out the actual experiment. This approach led to the identification of the effects of the application of training programs and operational structures experienced in practice, intended especially for the development of coordinative qualities, the effects being related to the quality and quantity of biological, motor, mental and performance changes.

The research was carried out on a sample of 53 subjects - girls from the Preparatory and 1st grades of Secondary School no. 96 Bucharest, divided into an experimental group consisting of 24 female students and a control group consisting of 29 female students. Six variables were used to assess basic motor skills: the 25 m sprint, the standing long jump, the trunk raise from supine, the measurement of dynamic balance (Bass test), the sheep ball throw, and the 5x5 m shuttle. The experiment took

place over a period of three months, with both groups having a total of 36 hours of training. There was no significant difference between the two groups' baseline testing ($\lambda=0.24$ and $p=0.44$), both groups having a similar start.

Recognized specialists in the field of Sports Science and Physical Education advanced the theory that, in the process of developing motor skills, the following requirements must be taken into account: "coordinative abilities are addressed at the beginning of the physical education lesson, as in the case of speed, on the basis of rest and adequate heating of the body; it is not recommended to approach coordination abilities and speed within the same lesson; optimal rest intervals must be scheduled between exercises, which allow the body's major functions to return to values suitable for the resumption of effort" (Dragnea A., Bota A., Teodorescu S., Stănescu M., Șerbănoiu S., Tudor V., 2006, p. 125).

Due to the high degree of complexity of motor skills, their development in primary school students contributes to learning and consolidating a useful technical background in the practice of several sports games and the game of minihandball in particular. The game of minihandball practiced both as a means of physical education, as a mass sport and as a competitive sport, is one of the most accessible games for 8-9 year olds, given the fact that it can be practiced by both girls, as well as for boys, "it has a simple and easy to learn technique" [Ghermănescu 1983].

The methodology approached within the instructional-educational process during the research period, centered on the development of coordination capacity at the 8-9-year-old age group, proved to be in full agreement with the motor, somato-functional possibilities and the level of previous instructional accumulations of the subjects.

The research conclusions sequentially present the scientific approach, putting in the foreground the formulated working hypotheses that are confirmed by the obtained results.

OCCURRENCE OF THE "T-INFANTILE" PHENOMENON AND ITS AUTONOMIC SUPPORT IN YOUNG ATHLETES

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Actuality. Nowadays in the world of sports there are big competitions such as Gymnasiade, Youth Olympic Games, etc. in which athletes between 15 and 18 years of age participate. It is known that it takes an average of 6.5–7.5 years of hard training to achieve high results and successful participation in competitions at this level, so most coaches want to make an earlier selection of children in sports sections. Existing age standards for sports activities are based on the passport age, but due to the phenomenon of acceleration, there are cases of discrepancy between the passport age and the biological age, when a child is 1–2 years ahead or behind his or her peers. For example, children from the age of 7 are admitted to the initial training groups of children's and youth sports schools in gymnastics, artistic gymnastics, swimming, figure skating, tennis and table tennis. In such cases, during the initial medical examination, the sports physician encounters features of the ECG of young athletes in the form of a juvenile ECG pattern, better known as the "T-infantile" phenomenon.

The purpose of the study was to determine the prevalence of the juvenile ECG pattern in young athletes aged 6–17 years and the autonomic support of this ECG phenomenon.

Research methods. Electrocardiographic examination and recording of heart rate variability were performed in 3720 children and adolescents aged 6–17 years, including 74.6% (n=2774) boys and 25.4% (n=946) girls, involved in various types of sports. Of the total number of athletes, the "T-infantile" phenomenon was detected in 56 people, or 1.5%, including 40 (1.44%) boys and 16 (1.69%) girls. The state of the neurohumoral regulatory mechanisms of the heart, the activity of segmental and suprasedgmental divisions of the autonomic nervous system (ANS) were assessed using mathematical and spectral methods of heart rate variability (HRV) analysis. ANS parameters were analyzed using an integral index of HRV, the stress index (SI).

Results. There were ten (25%) boys at age 9, eight (20%) at age 10, six (15% each) at ages 8 and 11, four (10%) at age 7, three (7.5%) at age 12, two (5%) at age 6, and one

(2.5%) at age 15. There were four (25%) girls at age 11, three (18.75% each) at ages 9 and 12, and one (6.25% each) at ages 7, 8, 10, 13, 16 and 17. Boys were involved in oriental martial arts – 22 (55%), sports games – 8 (20%), horting – 4 (10%), diving – 3 (7.5%), swimming – 2 (5%), fencing – 1 (2.5%). Girls were involved in sports games – 5 (31.25%), swimming – 5 (31.25%), martial arts – 2 (12.5%) and one (6.25%) each in diving, sports aerobics, rhythmic gymnastics and archery.

The highest number of young athletes with this ECG phenomenon was found in boys at the ages of 9 and 10, and in girls at the ages of 11, 9 and 12. The types of sport most frequently practiced by boys and girls were mainly martial arts and sports games, although nowadays an earlier age of starting sport is typical for all types of gymnastics (artistic, sports, aesthetic), figure skating, tennis, swimming and diving. Some differences in the occurrence of "T-infantile" in young athletes, compared with the results of other authors, may be related to the analysis of other sports in which the athletes studied participate, as well as to factors that take into account the gender of the child.

The next stage of our research was to analyze the ECG characteristics of young athletes with the "T-infantile" phenomenon. In boys with "T-infantile" (n=40), normal sinus rhythm was found in 80% (n=32) and right atrial rhythm in 20% (n=8). Regular rhythm was found in 80% (n=32) and sinus respiratory arrhythmia in 20% (n=8). Normal ECG amplitude was recorded in all boys. In the boys with "T-infantile" in 30% (n=12) the electrical axis of the heart was not deviated and was in a semi-vertical position, in 25% (n=10) it was vertical, in 7.5% (n=3) the axis was deviated to the right, in 5% (n=2) it was semi-horizontal and in one (2.5%) the heart axis was deviated to the left. Bradycardia was detected in 15% of the examined athletes (n=6), 42.5% (n=17) had heart rate in the range 61–79 bpm⁻¹ and the remaining 42.5% (n=17) had heart rate 80 bpm⁻¹ or more. ECG changes were present in 49 cases, i.e. in addition to T-infantile in five (10.2%) athletes in combination with incomplete right bundle branch block, in three (6.12%) with shortened PQ syndrome and in one (2.04%) with early ventricular repolarization syndrome.

In girls with T-infantile (n=16), normal sinus rhythm was found in 87.5% (n=14) and right atrial rhythm in 12.5% (n=2). Regular rhythm was found in 75% (n=12) and respiratory sinus arrhythmia in 25% (n=4). Normal ECG amplitude was recorded in all girls. In 43.75% (n=7) of the young female athletes the electrical axis of the heart had a semi-vertical position, in 25% (n=4) the electrical axis of the heart was not deviated and had a vertical position and in one (6.25%) the electrical axis of the heart was deviated to the right. Bradycardia was detected in 12.5% (n=2), heart rate in the range of 61-79 bpm⁻¹ in 50% (n=8) and in 37.5% (n=6) heart rate was 80 bpm⁻¹ or more. ECG changes were observed in 20 cases, i.e., in addition to "T-infantile", three girls (18.75%) additionally had incomplete right bundle branch block and one (6.25%) had short PQ syndrome.

A comparative analysis of heart rate variability values in boys and girls with the "T-infantile" phenomenon showed that boys, who were younger than girls (9.3±0.27 years vs. 11.1±0.68 years, p=0.02), had a significantly higher D value, reflecting the

activity of vagus regulation of heart rate (0.403 ± 0.028 s vs. 0.311 ± 0.025 s, $p=0.019$). They also showed a tendency to decrease the following indices AMo, a measure of the mobilising influence of the sympathetic arm of the autonomic nervous system ($36.321\pm 2.059\%$ vs. $40.20\pm 4.465\%$, $p=0.425$), AMo/D, an index of the ratio between sympathetic and parasympathetic activity (122.80 ± 16.18 %/s vs. 167.97 ± 37.58 %/s, $p=0.269$), autonomic rhythm index (ARI), indicating the balance of autonomic regulation of the sinus node (4.363 ± 0.376 1/s² vs. 5.307 ± 0.761 1/s², $p=0.265$), adequacy of regulation processes (ARP) – reflecting the correspondence between the activity of the sympathetic arm of the ANS and the leading level of sinus node function (52.869 ± 3.577 %/s vs. 58.814 ± 8.566 %/s, $p=0.517$), SI – stress index indicating the degree of centralisation of heart rate control (90.835 ± 12.904 conventional units vs. 127.226 ± 32.763 conventional units, $p=0.300$) and LF/HF-sympatho-vagal index (1.159 ± 0.188 conventional units vs. 1.413 ± 0.282 conventional units, $p=0.450$). The data obtained indicate a trend in the prevalence of parasympathetic influences of the ANS in boys.

Conclusions. The prevalence of the "T-infantile" phenomenon among young athletes aged 6 to 17 years was 1.44% for boys and 1.69% for girls ($p=0.945$), i.e. it didn't differ significantly between the genders. The highest percentage of young athletes with "T-infantile" was found in boys aged 9 and 10 years and in girls aged 11, 9 and 12 years. Boys were mainly involved in oriental martial arts and sports games, while girls were mainly involved in sports games and swimming. T-infantile phenomenon in boys and girls was associated with incomplete right bundle branch block and short QT syndrome.

Keywords: young athletes, juvenile ECG pattern, autonomic support, "T-infantile" phenomenon.

**THE METHODOLOGY EFFICIENCY OF INTENSIFYING THE
INSTRUCTIONAL-EDUCATIONAL PROCESS IN THE PHYSICAL
EDUCATION LESSONS WITH THE HELP OF FUNCTIONAL MUSIC IN
DOING HOMEWORK**

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Actuality. The musical support becomes a beneficial and rational factor for carrying out the motor activity. Positive emotions as a result of using music in the activity carried out contribute to a large extent to avoiding the feeling of overfatigue, conditioning the increase in work capacity.

The use of functional music as a psycho-pedagogical factor requires students to possess an artistic sense, but also a special training of the physical education teacher. The teacher must be competent in the selection of exercises, music, sports inventory (gymnastics rope, hoop, various weight objects, sticks, etc.) for the execution of the planned exercises.

In this context, we will exemplify the grouping of physical exercises intended to achieve certain objectives, as well as the selection of musical tracks in accordance with the respective requirements for the execution of the exercises.

If the student has assimilated the recommended exercises for the hands, shoulder girdle, back, abdominal muscles, lower limbs, etc., it is precisely then that it is the most suitable moment to combine them in a certain order and then perform them without interruption. But without a well-selected rhythmic music, the intended effect and pleasure from this exercise cannot be achieved. Music is a prime factor in this activity.

For this purpose, the most diverse music can be used, but it must first of all be rhythmic. The second requirement concerns the tempo of the music. Too fast music can exhaust the body, and exercises performed in a hurry can cause a violation of the consecutiveness of movements. And the present tempo will not result in the expected effect.

How should the right tempo be chosen? The student performs any movement at a tempo suitable for him, for example, swinging his arms forward. The student counts how many cycles (rotations) he performed during 10 sec., and the number of movements is multiplied by 6. The tempo of the music for this exercise is equivalent

to 90 musical accents.

We have determined that a tempo of 40-60 musical accents/min is suitable for extension exercises, turns and head bends for exercising chest muscles - around 70-80 accents/min., for hands, shoulder girdle, leg movements - 80-90, jumping - 120-150, and for running at a fast tempo and energetic dances - 160 and many more accents / 1 min.

It is important not only to respect the musical accents, but also that the music is to the students' liking. It is good to use favorite songs. These can be popular, pop songs performed by well-known performers and bands. Relaxation, extension exercises can be performed under blues music, for the shoulder girdle - music in the style of rag time, various leg movements, such as running, jumping are combined with rock music. For some, contemporary music may seem too noisy and the tempo too fast. It is possible that exercises accompanied by retro-style music will present themselves as an optimal option. Likewise, the student's favorite songs such as tango, foxtrot, Charleston, Latin rhythms (rumba, samba, cha-cha-cha) will create a good mood, a pleasant emotional background. Therefore, the musical tempo, depending on concrete exercises, can vary.

The purpose. Validation of the developed methodology, aimed at the use of functional music in physical education lessons.

Research methods. In order to carry out our research, there were applied methods that ensured the achievement of the established objectives, among them we can list: the analysis of the specialized scientific-methodical literature, observation, processing methods and quantitative and qualitative analysis of statistical data.

Findings and results. So, for a complex of exercises performed at home, which is accompanied by listening to functional music, it is necessary to choose a musical composition that in terms of size, tempo and character coincides with the movements performed with or without objects. Both the musical instrument and the cassette player can serve as means that reproduce music.

Conclusions and recommendations.

Therefore, the student's motor practice at home, accompanied by functional music, will contribute to:

1. Formation of students' motivation and interest towards the physical education lesson conducted through functional music;
2. Increasing the student's work capacity and body's immunity being a curative and effective remedy in the prevention of the student's health;
3. Development of motor skills and refreshment of psychophysical forces.

Keywords: active leisure, home motor activity, functional music, physical exercises.

NEW IMPACT IN SPORTS CORRUPTION

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Actuality. Corruption in sports refers to any unethical or illegal activities that compromise the integrity of sporting events, organizations, or athletes. It can take various forms, including match-fixing, doping, bribery, embezzlement, and other forms of dishonest behavior. Corruption in sports not only tarnishes the reputation of the games but also undermines the principles of fair competition and sportsmanship. Here are some key aspects and examples of corruption in sports:

Match-Fixing: Match-fixing occurs when athletes, officials, or individuals involved in sports conspire to manipulate the outcome of a game or event. This can involve intentionally losing, scoring own goals, or ensuring that certain outcomes occur to benefit those involved in the fix, often for financial gain.

Doping: Doping involves the use of banned substances or methods to enhance an athlete's performance. This practice is not only unethical but also poses health risks to athletes. Organizations like the **World Anti-Doping Agency (WADA)** work to combat doping in sports by implementing testing and regulations.

Bribery and Corruption: Corruption can also manifest as bribery, where athletes or officials accept money or gifts to influence their decisions or actions in sports. This can range from bribing referees to influence match outcomes to paying off officials for favorable treatment.

Embezzlement: Embezzlement occurs when individuals in positions of trust within sports organizations misappropriate funds for personal gain. This can involve stealing ticket revenue, sponsorship money, or other financial resources meant for the development of sports.

Governance Issues: Sports organizations, including governing bodies and national associations, may become corrupt when leaders or officials engage in fraudulent practices, such as nepotism, misappropriation of funds, or election rigging.

Gambling: The rise of sports betting can also contribute to corruption, as individuals may attempt to manipulate outcomes to profit from their bets. This can create incentives for match-fixing and other forms of cheating.

The purpose of the research is to present a summary of the scientific literature on the threats to corruption in sport; introduce a framework to categorise these threats; identify research gaps in the field and provide safeguarding recommendations for

sport organizations.

Corruption in sports serves various **purposes**, although all of them are unethical and detrimental to the integrity of sports and fair competition. It's important to note that corruption in sports is not justifiable, and its purposes are harmful. Here are some of the **purposes** behind corruption in sports:

Financial Gain: One of the primary purposes of corruption in sports is financial gain. Individuals involved in corrupt practices, such as match-fixing, bribery, or embezzlement, seek to profit from their actions. This can involve players, coaches, officials, or even organized crime syndicates looking to make money through illegal means.

Influence and Power: Corruption can also be driven by the desire for influence and power within the sports world. Individuals may engage in corrupt activities to secure positions of authority, gain control over sports organizations, or manipulate the outcomes of events to their advantage.

Preservation of Reputation: In some cases, athletes or teams may resort to corrupt practices to protect or enhance their reputation. This can involve doping to achieve better results and maintain a positive public image, even if it means cheating.

Maintaining Employment: Athletes, coaches, and other individuals involved in sports may engage in corrupt practices to ensure their continued employment or contract extensions. This can include actions such as point-shaving in team sports to influence the final score without drawing suspicion.

Research into corruption in sports typically employs various **methods** to gather data, analyze trends, and uncover the underlying causes and consequences of corrupt practices. These research methods can be broadly categorized into quantitative and qualitative approaches, and they often involve a combination of techniques. Here are some common **methods** used in researching corruption in sports:

Surveys and Questionnaires: surveys or questionnaires to collect data from athletes, coaches, officials, and other stakeholders in the sports world. These surveys can ask about personal experiences with corruption, perceptions of corruption within the sport, and attitudes toward anti-corruption measures.

Interviews: In-depth interviews with key informants, such as athletes, coaches, sports officials, and experts, can provide valuable qualitative data. Interviews allow researchers to explore the motivations, behaviors, and perspectives of individuals involved in or affected by corruption in sports.

Content Analysis: Researchers analyze written, audiovisual, or digital content related to sports, such as news articles, social media discussions, and legal documents. Content analysis can help identify and track instances of corruption, as well as public reactions and perceptions.

Case Studies: Researchers often conduct detailed case studies of specific instances of corruption in sports. This qualitative approach involves in-depth examination of the circumstances, individuals involved, and consequences of particular corruption cases.

Data Mining: With the proliferation of digital data, researchers can use data

mining techniques to extract valuable insights from vast datasets related to sports, including financial transactions, betting patterns, and social media interactions. Data mining can help detect irregularities and suspicious activities.

Observation: Ethnographic research involves observing and immersing oneself in the sports environment to gain firsthand insights into the culture, practices, and dynamics related to corruption. Researchers may attend sporting events, interact with participants, and document their observations.

Secondary Data Analysis: Researchers often analyze existing datasets and reports related to sports corruption. This can include data from sports governing bodies, law enforcement agencies, and academic studies. Secondary data analysis allows for the examination of trends and patterns over time.

Surveillance and Whistleblower Reports: Surveillance methods and whistleblower reports can be valuable sources of information on corrupt activities in sports. These reports can include evidence of match-fixing, doping, and other illicit activities.

Network Analysis: Researchers use network analysis techniques to map out relationships and connections among individuals and organizations involved in corruption in sports. This approach helps identify key actors and their roles in corrupt networks.

Comparative Studies: Comparative research involves analyzing corruption in sports across different countries, regions, or sports disciplines. This approach allows researchers to identify variations in corrupt practices and anti-corruption efforts.

Research findings and results in the area of corruption in sports have revealed numerous insights into the extent, causes, consequences, and strategies to combat corruption within the sports industry. While specific findings can vary depending on the research focus and methodology, here are some common themes and key findings from studies on corruption in sports:

Prevalence of Corruption: Research consistently highlights that corruption in sports is a widespread problem that affects various sports disciplines and regions across the world. Studies have documented cases of match-fixing, doping, bribery, and embezzlement in both amateur and professional sports.

Financial Impact: Corruption in sports can have significant financial consequences. Research has shown that match-fixing and doping scandals can lead to financial losses for sports organizations, sponsors, and broadcasters. Additionally, corruption can deter legitimate investment in sports.

Motivations: Studies often explore the motivations behind corrupt practices in sports. Financial gain, the pursuit of power and influence, and a desire for success or recognition are among the primary motivations identified for individuals involved in corruption in sports.

In conclusion, corruption in sports represents a significant and multifaceted challenge that has far-reaching consequences for athletes, organizations, fans, and the integrity of sports as a whole. The findings and research in this area have shed light on the prevalence, motivations, and impacts of corruption in various sports disciplines

around the world.

Corruption in sports encompasses practices such as match-fixing, doping, bribery, embezzlement, and more, with financial gain, power, and influence often serving as key motivations. It is not limited to a particular sport or region, and it can undermine the very essence of fair competition, sportsmanship, and trust that underpin the sporting world.

Efforts to combat corruption in sports involve a combination of stringent regulations, effective monitoring and enforcement, education and awareness programs, whistleblower protection, and enhanced transparency and governance within sports organizations. Technology also plays a pivotal role in both detecting and perpetrating corruption, presenting both challenges and opportunities for anti-corruption efforts.

Preserving the integrity of sports is essential not only for the well-being of athletes but also for maintaining the trust and enthusiasm of fans and sponsors. Corruption erodes the core values of sports and can lead to financial losses, damaged reputations, and a decline in fan engagement.

Keywords: corruption, sporting events, WADA, doping in sports.

STUDY ON THE SOCIO-AFFECTIVE CLIMATE OF ADOLESCENT STUDENTS

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The problem under research is of particular importance for the family and society because we can say, without fear of being subjective, that the socialization of children, i.e. their preparation to live in society, is a very topical problem precisely by ignoring its systematic and conscious approach at the level of society, especially in the context where puberty is the period when sports activities are of vital importance for socialization. At this stage of life, the child is sensitive to cognitive and moral development, he assumes different roles, learns that he is different from others and, above all, learns to build relationships with others.

The purpose of the research. Establishing the socio-affective climate of the groups of students subject to research aims to identify the level of socialization and relationship among students, existing relationships at the group level, socialization, communication and relationship. The group interaction took place during swimming training, through the school curriculum

Research method: sociometric test

Sociometric testing reveals relevant aspects regarding the relationship of the student and the group as a whole. In order to know the level of socialization, empathy and mutual relations between adolescent students who practice swimming, the sociometric test was applied to the experimental group and the control group (50 students from the I.C. Vissarion Titu Theoretical High School, age level 13, 14 years).

The sociometric study has a triple orientation in the present research:

1. The teacher-coach's knowledge of the relationships within the group;
2. Students' identification of their own positions within the group;
3. Improving relationships and the psychosocial climate of the group through specific actions (socialization program in school camps)

The sociometric test was applied to students in the period 01.02-01.03.2023. the test was applied to both research groups.

The results of the sociometric test were transposed into the sociometric matrices. For each group of pubertal age students (from the 8th grade of the I.C. Vissarion Titu Theoretical High School, age level 13-14), a matrix was created. This allowed the creation of a table with double entry, in which the subjects were numbered on the first line and column, in order to preserve the confidentiality of the data, respectively the names of the students, each student received a code name, the experimental group no. I-A1 – A25 and control group no. II- B1 - B30 (Appendices no. 4 and 5), and the data from the tests were recorded one by one in the sociometric matrix, thus reflecting the place of each member within the group.

The resulting matrix shows that the highest score of positive attractions, namely 13, is obtained by A5 which has only 2 rejections, followed by A 16 and A24 with an attraction score of 12 and 2 rejections. Then, A8 and A11 stand out, each with a score of 9 in the election chapter.

As I mentioned, in the center of the group is A5, chosen by 6 members of the group: A1, A2, A9, A12, A14 and A18, followed by A2, with 5 choices: A3, A10, A12, A16, A5. The following group members A 4, A10, A1, A19 have 4 choices each, followed by those with three choices: A1, A13, A14, A17, A 20.

In the "chapter" rejections, the situation is as follows: A3 and A23 are each rejected by 6 members of the group, A 3 by A2, A5, A8, A14, A 21, A23 and A23 is rejected by A2, A3, A15, A18, A20, A24.

We have also identified that A3 did not register any choice and so did A23. At the opposite pole, the fewest rejections were recorded by A4, A13, A16, one rejection each.

From the analysis of the existing data, it appears that there are a number of 9 mutual choices: A1 with A19, A1 with A21, A4 with A24, A8 with A17, A8 with A20, A11 with A14, A13 with A 22, A14 with A21, A15 with A19 . At the same time, 4 mutual rejections were also identified: A3 with A23, A3 with A5, A6 with A25, A14 with A8.

According to the matrix of the experimental group, within this group there are 2 subjects who did not register any attraction from the other members of the group, only registered rejections, they are A3, 0 choices and 6 rejections and A 23 0 choices and 6 rejections.

The recorded results and the sociometric matrix show us that the subjects in the experimental group is not cohesive, there is no close relationship and communication between the group members. Lack of cohesion can lead to difficulties in communication, collaboration and achieving common goals.

In the case of the second group subject to research, group no. II B (B1-B25), the results highlight the subjects with the highest score in positive choices are B5 and B15 registering an ISP index of 0.33, but those who have recorded the most positive choices are, B5 preferred by 8 members of the group: B1, B2, B7, B9, B12, B14, B19, B22, followed by B8 with 6 positive choices from the following members: B3, B5, B6, B10, B17, B21, and B16 registered 5 positive choices: B4, B7, B14, B15, B24.

There were also 9 mutual positive choices, distributed as follows: B1-B2, B2-B12, B1-B5, B8-B10, B8-B17, B10-B13, B16-B24, B15-B19, B21-B1 . We note that B1 has reciprocal relationships with B2 and B5, and B8 with B10 and B17.

In the case of group II B, the control group, all group members received choices and rejections. For example, there were subjects who chose but were rejected by the chosen: B2-B3, B-B3, B4-B25, B11-B4, B15-B4, B5-B12, B5-B19, B9-B24, B12-B20, B1-B19, B5-B19, B18-B20.

In the rejection chapter, the highest negative score of 0.25 was recorded by A3 and A16, the most rejections are recorded by B3 with 5 rejections from the subjects: B2, B4, B5, B8, B25, followed by B15 all with 5 rejections obtained from: B1, B9, B12, B21,

B23, then B25 also with 5 rejections from the following subjects: B4, B7, B16, B17, B19. The fewest rejections, respectively 1 each, were recorded by the following subjects: B1, B7, B9, B16, B24.

The analysis of the results of the sociometric test applied to the two groups of adolescent students who practice swimming, groups I A and II B, brings to the fore a low degree of cohesion among the group members.

Studying the indices of preferential status for group I, we find that the psychological value of preferential time "popular" registered three members, who were preferred by a certain subject. The preferential status index for the psychosocial value of the "popular" type fell within the value of 0.50 - 0.45. For the second group the psychological value of preferential time "popular" recorded two members, who were preferred by a certain subject. The preferential status index for the psychosocial value of the "popular" type fell to the value of 0.33.

Within the "accept" preferential type psychosocial value, the first group, I, recorded 9 members, and the second group recorded 10 members, "accept" preferential status indices in group I A ranged from 0.25 - 0.04, compared to group II B where the preferential status index is between 0.25 and 0.08.

The psychosocial value of the "marginalized" preferential type highlights the fact that the subjects of group I fall within the range of -0.45 and -0.08, and those of group II within the range of -0.33 and -0.04. Group I registered 11 "marginalized" subjects and group II 10 marginalized.

The results of the initial testing show that the two research groups are relatively homogeneous.

Studying the sociograms below, we notice that subjects A5, A16, A24 and B5, B15 are "popular" in the group of subjects, being placed in the center of the sociogram. Less integrated, registered under the chapter "accepted" are subjects A2, A4, A6, A7, A8, A10, A13, A22 and B1, B4, B6, B7, B8, B10, B11, B12, B21, B24.

At the same time, the "marginalized" are highlighted A1, A3, A9, A11, A12, A14, A15, A18, A21, A23, A25 and in group II B2, B3, B9, B14, B16, B17 B18, B19, B20, B23 , B25, Indifferences are: A17, A19, A20 and B11, B13 B18.

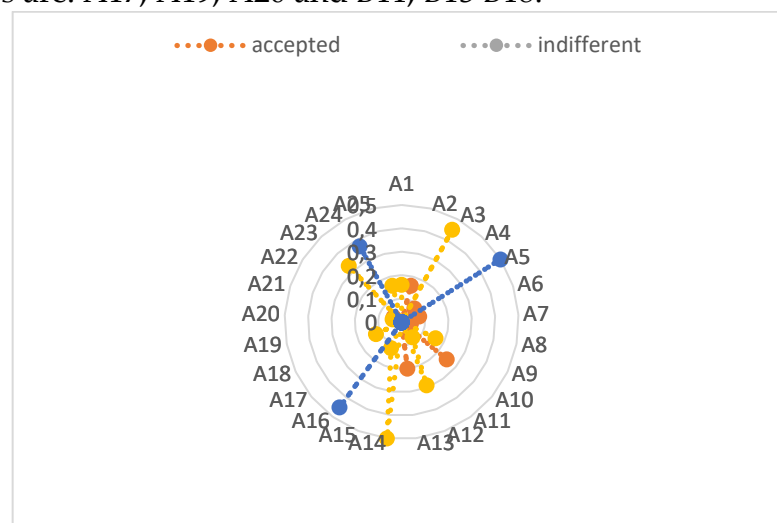


Figure 1. Sociogram of group I A

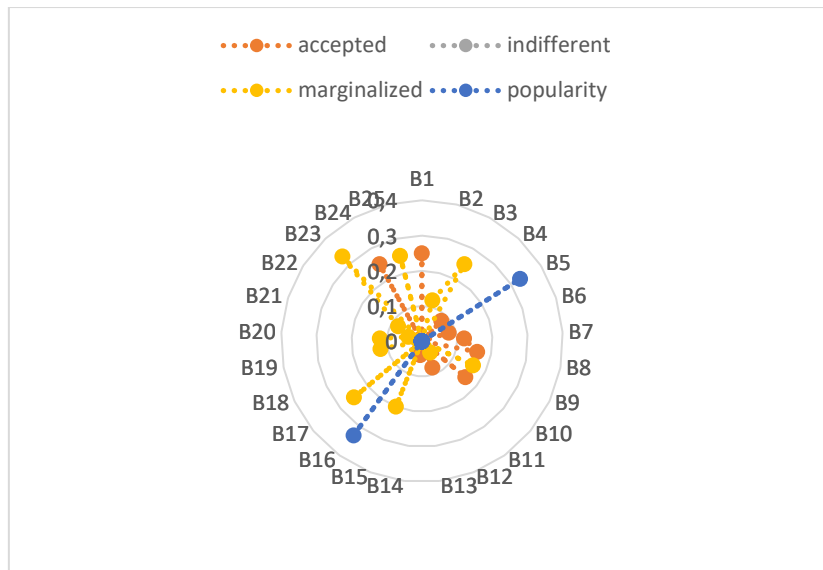


Figure 2. Sociogram of group II B

Conclusions. By examining the sociogram, we gained useful information about how group members interact, who are the leaders, and who are the more socially isolated. This information is useful for us to develop strategies to strengthen relationships and improve group dynamics.

According to the research results we recommend the following:

- The coach can offer the children exercises and games to help them improve their verbal and non-verbal communication skills.
- Encouraging children to participate in team games and cooperative activities.

Keywords: swimming, leaders, matrices, socialization sociogram.

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THE DEVELOPMENT OF STUDENTS' MOTOR SKILLS IN THE DISCIPLINE OF HIKING TOURISM, IN THE CONTEXT OF THE IMPLEMENTATION OF THE NEW PHYSICAL EDUCATION CURRICULUM IN THE REPUBLIC OF MOLDOVA

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Capaciteric development of students is a crucial aspect in their education, having a significant impact on their health and quality of life. This analysis aims to explore the importance of developing motor skills of students and the ways in which education, sport and recreational activities can influence this development. Physical education classes are an essential component in the development of students' motor skills. They give students the opportunity to improve their agility, endurance and motor coordination. Through physical education, students learn not only to develop their motor skills, but also to appreciate the importance of physical activity for a healthy life.

Tourism is a means of harmonious development of students, through recreational activities and useful social activities aimed at ensuring a multilateral education from the point of view: physical, moral, etc. Thus, the basic principle of physical education lessons that follow the use of tourism. within the lessons is the development of the students' individual capacities, the maintenance of their emotional and health status.

As is known, since the beginning of life, the human being grows, develops, matures, evolves under the influence of biological, psychological and social factors that act on him transversally and longitudinally. These factors can be favorable, when they stimulate the entire evolution, and unfavorable or relatively favorable, when they determine limited or even restrictive structures for shaping human characteristics.

The evaluation of these conditions, of the motor qualities, is done in relation to the concrete context in which the student is, but also in relation to the methods of reception and structuring of the particularities that define him. In the conditions of today's society, we are witnessing an obvious progress of contemporary civilization, and the informational explosion triggers a series of changes and evolutions in secondary education, which in the 21st century is experiencing a continuous transformation and development in terms of content, methodology and didactic strategies.

The purpose of the research is to analyze the development of students' motor capacities, in the discipline of pedestrian tourism, in the context of the implementation of the new physical education curriculum in the Republic of Moldova.

Research methods. To achieve the goal and achieve the objectives, the following

research methods were proposed and established as: analysis and synthesis, scientific research and documentation.

Results and discussion. The development of motor capacities are characteristics of the body that offer the individual the possibility of performing various motor acts, related to both his daily and sports activities.

In the education process, finding and using the most effective methods and means to ensure the development of these capacities occupies an important place in the specialist teacher's concerns.

Pedestrian tourism is a form of sports tourism that represents a tourist march along a certain route. It involves the free choice of several routes, representing a great advantage for those practicing this test. The essential technical elements of this form of tourism are: the technique of pedestrian tourism, which represents a complex of procedures and means used effectively for the solution of tourist objectives (eg: the technique of crossing obstacles, the technique of organizing the tourist bivouac, the technique of orientation in the terrain, techniques of granting the first aid and transporting the injured) and the tactic of pedestrian tourism - is intended to ensure a necessary balance for the students' body between travel and rest.

The development of students' motor capacities, in the discipline of Pedestrian Tourism, in the context of the implementation of the new Physical Education curriculum in the Republic of Moldova, pedagogically capitalizes in the Curriculum, a valuable potential for the formation and development of students' personality in the unit of socio-psycho-motor plans. The formative values of the discipline are varied and valuable: the harmonious and healthy development of the body; enhancing, maintaining or restoring motor qualities and health; dynamization of mental processes, including volitional and affective ones; increasing resilience; stimulation of intellectual activity; the development of moral qualities, such as: team spirit, fair competition, entrepreneurial spirit, courage and selflessness, responsibility, discipline and self-control, patriotic spirit, etc.

The development of motor skills in students is an essential process for a healthy childhood and for their preparation for adult life. Through physical education, sports and recreational activities, students not only improve their motor skills, but also acquire values and habits beneficial for life. Promoting these issues in schools and communities is vitally important for the healthy future of young generations. Tourism activities can play a significant role in the development of motor skills in students, providing them with unique opportunities to improve their physical skills, but also to learn essential aspects such as teamwork, problem solving and adaptability. This analysis focuses on how tourism activities contribute to the development of motor skills in students and their formation as well-balanced individuals.

Conclusion: Tourism activities provide a fascinating panorama of how students can develop motor skills and reach the maximum potential of their physical abilities. By exploring natural environments, tackling challenges and building resilience, students not only improve their motor skills, but also gain confidence in their own abilities. Promoting these activities in education can contribute to the formation of

healthy adults, aware of the environment and able to cope in various situations. Therefore, the development of motor skills through tourism activities represents a valuable investment in the future of our students.

Keywords: tourism; motor skills; secondary school; pedagogical process; pupils;
Field: Sociology.

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THE ROLE OF CENTRAL AND LOCAL AUTHORITIES IN THE REPUBLIC OF MOLDOVA ON THE SUSTAINABLE DEVELOPMENT OF SPORTS TOURISM

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Actuality. The tourism sector in the Republic of Moldova is growing in the context of a rather difficult period due to the economic and pandemic crises. This fact is due to the role of central and local authorities on sustainable development policies and strategies that have been and are being implemented for the development of tourism in the Republic of Moldova. Various forms of tourism can be practiced on the territory of the country, which, capitalized and supported by central and local authorities, can become the business card of domestic tourist destinations. One of these forms is sports tourism, which in recent years has acquired a special connotation, being more and more popular and with a significant increase. In this context, the central and local authorities collaborate in the perspective of the development of this form of tourism which, as demonstrated by the last sports events organized by the Republic of Moldova, are able to attract many athletes who are accompanied by both technical staff and microbiologists or close people that support them in their developments, a phenomenon that assumes that all those mentioned will use a range of tourist services on the territory of the Republic of Moldova (accommodation, food, transport, excursions, etc.), which will ensure their temporary stay in the area where the sporting event takes place .

Purpose. Examining the contribution of central and local authorities in the sustainable development of sports tourism.

Research methods. In order to carry out the study, there were applied methods that ensured the achievement of the established objectives, among them can be listed: the analysis of the specialized scientific-methodical literature, observation, methods of processing and quantitative and qualitative analysis of statistical data.

Findings and results. The development of sports tourism can have a sustainable aspect if it is based on both economic and social and environmental objectives. Since sustainable development is a fundamental objective of the European Union, it must also be addressed in the field of sports tourism, and this fact is achieved by the central public authorities through the development of strategies for the development of the tourism sector, namely the Tourism Development Strategy in the Republic of Moldova between 2003 -2015, Tourism Development Strategy "Tourism 2020", National Tourism Development Program "Tourism 2026". All of them have a special role in the development of sports tourism, at each stage of this form of tourism being given a certain status and connotation depending on the developments on the international tourist market.

In recent years, tourism at the local level has received significant attention from central and local authorities, the reason being the stimulation of the attractiveness of tourist destinations at the community level that can become a source of income for local budgets. In this context, at the local level, the authorities through various mechanisms try to develop the tourism sector depending on the existing tourism potential, the available infrastructure, but also within the limits of the existing financial sources. This fact required the creation of tourism development strategies, or sustainable, socio-economic and integrated development strategies in which a separate segment is dedicated to the tourism and sports sectors at district level, which set priorities for the development of various forms of tourism, including sports, as a form of tourism that can ensure the development of local communities, by: creating jobs, developing small and medium enterprises, etc. At the same time, they include a series of actions for the valorization of sports tourism, which are mostly focused on: the development of sports infrastructure, the promotion of tourism forms including sports, the holding of sports events, etc.

According to the World Tourism Organization (WTO), sporting events can be a catalyst for tourism development if they are successfully exploited in terms of destination branding, infrastructure development and other economic and social benefits.

In the Republic of Moldova, in recent years, more attention has been paid to the development of the appropriate infrastructure to ensure the holding of sports events, but also the practice of various sports events, but there are still great reservations in this regard, especially since this is mainly in the capital and less at the regional or local level, and the development of sports tourism is not possible without a technical-material base and tourist destinations prepared for such a tourism form.

In the last five years in the Republic of Moldova there has been an increase in sports buildings, and an example is the construction of the "Chisinau Arena" complex, which has already hosted a series of events attended by hundreds of athletes and spectators, and an eloquent one was the Championship European weightlifting among young people that brought together 346 athletes, but also members of their technical staff, as well as supporters.

However, at the regional level, the local authorities try to develop this form of tourism within the limits of financial possibilities, by creating the necessary infrastructure that meets international requirements to be able to organize sports events that attract both athletes and their teams, as well as tourists who are interested in sports activities during their travels, regardless of whether sports is the main purpose of it.

In addition to the precarious economic situation at the national level and at the regional level, in the last five years, the sports edifices register both slight increases in some structures and decreases in certain regional areas, a fact that highlights that the sports tourism sector is stagnant and does not contribute significantly to the development of local destinations.

Conclusions and recommendations. As a result of the research carried out

regarding the role of the central and local authorities in the Republic of Moldova in the sustainable development of sports tourism, it can be mentioned that they have elaborated development strategies, which assume the valorization of sports tourism for the economic development of local communities. In recent years, they have been reviewed and adapted to international requirements, and this fact is starting to bring economic benefits to the destination where the sports events take place (example: the European Weightlifting Championship in 2023). At the same time, at the local level, the authorities have well-established directions until 2026 regarding the development of sports tourism and its forms, such as: nautical tourism, aero tourism, mountaineering, etc.

Not following the directions drawn, sports buildings at the national level do not register a significant improvement, and this fact endangers the development of sports tourism. Thus, it is recommended to develop a concept for the development of this form of tourism with an emphasis on the initial development of the areas where this form of tourism has real chances of development.

Keywords: development, authorities, sports, tourism, sporting events.

CHILD PROTECTION IN SPORT FOR SPORTS COACHES

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Actuality

Football is one of the most popular sports worldwide and millions of children around the world are involved in it. Many of them play, whether in organised matches or kick-about. At the same time, almost all children follow a favorite team, learning valuable life lessons such as loyalty and team work. In this context, involving children in playing football requires ensuring and respecting their right to a safe environment, a culture of respect and understanding within the football team. Every child has the right to enjoy football in a safe and inclusive environment, free from any form of abuse, harassment or exploitation, and the failure to ensure all the aforementioned conditions is a violation of children's rights.

Safeguarding children in Sport/football is a priority both at the national and international level and for this reason the need to implement a child protection policy in sport.

Article 19 of the United Nations Convention on the Rights of the Child stipulates that States Parties shall take all appropriate legislative, administrative, social and educational measures to protect the child from all forms of physical or mental violence, injury or abuse, neglect or negligent treatment, maltreatment or exploitation, including sexual abuse.

An important outcome of the UEFA project has been that Football Association of Moldova, under the lead of the UEFA FSR project "Safe football for children In Moldova", are developed attached child protection policy (manual), which was approved by FAM senior management on 15 April 2021. This safeguarding policy has since formed a basic book regarding child safeguarding in Moldova.

Methodological aspects of the research:

The purpose of research: The sociological study named "**Knowledge, Attitudes and Practices for Safeguarding Children in Football**" was designed to assess the knowledge, attitudes and practices (KAP) aimed at protecting children involved in football. The research objectives have centered on:

- determining the degree of satisfaction of the target groups (coaches, children, parents and football experts having direct or indirect contact with children involved in football) with the football club and its work;

- identifying children's perceptions of the degree of safety within the club/football team;

- determining perceptions of the risks to which children are/may be subjected while playing football;

- identifying the views and attitudes of target groups on safeguarding children in football and the need for the safeguarding measures thereof;
- establishing practices for the information of the target group on measures for safeguarding children in football;
- identifying the level of knowledge about the rights of the child and protective measures in respect thereof;
- establishing the forms of violence and the frequency of their application to children during training sessions;
- revealing the knowledge of the target group on reporting the infringements of the rights of the child to enjoy football, including the cases of violence against children.

Methods of research. Following the state of emergency declared in the Republic of Moldova in March 2020, due to COVID-19 pandemic, all football clubs shut down for about 5 months. In this context, the research design has been adjusted to the new existing conditions, being determined the need for collecting all the necessary data in online form. Thus, the research has been conducted on the basis of a structured, self-managed online questionnaire via the <https://docs.google.com> platform, the research tool being adapted for each category of respondents (child, parent, coach).

The research community/target groups included respondents from both banks of the Dniester/Nistru River, the total number of participants in the study being of 391 individuals, of whom 204 children (girls and boys attending local football clubs), 75 parents of children attending local football clubs, accompanying their children most frequently (women and men), 57 coaches and 55 managers of football clubs and sports schools.

Findings and results.

Structure of the sample designed for children

The sample was drawn on the basis of existing statistical data on the number of clubs - members of the FAM (Football Association of Moldova) covering the region and number of children (boys/girls) based on their age. The sample was structured at national level based on the following criteria: The geographical coverage – area of activity/place of residence (North, Centre, South, Chisinau, Transnistria).

Gender (boys and girls) and age (year of birth 2002-2010). Of the 204 children surveyed, 85.3% (174) are male, and 14.7% (30) are female, about 22% are aged 10-11 years, and 31.4% - 12-13 years, children aged 14-15 years are 31.4%, and those aged 16-17 years only 17.6%. Children from urban areas have a higher share – 61.8%, especially from Chisinau municipality - 38.2%, of the other regions of the country the share of children participating in the study is approximately 20%.

Structure of the sample designed for coaches

The sample designed for coaches has been nationally structured on the basis of the following criteria: gender of the coach, work experience in football, age/gender of children he/she is providing training for, type of licence and place of residence. In this context, of the total of 57 coaches surveyed, 89.5% (51) are male, and 10.5% (6) are female. Slightly more than half (57.9%) of them are more than 35 years old, whilst 42.1% of them are aged between 25 and 35. About 60% of coaches have a work

experience in football of up to 10 years (59.6%) and live in urban areas (61.4%), whilst about 2/3 of coaches provide training for 2 or more teams (64.9%) and, in particular for boys' teams (66.7%).

Conclusions and recommendations.

The sociological study named "**Knowledge, Attitudes and Practices for Safeguarding Children in Football**" have pointed out several shortcomings in understanding and taking action in the event of failure to comply with the rights of the child in football, but also on ensuring his/her protection. The main conclusions of the study revealed the following:

- a pleasure to play football among children, not being an activity imposed by parents or adults. Approximately the third part of the children want to become great footballers, the vast majority having expanded their circle of friends;

- the environment of the football club is rated by the children as being a safe one, they having increased confidence in the staff of the club, while the coaches consider that children are safer outside the club due to the conditions of the clubs, especially the conditions regarding the showers and toilets;

- the sports infrastructure is regarded as being in good condition, but there were complaints regarding the existence and condition of the changing rooms, including toilets, bathrooms/showers separated on gender, which reveals a violation of the child's rights to healthy environment and hygiene;

- rural football clubs have poor infrastructure, being poorly equipped with toilets inside the club, with aqueduct and sewerage facilities, including access to hot water;

- the low participation of parents, children and coaches in information activities is reflected in the level of knowledge about the protection of children in football: the vast majority having a low and medium level of knowledge of the rights of the child;

- child protection policy even if it is approved at institutional level, it is not made known to all parents;

- the main way of intervention in most cases of violence is communication with the coach, child-victim, child-abuser and their parents;

- the referral of cases of violations of children's rights to competent institutions in the field is poorly achieved; only 0.5% of children and one in ten parents would call the Childline. Calling the police is also a rare practice among parents or coaches.

Following the study conducted therein, it is recommended:

- to appoint a child protection officer at the level of each institution, given that about a third of the coaches know about his/her existence in the football club where he/she works and most parents consider his/her presence very important;

- to implement the child protection policy by applying the UEFA tools at the level of all football clubs and sports schools;

- to make the FAM responsible for monitoring the implementation of the child protection policy tools by its uniform application at national level;

- to carry out a broad information and awareness-raising campaign to inform children and parents about the rights and means of safeguarding children involved in football, given that there is a low level of information and knowledge about the rights

of the child;

- to make improvements to the training system of coaches and managers of clubs on safeguarding children involved in football, determined by the situation in which knowledge is found to be misapplied in sports activity;

- to establish collaboration relationships with Child Protection Authorities, being observed a low number of parents and coaches appealing to them;

- to improve the sports infrastructure from the perspective of providing optimal and healthy conditions for the conduct of training sessions and sports activities, determined by the poor equipping of football clubs with changing rooms, showers and separate toilets for girls and boys inside the clubs, with hot water and sewerage facilities, sports equipment, etc.;

- to create a non-discriminatory football environment adapted to the needs of all children, including children with disabilities.

Keywords: Child protection, sport, research, safeguarding policy, code of ethics, parents, coaches, children.

STUDY ON THE LEVEL OF MOTIVATION FOR SWIMMING AT THE AGE OF 9-10 YEARS

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The instructional-educational process in learning to swim plays a crucial role in children's development. Approaching methods and use in training practices of all ages and performance levels have been the subject of ever deeper research, so that the effectiveness of training in this area is increasingly visible.

The issue of motivation in sports is a topical issue because it is essential for athletes' involvement and performance. Although material stimulation can be considered an important factor in motivating athletes, it is not necessarily enough to commit them to an extremely difficult and risky path, such as that of performance sports.

Athletes' motivation stems from a complex combination of factors, including passion for sport, the desire to demonstrate their skills and talents, the aspiration to achieve personal and collective goals, and the desire to achieve recognition and satisfaction through sporting success.

The purpose of the research is to identify the level of motivation for swimming and performance of children aged 9-10 years.

Research method: the test Motivation for swimming of children aged 9-10 years (adaptation after N. Luskanova)

The test was applied by the researcher in October 2022 to a number of 30 children aged 9-10 who practice swimming in the Târgoviște Swimming Complex and CSȘ Târgoviște Swimming Pool. Depending on age, we have, within the experimental group, 7 children aged 9 and 8 children aged 10. Within the control group, we identify 6 children aged 9 years and 9 children aged 10 years. We observe that the two groups are homogeneous, referring to the age variable.

Regarding the gender of the subjects who are part of the group subjected to the experiment, we observe homogeneity in terms of gender, in each group there are 5 girls and 10 boys. The distribution according to the residential environment from which they come is as follows: from the experimental group 3 subjects come from the rural environment and 12 from the urban environment, and in the control group 1 subject comes from the rural environment and 14 from the urban environment

The test results can be seen in Table 1.

The difference between the values obtained between the experimental and control groups is not significant from a statistical point of view, since the values of the statistical indicators are close, we observe small differences between them.

Table 1. Distribution of results on the Motivation for swimming test of children aged 9-10 years (adaptation according to N. Luskanova), experimental group and control group (n=20 boys)

Nr. crt.	Experimental group		Control group	
		Initial testing		Initial testing
	Child's first and last name (initials)		Child's first and last name (initials)	
1.	A.N	23	A.I	21
2.	A.T	20	B.G	19
3.	B.L	17	B.M	24
4.	C.R	25	C.I	21
5.	D.F	19	D.C	15
6.	G.I	15	R.N	23
7.	I.A	17	R.O	18
8.	I.I	24	M.R	25
9.	M.G	18	N.A	23
10.	S.C	26	V.E	21

The differences between the two groups in the statistical indicators are variable, the difference between the averages is small, 0.6 points, in the standard deviation the difference between the groups is 0.77 points, the minimums recorded are equal to 15 points, and the difference between the maximums of the groups is 1 point. These results show homogeneity regarding the level of motivation between the experimental group and that of the control group.

Table 2. Analysis of the level of motivation for swimming in the experimental and control groups, boys

Nr. crt	Experimental group	Control group	Level	Points	Motivation
1.	SC-26 p CR- 25 p	MR-25 p	I	25-30	Very good motivation
2.	I.I-24p AN-23 p AT-20 p	BM-24 p NA-23 p RN-23 p CI-21 p A I-21 p VE-21p	II	20-24	Good motivation
3.	DF- 19 p MG-18 p BL- 17 p IA-17 p GI-15 p	BG-19 p RO-18 p DC-15 p	III	15-19	Relatively good motivation
4.			IV	10-14	Poor motivation
5.			V	<10	Very poor motivation

We find that the level of motivation for swimming of the interviewed subjects is good. On the first level are ranked 2 subjects from the experimental group SC with 26 points and CR with 25 points, and from the control group subject MR with 25 points. These subjects have a very good motivation to practice swimming.

On the second level, a number of 3 subjects from experimental group II are ranked with 24 points,

AN with 23 points, AT with 20 points and six control subjects BM with 24 points, NA and RN with 23 points each, CI, AI and VE with 21 points each. The motivation of these subjects is characterized as good.

Level III, respectively of relatively good motivation, has 5 subjects from the experimental group in the ranking: DF with 19 points, MG with 18 points, BL and IA with 17 points, GI with 15 points. In the control group, three subjects were registered on this level: BG with 19 points, RO with 18 points and DC with 15 points.

None of the subjects was ranked on level IV-weak motivation and on level 5-very weak motivation.

Overall, the motivation of 9-10 year olds for swimming is good and relatively good.

In the following we will analyze the results recorded by the girls' teams.

Table 3. Distribution of results on the Motivation for swimming test of children aged 9-10 years (adaptation according to N. Luskanova), experimental group and control group, (n= 5 girls)

Nr. crt.	Experimental group		Grupul de control	
		Initial testing		Initial testing
	Child's first and last name (initials)		Child's first and last name (initials)	
1.	A.F	22	A.N	20
2.	B.M	20	B.P	18
3.	E.L	19	D.V	22
4.	G.M	26	I.F	20
5.	M.T	18	N.O	18

The difference between the values obtained between the experimental and control groups is not statistically significant as the values of the statistical indicators are close in value.

The difference between the averages of the two groups is 1.04 points, the standard deviation being 2.82 points in the case of the experimental group and 1.49 in the case of the control group. The difference between the minimum values is 1 point, and between the maximum values is 4 points in favor of the experimental group.

The results obtained by the girls from the two groups subjected to the experiment, in the Motivation for swimming test of children aged 9-10 years, are as follows: on the first level, with a very good motivation, only GM ranked with 26 points, from the experimental group, on level II, with good motivation, the subjects

AF with 22 points and BM with 20 points from the experimental group and DV with 22 points, AN and IF with 20 points each from the control group are highlighted. On level III, relatively good motivation, there are EL with 19 points and MT with 18 points from the experimental group and BP and NO with 18 points each from the control group.

Table 4 Analysis of the level of motivation for swimming in the experimental and control groups, girls

Nr. crt	Experimental group	Control group	Level	Points	Motivation
1.	GM -26-p		I	25-30	Very good motivation
2.	AF-22 p BM-20 p	DV-22 p AN-20 p IF-20 p	II	20-24	Good motivation
3.	EL-19 p MT-18 p	BP-18 p NO-18 p	III	15-19	Relatively good motivation
4.			IV	10-14	Poor motivation
5.			V	<10	Very poor motivation

Conclusions

The analysis of the obtained data shows us that both groups subjected to the experiment, both in the case of boys and girls, have a good motivation for swimming, but there is a need to increase the level of motivation to maintain interest in this sport and to register performance, through specific activities.

We believe that an increased level of motivation among children between the ages of 9 and 10 in swimming practice can have a significant impact on their development both in sports and personally.

In correlation with the research results, we propose the following **recommendations**:

- For each group of children, by age level, a psychological training program targeting the motivational component will be developed, which will be integrated into the training process. This program will be adapted to the specific needs of the group and will aim to adapt motivation and, implicitly, sports performance.

- The psychological training program will include strategies and techniques to support the development of children's motivation for swimming, promoting commitment, the desire to excel and perseverance in training and competitions. This could include, among other things, visualization sessions, stability of personal goals, working with thoughts and emotions to maintain a positive mindset and focus on success.

Keywords: development, swimming, motivation, performance, sport.

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THE IMPORTANCE OF THE METHOD OF PLAY IN THE DEVELOPMENT OF PSYCHOMOTOR SKILLS IN ATHLETES PRACTICING CHANBARA

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Actuality. Chanbara is an oriental martial art, a new modern Japanese sport that appeared recently in 1970. The word "chanbara" in Japanese means the sound of sword strokes. Retrospective analysis allows us to highlight the gradual development of the new style of chanbara martial arts, which originally was a kind of training fights in batto-do and kenjutsu, applying striking techniques with maximum speed and power, as well as defense from them. The training process as well as competitions in chanbara proved to be such attractive, interesting and useful exercises through play that they stood out as a separate sport, applying soft, air swords that are pumped like a football.

At the contemporary stage of development of the new style of chanbara, the volume of motor activities performed in unpredictable situations has significantly increased, which requires the manifestation of ingenuity, quick reaction, the ability to concentrate and shift attention, the spatio-temporal accuracy of movements and their biomechanically rational character.

During competitive activity in the combat sports system, including chanbara, the most successful athletes perform best when they demonstrate a high level of psychomotor possibilities, which is manifested by the perfection of specialized perceptions, such as the sense of the opponent, distance, combat space, balance, rhythm, tempo and last but not least precision.

We can assume that the application of the game method based on the development of psychomotor skills in young athletes at the initial stage will contribute to the intensification of the training process of competitive technical-tactical activity specific to chanbara.

The aim of our work is to develop psychomotor skills in young athletes practicing chanbara by applying the game method.

Research objectives.

1. To study the problem of psychomotor activity of young people who practice chanbara.
2. To determine the significance of the game method in the development of psychomotor abilities of young athletes who practice chanbara.
3. To find more rational conditions for the education of psychomotor skills specific to chanbara activity.

Research methods.

Analysis and generalisation of scientific-methodological literature, data from the internet; retrospective analysis, testing of physical parameters, mathematical processing method and interpretation of statistical data. The experiment involved 18 year-old youngsters practicing chanbara who gave written consent to participate in the research according to the ethical standards of the Declaration of Helsinki.

One of the important factors that characterize the psychomotor activity of the athlete is the ability to perform technical-tactical actions in accordance with the rules established in the competition.

The formation of psychomotor capacities is one of the main current issues that play an important role in the formation of the structure of the athlete's technical-tactical actions at the initial stage.

For these reasons, we have developed an experimental program, the specificity of which consists in the fact that for the targeted formation of psychomotor actions in the chanbara sport event, we have introduced the method of playing, the arsenal of which allowed us to design an algorithm of training athletes in chanbara.

Table 1. Algorithm of psychomotor capacity development in novice athletes practicing Chanbara based on the application of the game method

Stages	I	II	III
Training type	JD+PFG+PFS →	PT+JS →	PTT+JST

The objectives to be achieved at the first stage consisted in the training of general and special capacities of the given type of sport through the application of dynamic games, in particular the education of psychomotor skills, with emphasis on the training of sensory-motor skills. The duration of the first stage was 3 months.

During the second phase, the technical training programme additionally included special games, which were developed on the basis of technical elements of a competitive nature. The duration of the second phase was 3 months.

The third stage involved the implementation of technical-tactical actions during the match, friendly meetings and during special competitions, in which the structure of specialized motor actions was organized. Special tactical games were used in the process of training technical-tactical actions.

Findings and results.

Two groups of young athletes of 12 respondents each were formed to carry out the pedagogical experiment.

In order to determine the effectiveness of the developed program, it was necessary to form two experimental groups (experimental and control) and to reveal the dynamics of the development of their psychomotor capacities. For this purpose, we carried out testing of indices of general and special training of young athletes practicing chanbara. At the beginning of the pedagogical experiment, testing of all indices was conducted to demonstrate the homogeneity of the results of the members of both groups ($P > 0.05$). The results of the testing are presented in Table 2.

Table 2. Results of testing athletes in the control and experimental groups at the initial stage of the pedagogical experiment

No. crt.	Parameters	$\bar{X} \pm m_x$		t	P
		Control Group	Experiment Group		
1.	Sense of rhythm (pct.)	4,55 ± 0,16	4,60 ± 0,15	0,23	>0,05
2.	Orientation in space (ori)	5,60 ± 0,32	5,80 ± 0,30	0,46	>0,05
3.	Romberg test (sec)	5,88 ± 0,18	5,71 ± 0,19	0,65	>0,05
4.	Sleigh run - 2×10 m with tumbling (sec)	11,25 ± 0,34	11,34 ± 0,34	0,20	>0,05
5.	Jump rope 30sec, (no.)	60,00 ± 2,46	61,00 ± 2,44	0,29	>0,05
6.	One-handed choken strikes, no./s.	28,77 ± 1,05	28,17 ± 0,93	0,43	>0,05

Note: $n=12$; $P= 0,05 \quad 0,01 \quad 0,001$;

$t = 2,042 \quad 2,750 \quad 3,646$

The experimental group trained according to our proposed methodology, based on the application of the game method in sports training according to the developed algorithm. As a result of the experiment the psychomotor abilities of the athletes practicing chanbara were considerably developed.

At the end of the experiment, repeated testing was conducted, which took place under the same conditions and according to the same method as at the beginning of the experiment. Athletes in both groups performed control exercises in the same order as at the beginning of the pedagogical experiment. The results of the testing are shown in Table 3.

It can be seen that, at the end of the experiment, the athletes in the experimental group showed significantly better results compared to those in the control group ($P < 0.05 - q < 0.01$) on all indices.

Table 3. Test results in the control and experimental groups at the final stage of the pedagogical experiment

No. crt.	Parameters	$\bar{X} \pm m_x$		t	P
		Control group	Experiment group		
1	Romberg test (sec)	5,55 ± 0,16	5,07 ± 0,15	2,09	<0,05
2	Sense of rhythm (pct.)	4,70 ± 0,15	5,19 ± 0,12	2,58	<0,05
3	Sense of rhythm (pct.)	6,13 ± 0,31	7,18 ± 0,28	2,50	<0,05

4	Sleigh run - 2×10 m with tumbling (sec)	10,74 ±0,32	9,57 ±0,30	2,66	<0,05
5	Jump rope 30sec, (no.)	64,93 ± 2,35	71,80 ± 2,30	2,09	<0,05
6	One-handed choken strikes, no./s.	33,13±0,99	28,83 ± 1,05	2,99	<0,01

Notă: n=12; P= 0,05 0,01 0,001;
t = 2,042 2,750 3,646

Thus, athletes in the experimental group, compared to those in the control group showed significant differences in the following parameters "Romberg test" - $t=2.09$, ($P<0.05$), "Rhythm sense" - $t=2.58$, ($P<0.05$), "Spatial orientation" - $t=2.50$ ($P<0.05$), Sleigh run - 2×10 m with tumbling (sec) - $t=2.66$ ($P<0.05$), and "Jumping rope" - 2.09.

In addition, in the experimental group, in contrast to the control group, there was a considerable improvement in the indices of technical preparation (the parameter "Choken strikes, one-handed" - $t=2.99$ ($P<0.01$), (Table 2).

Conclusions and recommendations

Based on the recorded data, we can assume, that the increase of results in the experimental group occurred due to the development of psychomotor abilities during the application of the game method introduced in the training process of young athletes practicing chanbara.

The application of the game method in the training process, which aimed to develop psychomotor skills in 18-year-old athletes, was beneficial.

It follows that the game method has a positive influence on the development of psychomotor activity of athletes, which in turn provides the prerequisites for the harmonious development of orientation in space, awareness of balance, sense of time, partner, distance in the process of performing technical-tactical actions in extreme competitive situations.

Keywords: chanbara, psychomotricity, initial stage, development.

THE STUDY ON THE CORRELATIVE ANALYSIS OF FAIR-PLAY IN SPORTS AND SOCIETY

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Actuality. Sport, through its means, represents the most effective form of education, training and promotion of fair play conduct. Education, in general, involves preparing individuals for life, in the sense of imparting them with knowledge and forming skills that they can use to deal with the various situations they will face throughout their lives. Fair-play conduct is one of the elements that underlie the respect for the other's freedom and offers the possibility of manifesting the physical and intellectual potential without putting the other in inferiority. Educating fair play is an essential condition of civilized coexistence and ensures progress based on mutual recognition of the value of the other. For a wider addressability, school physical education is the discipline within which fair play can be educated and trained, providing the sustainable environment in which the level of internalization of fair play behaviors can be assessed and verified. Also through education, students and athletes must be aware of negative factors, opposed to fair play conduct, such as the desire to win at any cost, non-compliance with regulations, cheating, etc., in order to be able to recognize them and not follow them.

Through the educational process, students and athletes must be made aware that the model of the educated athlete is characterized by – simplicity, modesty, balance. In general, fair play is not just ethical conduct or casual behavior. He represents an entire morality, a psychology, a code of unwritten, chivalrous and traditional laws.

Philosopher Hans Lenk and sports sociologist Gunter A. Pilz argue that education in the spirit of fair play should not be neglected in a society that threatens to become oriented exclusively after success. Fair play education encourages people to learn to be calm, relaxed and more fair. Fair-play means respecting the rules, renouncing unfairly obtained advantages, equal opportunities, preventive behavior, respecting sports opponents, accepting other peers and offers genuine possibilities for better orientation in a world full of competitive elements.

Fair play does not only mean observing the rules of the game, it transcribes the attitude that the athlete must have: respect for the opponent and preserving his physical and mental integrity.

Sportsmanship and fair play are characterized by discipline, conduct, honest, loyal, respectful attitude of an athlete towards his partners and opponents.

Purpose. In the present study we aim to highlight the impact of fair play behavior in competitions and social life and if there is a correlation between them.

The research has an exploratory character and consisted of a documentation and

application process, which resulted in the construction of the questionnaire and its application to a number of 150 athletes, who come from different sports clubs.

The independent variables of the study were the following: gender (male, female), age (17-23; 24-30; 31-37), sports branch (athletics, football, handball, rugby, volleyball), qualification level (Division National, Division A, Division B, seniors, juniors), level of training (general school, vocational school, high school, university studies, postgraduate studies).

Dependent variables that resulted from the statistical analysis were the correlations between fair play in competitions, general fair play and fair play in society.

The purpose of our research is to highlight the need for a moral dimension in the training of athletes, embodied in the athletes' fair play attitudes and behaviors.

The hypothesis of the undertaken research consists in identifying the direct correlations between the variables of fair play in competitions, fair play in general and fair play in society.

Methods of research. Fair play was measured by means of the Fair Play Questionnaire (CFP). It has the role of measuring the way athletes think and act in competitions and in social life from the point of view of fair play and contains a number of 28 items, being structured on two subscales of 14 items each: fair-play in competitions and fair play in society. The subject had to choose a number from a Likert scale with 5 degrees of intensity, the number signifying the degree to which the subject agrees with that statement.

The analysis and interpretation of the results was carried out with the help of the SPSS for Windows program and the Pearson bivariate correlation was carried out between the variables general fair play, fair play in competitions, fair play in society.

Findings and results. The analysis of the correlation between the variables of fair play in competitions and fair play in society, demonstrates that the higher the score in one of the two dimensions, the more the score will increase in the other. This conclusion was issued following the calculation of the Pearson bivariate correlation coefficient between the fair-play variable in competitions and the fair-play variable in society.

There is a direct significant positive correlation between the variables fair-play in competitions and fair-play in society ($r = 0.680$, $p = 0.000$), in the sense that athletes who have high fair-play behavior in competitions will have fair-play behavior raised in society and vice versa.

The analysis of the correlation between the variables of fair play in society and general fair play, demonstrates a direct correlation between them, in the sense that the higher the score on the dimension of fair play in society, the more the score will increase on the dimension of general fair play. To verify, the bivariate Pearson correlation coefficient was calculated between the fair-play variable in society and the general fair-play variable.

There is a direct significant positive correlation between the social fair-play and general fair-play variables ($r = 0.897$, $p = 0.000$), in the sense that athletes who have

high fair-play behavior in society tend to have high fair-play behavior in general and vice versa.

The analysis of the correlation between the variables of fair play in competitions and general fair play, demonstrates a direct correlation between them, in the sense that the higher the score in the dimension of fair play in competitions, the more the score will increase in the dimension of general fair play. To verify, the bivariate Pearson correlation coefficient was calculated between the fair-play variable in competitions and the general fair-play variable.

There is a direct significant positive correlation between the fair play variables in competitions and general fair play ($r = 0.934$, $p = 0.000$), in the sense that athletes who have high fair play behavior in competitions tend to have fair play behavior high in general and vice versa.

From a qualitative point of view, for the correlations found between the variables of fair play in competitions, fair play in society and general fair play, we can state that athletes who exhibit a behavior full of fair play in sports competitions will exhibit the same type of behavior and in social life.

Conclusions and recommendations

Awareness of the sports activity carried out leads to the construction of the athlete's personality by educating morality and will, motivation occupying an important place in the training of athletes.

The lack of statistically significant differences between the analyzed groups could be due to the fact that fair play has the same importance for all athletes regardless of age or gender. Accomplishing adequate training in this segment since childhood leads to the internalization of social norms, those imposed by the rules and regulations of sports competitions, fair play being an integral part of the self and behavior of any athlete.

Sports norms, rules and regulations, as well as social norms and rules of social coexistence leave their mark on the behavior of athletes who internalize them and behave in the spirit of fair play. Respect for peers, respect for opponents and teammates, the acquisition and observance of game and social rules leads to the formation of sportsmanship in the spirit of fair play, conduct that manifests itself in any life situation.

The correlations found between the variables of fair play in competitions, fair play in society allow us to say that athletes who exhibit fair play behavior in sports competitions will also exhibit the same type of behavior in social life. Sports norms, rules and regulations, as well as social norms and rules of social coexistence leave their mark on the behavior of athletes who internalize them and behave in the spirit of fair play.

Athletes who demonstrate a fair-play behavior have a greater awareness of their own feelings and a better consolidated sense of Self, live and perceive a sense of choice regarding their own behavior, compared to those whose fair-play is less. In the same way, we can say that with the internalization of social norms and rules, those of sports and social coexistence, athletes will show a much more autonomous behavior than

those who only take note of the existence of these rules and norms, behavior that springs from the intentionality of individuals, that is, a self-determined one. The realization of a sports education in the spirit of fair play leads to the formation of the autonomous personality of the athletes, to the manifestation of their capacity to develop themselves in accordance with the principles of fair play.

Keywords: Fair play, education, sport, performance, social integration.

DEVELOPMENT OF MUSCLE STRENGTH IN WOMEN 20-35 YEARS BY APPLYING MEANS FROM FITNESS

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Actuality. In modern times, it is not easy for a person to maintain his state of Health. He is constantly exposed to the technologically altered environment, great physical and psychoemotional stress, so modern man has to live more and more at the limit of his psychic and physical capabilities. In recent years, the Republic Of Moldova has seen an unprecedented decrease in the level of public health. The greatest concern in this regard is the attitude of the younger generation to their health. In the meantime, they will ensure the future socio-economic, political, scientific and technological progress of society.

With the emergence of new directions of maintaining and strengthening the state of health, as well as fitness in the field of wellness technologies, significant transformations began to take place in this area important for contemporary society, which, due to excessive technologization, is increasingly subject to the phenomenon of hypodynamia. Every year the number of fitness, medical and wellness sports programs is increasing. Fitness influences the development of all the physical qualities necessary for everyday life. It is so varied that anyone, regardless of age, sex, lifestyle and health status, can adapt the system to their needs, achieving the goals of physical development and training, as well as those of fortifying the state of Health. All the methods applied in fitness contribute to the mass development and improvement of the health of the population by the means available to each person. Among the various directions, a special place is occupied by strength fitness, which is becoming more popular every year.

Strength Fitness is one of the most optimal means of maintaining good physical condition and mental energy until old age. Therefore, there is no doubt that strength fitness, as a means/method of fitness will gain more and more followers over time.

The purpose of this study is to refine the methodology of the development of motor qualities and capabilities in women (muscle strength), based on the individualization of the training and training process.

Research methods: analysis of bibliographic sources; pedagogical observation; control pedagogical testing; pedagogical experiment; statistical-mathematical methods; graphical and tabular method.

Research results. For the conduct of experimental research, the evaluation methodology was developed, as well as control tests for researching the level of development and physical training (strength) of women involved in the research were identified. Subsequently, the selection of means intended for strength training was

carried out, which would be optimal for the female organism. For this purpose, strength development complexes have been developed, which, at the same time, are aimed at optimizing the psychophysical state of women, depending on individual characteristics.

The content and volume of the means aimed at increasing the level of physical training and, implicitly, fortifying the state of health, by improving the level of muscle strength in women of 25-35 years with different degrees of development and physical training, are determined based on the use of the most effective means of training, which should be based on the application of various fitness devices and devices, directed to improving the motor capacities in the researched subjects.

As a result of the application of the strength training methodology of women 20-35 years old from the experimental group, developed by us, a substantial increase of the strength indicators defining this motor quality for different links of the body was obtained, compared to the women in the control group, who applied classical strength training technologies used in bodybuilding and who, most often, are based on the accumulation of muscle mass, without taking into account the individual characteristics of the, their needs and goals pursued in the training process.

The improvement in the level of physical development in the experimental group starts from 0.1% (waist) and reaches up to 12.4% (decrease in body weight), while in the control group, which also made some progress, however the increases were significantly smaller, starting from 0.1% (waist) and reaching only up to 7.5% (waist perimeter).

The indices that define the level of strength training also proved to be significantly higher in the experimental group, where an increase in parameters was attested from 33.3% (lifting the torso from the facial lying 30s.) to 109.1% (maintaining the static position of the torso from the extended facial lying (sec). As for the control group, the increases were not so large, often insignificant, and were within the limits of 18.9% (lifting the trunk from the facial lying 30s.) and 87.8% (maintaining the static position of the trunk from the extended facial lying (sec.).

The results of experimental research confirmed the hypothesis put forward in the research, and the goal and objectives outlined were successfully solved.

Conclusions and recommendations. Analysis of the scientific literature on strength training of women, practicing fitness has shown a wide variety of methods. The main attention of researchers is paid to the biochemical and biomechanical substantiation of strength training, which undoubtedly confirms the increased attention to fitness, as a form of practicing physical exercise and recreational activity, aimed at fortifying and maintaining the health of women in the basic reproductive period.

The identification of tests for the evaluation of individual indicators that define the level of development and physical/strength training) of women 20-35 years old practicing fitness, through the application of factorial analysis, allowed us to objectively assess the level of development and strength training, taking into account their individual characteristics. The strength training technology developed by US

and applied in the formative experiment demonstrated a much higher degree of efficiency in the experimental group, which significantly improved, compared to the control group, both the parameters that define the level of physical development and those that define the level of strength training.

As a result of the experimental research developed and applied by us, it was confirmed the hypothesis put forward about it, that the use of pedagogical technologies, including optimal regimes for strength development and fortifying the health status of women 20-35 years old, based on individual indicators of physical development and training, will significantly increase the efficiency of the process training and training in fitness clubs.

Based on the conducted experimental study on the development of strength in women 20-35 years, by applying the means from fitness, we can recommend the following:

- number of training sessions per week - 3 (three);
- the duration of the fundamental stage of training is up to 60 Minutes;
- heating must include general and special components;
- for the development of force capacities, the method of intervals in circuits will be applied;
- weight size 50-55% from maximum;
- duration of execution-40 seconds;
- rest between exercises-30 seconds;
- rest between Series - 3 minutes.
- the tempo of the exercises is maximum.

It is not recommended to carry out training sessions on days and muscle groups, just like men, who are more concerned about increasing muscle mass and less about the level of strength training. Means for training should be varied and often combined with each other, so fats will burn faster, and changes will come faster. You need to eat properly before and after training, to burn fat faster and make the most of the impact of exercise on the body.

Keywords: fitness; women 20-35 years old; individualization; muscle strength; level of development and physical training; fitness programs.

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THE ROLE OF FITNESS PROGRAMMES IN REDUCING OVERWEIGHT IN SECONDARY SCHOOL STUDENTS

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From primary school onwards, the pupil is filled with information from all directions (school, family, media, internet.), about how he should be as an individual, what should do, what should know or what is most important for him as a human being. Sometimes in school there is no emphasis on information showing children the importance of physical exercise on their development, on their biological potential or on the influence of physical effort and games on normal psychomotor and biological development. All these aspects should be of concern to us in order to develop in pupils the thinking, practicality, responsibility, sociability, communication, qualities of will, courage and perseverance, fairness and respect, bodily aesthetics and moral conduct, qualities necessary for the future adult, integrated and adapted to the requirements of modern education.

Specialists in the psycho-pedagogical field have unanimously accepted that physical education, regardless of the level of education at which it is taught, plays a fundamental role in the process of formation and development of the child/adolescent's personality, and the formative biological, motor, psychological and social values of this discipline are recognized. The general aim of our research is to determine the extent to which exercise alone contributes to reducing the effects of obesity in secondary school children. The research is of an experimental type, carried out in several stages, on a sample of 24 overweight male and female students, aged between 10 and 14 years old, from "Vasile Alecsandri" National High School and "George Bacovia" Secondary School, Bacau, Romania. At the first stage of the research, during the period 01.09.2021 - 01.11.2021, the sample and the locations where the extracurricular fitness activities will take place were identified and the measurements of anthropometric indicators and psychomotor test sets necessary to investigate the level of physical fitness, respectively the value of its components in the subjects included in the research were selected.

The second phase of the research were applied the testing method and the pedagogical experiment, carried out between November 2021 and May 2022, aimed to apply the training program on the sample identified in the first phase, with the realization of the initial (November 2021) and final (May 2022) tests. In our research we designed a physical training program in which means of action from various

sports branches were used, adapted to the specific age of the pupils of the secondary school classes.

The main results of the research at this stage refer to the evaluation of the impact of the training program applied to the experimental group, reflected in the evolution of anthropometric indicators measurements in the subjects included in the research.

Keywords: workout, overweight, fitness program.

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THE DEVELOPMENT OF EMOTIONAL INTELLIGENCE WITHIN THE SPORT OF JUDO DURING THE ADOLESCENT PERIOD

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Actuality. Contemporary society adopts an ideal of personality, which describes humans, much from the point of view of emotional intelligence. The ever-increasing complexity of contemporary society makes emotional intelligence insufficient for children (the young generation) in the context of solving everyday problems. Aware of these things, we increasingly reveal the importance of emotional intelligence in supporting control over difficult social situations, leading to correct behavior, guaranteeing an adequate level in society.

Academic performance and children's adaptation to the demands of social life are a priority for parents as well as for teachers. The ever-changing ideals of contemporary society make the intelligence acquired both in the family and in educational institutions insufficient for most of the children.

Research in recent decades has focused on the tendency to theoretically and practically substantiate the concept of emotional intelligence, demonstrating its importance for personal development and socio-professional insertion, and current concerns in this field branch out into several fields such as sports. The perspective of developing emotional competence by practicing motor activities involves improving well-being, increasing the decision-making capacity to solve problems in a responsible way, coping with everyday and stressful demands.

P. Salovey and J.D. Mayer consider that emotional intelligence involves the ability to perceive emotions as correctly as possible and to express them, the ability to generate feelings when they facilitate thinking and the ability to know, perceive emotions and regulate them, in order to promote emotional and intellectual significant development. Emotional intelligence represents "the ability to accurately perceive, understand and positively express certain emotions, to use emotional valences to facilitate the resolution of problematic situations".

The sports environment requires solving emotional problems through specific training and competition that create conditions for the athlete to develop emotional intelligence, to increase self-confidence.

Judo is the model sport for emotional development. The means and methods implemented in Judo, its special principles and forms, are oriented towards the training of athletes in order to acquire the technique of procedures and motor actions for the development of motor qualities; to increase the capacities of the functional

systems of the athletes' body, which ensure the results of the competitive activity; towards the formation of moral and volitional qualities, towards expanding the possibilities of developing emotional intelligence.

Judo sports activity:

- provide pleasant physical and mental sensations.
- improves motor behavior - gesture quality, precision and strength.
- ensures the improvement of major functions and adaptation to effort - mental-emotional resistance at the same time.
- guarantees the balance and consistency of psycho-emotional manifestations - the development of emotional intelligence.

The topicality of the topic addressed is determined by the valorization of the sport of Judo, in the development of emotional intelligence. The most important styles of martial arts are increasingly popular in recent years, one of them being Judo, which is not just a simple sport, but also a form of mental development, namely emotional stability, self-esteem and respect for the opponent (empathy) main components of emotional intelligence. In this context, we note the need to capitalize on the sport "Judo" as an alternative to technologies for developing emotional intelligence in psychology.

Research hypothesis. It is assumed that the practice of the sport of Judo, through the specific techniques and methodologies of mental preparation of the judocan, can be a psychotherapeutic alternative for the development of emotional intelligence.

The purpose of the research consists in capitalizing on the sport of Judo as an alternative to the psychological methods of developing emotional intelligence during the adolescent period.

Research objectives: 1. Analysis of epistemological benchmarks regarding the role of Judo sport in the development of emotional intelligence during the adolescent period. 2. Emphasizing through a sociological survey the problem of emotional intelligence in society and highlighting the role of the sport of Judo in the development of emotional intelligence. 3. The elucidation of mental training mechanisms in the sport of Judo having an impact on the development of emotional intelligence during the adolescent period. 4. Experimental argumentation of the effectiveness of the sport of Judo in the development of emotional intelligence.

Methods of research: At the level of theoretical conceptualization: the method of analysis and synthesis, the method of theoretical generalization, theoretical modeling, interpretation and conclusion. At the praxeological level – the pedagogical experiment; survey based on a questionnaire for specialists in the field.

The importance of the research represented by: substantiating the methodological approach of the sport of Judo in the training/development of emotional intelligence in adolescents; examination and interpretation of theoretical benchmarks regarding the problem of emotional intelligence in the adolescent period.

Findings and results. The data of the sociological research allowed us, along with the characteristics of the de facto state, to obtain information about the possible perspectives of Judo sport activities in overcoming emotional intelligence. The

exposed and generalized opinions of the specialists predetermined the development of experimental events for the scientific foundation of the problem of emotional intelligence and the ways of development through the sport of Judo.

The basic pedagogical experiment, carried out in the training conditions of the experimental group, evaluated emotional control through projective psychodiagnostic tests. The evaluation tests confirmed a significant final increase in emotional intelligence, with a discrepancy between the initial and final testing, relevant from a statistical point of view. This proves that the implemented independent variable confirms the initial expectations, and can be considered an optimal solution in improving the process of developing emotional intelligence in adolescents.

The results obtained as a result of the statistical processing of the recorded data are significant, in the post-test compared to the pre-test, a fact that determines the confirmation of the hypothesis according to which: Practicing the sport of Judo, through the specific techniques and methodologies of mental training of the judo artist, induces the development of emotional intelligence.

Conclusions and recommendations. Through the research carried out, it was capitalized with an overall vision on the development of emotional intelligence by practicing the sport of Judo. Based on the investigative results, we can formulate the following general conclusions:

1. At the present moment, a negative aspect in the early school period are the emotional consequences, which negatively influence the success of the educational process and the formation of the personality as a whole. Obviously, scientific notions were identified with reference to solving the problems of emotional intelligence in adolescents. At the same time, the knowledge in the development of emotional intelligence in practice is insufficient, it requires a specific, current approach to the components of the development of emotional intelligence by focusing on other fields that can have a significant contribution in emotional establishment such as Sports.

2. The analysis of the peculiarities of mental training in the sport of Judo demonstrated the synergy and consolidation of the complex factors of the The dynamic study of the pedagogical experiment allowed us to establish the level of emotional intelligence development. The emotional state of the teenager at the end of the experiment is stable. The subjective perception of one's own conditions and possibilities is at a good level. There is no situational nervousness, the surrounding factors do not influence motivation. the final results according to the studied tests are significantly higher compared to the initial ones, both dynamically and between groups ($P < 0,05-0,01$).

Keywords: emotional intelligence; Judo; psychological training; technology; emotional stability; psycho-emotional resistance.

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THE IMPORTANCE OF DEVELOPING THE PSYCHOMOTOR SKILLS OF YOUNG SCHOOL-AGE CHILDREN THROUGH THE MEANS OF MUSIC AND MOVEMENT

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Actuality. The current training system with primary school children offers a flexible offer, which allows the teaching staff to modify, supplement or replace the learning activities.

The pursued study consists in the analysis and determination of a personalized didactic approach, through which the training of the skills provided by the program is ensured in the specific context of each class and each children. The need for a specific approach to early childhood education is essential, based on the stimulation of learning through play. In this sense, the "music and movement" discipline has a novelty character in relation to the disciplines studied so far in primary education, due to its integrated character.

Movement through its means educates the basic components of body-gestural beauty and expressiveness. Music is the perfect artistic way to express feelings and emotions, it contributes to the development of cognitive processes and the development of children's personalities.

The purpose of the research is to improve the instructional-educational process of primary school students through the formation of motor intelligence, based on the specific means of movement in combination with musical support.

Research objectives:

1. The study of specialized literature regarding theory and practice in order to form the personality of primary school students through the use of music and movement

2. Determining the development of a curricular model as a means of training motor intelligence based on a music and movement program oriented towards the psychomotor training of young school-age students

Research methods used are: bibliographic study, interview and pedagogical observation, the method of tests and pedagogical experiment.

The results of the study demonstrated that the discipline "Music and Movement" aims at an educational course specific to the intuitive stage, as the first

stage in the realization of musical education. The association of music and movement at the level of the official curriculum has the advantage of stimulating the expressive manifestation of the student.

The sociological study carried out on the level of development of the motor intelligence of primary school students shows that in preparatory classes I and II the association of music and movement is on the one hand appropriate to the particularities of the children's age, and on the other hand has pedagogical valences in the sphere of supporting physical development harmonious, movement coordination, aesthetic sense development, affective development and intellectual development.

By determining the level of knowledge of physical education teachers about learning and motor intelligence of children of small school age, analyzing the level of awareness of teachers about motor learning, motor intelligence of students in order to improve psychomotricity components within the discipline of Music and movement and identifying the way in which physical education teachers represent their method of teaching the subject in the instructive-educational process for children of small school age, it was found that musical education has a determining role in the multilateral development of children's personality and is an integral part of aesthetic education, throughout elementary school.

The argumentation and experimental verification of the effectiveness of the methodology of applying music and movement activities, aimed at the formation of the personality of primary school students in psychosocial and psychomotor terms, makes a substantial contribution to the formation of the personality of students by optimizing psychomotor potential, motor intelligence, establishing interpersonal relationships effective, expressed through indicators of group cohesion and personality traits by approaching new perspectives in the instructive-educational process in the field of music and body movement for students. The applied value of the research is given by filling the obvious gap created in practical knowledge and developing the curriculum that combines music and movement, contributing to the harmonious development of primary school students and increasing interest in active and creative participation in their own training.

The correlations obtained for the test values at the beginning and at the end of the training period additionally underline the well-achieved results by using the proposed curriculum through the value of the correlation coefficient for the experimental group in the final tests but also by the correlation of the data obtained at the end of the test period between the various tests carried out: movement memorization, body alignment, rhythm structure and musicality and dynamism. The overall value of these tests underlines Gardner's idea, like "music and movement to define as an ability to solve problems and/or create products that are valued at a given time by a certain human culture".

The influences of musical education are not only limited by the biological side, but also determine the formation of skills, skills and motor qualities, they have positive effects on the spiritual side as well, the student being engaged with his whole

personality. Practicing for physical perfection the student perfects his higher spiritual structures of cortical activity involved in the development of language, thought and all psychic capacities.

The declared goal is that the students will obtain superior values of the various psycho-functional types through which the motor intelligence will be manifested.

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PLANNING THE PROCESS OF TRAINING PSYCHOMOTOR SKILLS IN STUDENTS OF THE FACULTY OF SECURITY SCIENCES WITHIN THE PROFESSIONAL-APPLIED TRAINING

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In this article, the results of the study regarding the theoretical foundation of the professional-applicative training of the future specialists of the public order and security system in the university environment, which highlights the need to respect an optimal amount of time, that fully frames the qualitative assimilation of practical skills. In the training of specialists in the system of force and public security structures, professional-applicative training represents a complex psycho-pedagogical process, aimed at ensuring training in various theoretical-practical professional fields, of which specific physical training and hand-to-hand combat are mandatory compartments throughout the training period. studies, as it complements the individual fund of skills and psychomotor skills useful from a professional point of view.

From this point of view, the students' skills are conditioned by the quality of the design of the curricular objectives and the programming of the didactic contents in order to capitalize on the professional skills and capacities in a limited time within the volume of the study program. The study of methodological-scientific sources and methodological bases regarding the initial and continuous training in the field of professional-applicative training in the sphere of security and law and order concerned curricula, guides and thematic plans of the study subjects and of the physical training departments and self-defense of the "Ștefan cel Mare" Academy of the Ministry of Internal Affairs of the Republic of Moldova, of the "Alexandru Ioan Cuza" Police Academy from Romania, of the Protection and State Guard Service and the Faculty of Protection, Guard and Security of the University of State of Physical Education and Sport from the Republic of Moldova.

Keywords: professional-applicative training, security guard, psychomotor capabilities, hand-to-hand combat

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INNOVATIVE APPROACH TO TEACHING CHILDREN SWIMMING USING THE "BACK FLOAT WITH 'NOODLES' METHOD"

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Relevance. Teaching children to swim is a pertinent topic with psycho-physiological and socio-cultural implications, especially during the summer period. Swimming, as a skill, holds not only physical value but is also essential for water safety. In modern society, parents and educational institutions predominantly focus on swimming lessons during the summer months. This choice is supported by psychological aspects of children's adaptation to aquatic environments, physiological characteristics of bodily activity during the summer, as well as cultural norms of leisure and health care during this period.

Simultaneously, challenges arise in the process of mass teaching children to swim during the summer, given the diverse levels of preparedness. This encompasses a range of difficulties and challenges related to organization, safety, and the effectiveness of instruction. Children joining swimming lessons might possess varying skills and experience in the water. Some may be beginners, while others quickly grasp swimming techniques. Adapting lessons to such a diverse range of swimming proficiency levels can be challenging for instructors. Having a large number of children in the water simultaneously also poses safety risks.

Considering the diversity of preparedness levels, achieving specific educational goals can be complex. Effective teaching of children with varying proficiency levels necessitates an individualized approach. However, in large groups, it can be challenging to dedicate sufficient attention to each child, helping them overcome personal difficulties and develop skills. Some children might progress quickly, while others might remain at a certain level, potentially leading to disappointment for both them and their parents.

The summer period is typically time-limited, and children might simply not have enough time to make substantial swimming progress.

Thus, as previously noted, key and pivotal aspects encompass water safety and developing swimming skills across a varied range of children's preparedness, creating challenges for effective teaching and requiring innovative methods. Nearly all contemporary methodologies involve an initial water acclimatization phase, including various exercises ranging from walking along the pool floor to gliding in the "back float" position. Given the issues of mass teaching and diverse preparedness, this approach is often ineffective, as pool depth might not comply with requirements,

and spatial possibilities are limited.

In this context, based on our own work experience and extensive pedagogical observations, the use of "back float with 'noodles'" as a means for gradual water acclimatization and initial swimming instruction has been proposed as an effective solution to this issue.

Objective of this research: To optimize the process of mass teaching swimming to children aged 7-12 through the utilization of the "back float with 'noodles' method" as an approach for initial instruction.

Research methods: Analysis of specialized literature, sociological methods (surveys, questionnaires, interviews), pedagogical observations, testing, biomechanical analysis of swimming skills.

Research results.

To achieve the set objective, an experimental study was conducted at the State University of Physical Education and Sport pool over a 12-week period during the summer, with three 45-minute sessions per week. A total of 206 children aged 7-12, who had not previously received swimming instruction, participated in the study, with 8-10 individuals per group.

The innovative approach in this context involved employing the "back float with 'noodles'" method as the initial exercise for water acclimatization and introductory swimming instruction. Examination of scientific and methodological literature, pedagogical observations, and surveys revealed several advantages of using noodles for back float exercises. These include the child's ability to hold the noodles at a comfortable distance under their arms, providing a sense of safety, confidence, and comfort by leaning on their back and hands. In this position, a child may not initially achieve a well-extended, horizontal body position in the water. However, they can effortlessly lift their legs off the pool floor and even perform kicking movements while sitting, following the coach's instructions. Given the fact that the composition of children's groups changes or is supplemented with newcomers approximately every two weeks during the summer, this approach enables dynamic, continuous lessons that are comfortable emotionally, safe, and allow for more rapid skill development.

As a result, nearly 95% of children at the beginner level were able to move in the water from their first lesson using the "back float with 'noodles'" technique, effectively performing the backstroke kick. Traditional methods often do not achieve such rapid progress. When a group of 8-10 children of the same age enter the pool for the first time and the water reaches shoulder level, each child reacts differently to the aquatic environment, its properties, and the considerable noise, among other factors. These elements often lead to low lesson density. Several children, after a few sessions or more, fear submerging their faces in the water, impacting their ability to float even with assistance from floatation devices. Although supporting tools like waist belts with floats exist, they have drawbacks. Positioned at waist level, they tend to rise under the armpits during water movement, somewhat restricting the child's movement and potentially irritating the skin.

The utility of this innovative approach lies in the fact that during swimming

lessons, even while apprehensive about immersing their face in the water or relying on flotation devices on their front, children were already mastering the backstroke kick and achieving a relatively horizontal body position. They also developed a certain level of endurance. Conversely, traditional water acclimatization exercises such as "floating," "starfish," "arrow," retrieving objects from the pool floor, and exhaling underwater were gradually introduced in subsequent sessions.

Conclusions and practical recommendations: Children with beginner-level proficiency who employed this method demonstrated the ability to move in the water and perform the backstroke kick effectively from their first lesson. This underscores the method's effectiveness in overcoming water-related fears and accelerating swimming skill acquisition.

The utilization of "noodles" in the back float position provided children with feelings of safety, confidence, and comfort, facilitating their successful adaptation to the aquatic environment and active execution of swimming exercises.

The "back float with 'noodles'" method contributed to the development of proper body positioning in water and breathing, critical for forming quality swimming skills. When compared to traditional methods of initial swimming instruction, children using this technique exhibited higher levels of progress. This affirms the innovation's effectiveness and its significance for mass instruction.

Based on the obtained results, it can be concluded that the "back float with 'noodles'" method serves as an effective tool for optimizing the initial swimming instruction of children aged 7-12. This method supports successful adaptation, rapid swimming skill acquisition, and ensures comfort and safety during the learning process. In the context of mass instruction, this approach enables more effective utilization of the limited summer timeframe to achieve substantial swimming results.

Keywords: swimming instruction, innovative method, children aged 7-12, noodles, back float swimming.

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TECHNICAL TRAINING OF JUNIOR FOOTBALL PLAYERS IN AN ANNUAL TRAINING CYCLE

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Actuality. The technical training of junior *footballers* in an annual training cycle is a very relevant and important topic in their development. This process is based on combining the technical learning of football fundamentals with the development of the physical and mental skills necessary to become successful players. Thus, the annual training of junior footballers is an integral component of any system of training sportsmen, subject to appropriate laws, including the orientation towards the highest achievements.

Specialists in the field dealt with the problem of improving the technical training of junior football players, but still there is an insufficiency of works dedicated to improving the technical training process of 13-14 year old junior football players at the stage of pre-competitive preparation.

The purpose of the research consists in the elaboration and experimental substantiation of the technical training methodology within an annual cycle of pre-competitive training, considering the improvement of the sequence of techniques as well as their combination with the advanced training of 13-14-year-old footballers.

Methods of research used to achieve the proposed purpose are:

1. The bibliographic study method;
2. Questionnaire method;
3. Observation method;
4. Testing method;
5. Methods of mathematical statistics.

Findings and Results. For the experiment, 22 junior football players from the Specialized Football Sports School No. 2 from Chisinau (experimental group) were selected. Also, 22 juniors from IP LT "Ion Creangă" from Chisinau (control group) were tested.

The experiment lasted for 1 year, from September 2022 to May 2023. After the experiment was completed, children in both groups were tested repeatedly. The experimental group was subjected to a special training program, with methods and means specific to technical training. The control group was trained according to the curriculum for secondary school classes.

The development of the methodology for the technical preparation of the experimental group, at various stages of the annual training, took into consideration

the results of the preliminary study regarding the competitive activity of the junior *footballers*. The most common mistakes that arose in combining techniques such as dribbling - pass, dribbling - shot, pass - reception, heading play, feints - pass, and throwing the ball from the sideline were also taken into account.

The particularity of the applied method consists in the development of instructional blocks for technical training through the implementation of:

- training blocks for junior football players to master the following techniques: *passing, dribbling, tackling, deceptive movement, receiving, shielding, shooting, throwing the ball from the sideline*;

- training blocks for the development of psychomotor qualities;
- outdoor games to reinforce the techniques and their integration;
- outdoor games to strengthen the techniques and develop physical qualities.

In the conditions of the pedagogical experiment, it was established that there is a statistical interconnection between the results of technical training and physical qualities at a weak level ($r=0.32-0.48$, $p < 0.05$), moderate level ($r=0.50-0.69$, $p < 0.01$), and strong level ($r=0.70-0.86$, $p < 0.01$).

It was found that in the experimental group, the technical level of the game is higher than in the control group, as evidenced by the calculated Student's t-test ($t=5.810-11.222$), indicating the effectiveness of applying training blocks in technical preparation. The research results of the control and experimental groups (with $p < 0.05-0.001$) confirm statistically significant differences between the indicators of technical preparation.

Furthermore, it is important to mention that in the experimental group, not only the time and qualitative indicators have been improved, but also the execution of technical procedures became of better quality compared to the control group. During the experiment, our goal was to eliminate errors within the experimental group, and thus, a combination of group and individual approaches was applied when teaching technical procedures and their combinations.

As a result of the conducted experiment, it could be affirmed that effective methods are those that are structurally similar to competitive exercises, simulating the level of muscular tension and the movement structure required for competition tasks during their execution.

In the control group, sequential error correction was not performed, and for this reason, errors were not eliminated. Apart from training deficiencies, there could also be reasons such as errors in teaching the methods of performing technical procedures, methodical mistakes in the training process, development of inadequate skills, uncertainty and anxiety in performing technical procedures, and delayed transition from one procedure to another.

In the experimental group, the training methodology had a positive impact, significantly influencing the effectiveness of the executed technical procedures. As a result, the percentage of errors in the final testing decreased from 62% to 32% in the experimental group, while in the control group, it decreased from 63% to 58%. Errors are natural in the process of training technical procedures. Observing these errors and

addressing their causes greatly determine the efficiency of training technical procedures in the football game.

Conclusions. The research results demonstrate that the development of technical procedures in training was improved due to the correct consistency of training, appropriate warm-up exercises, and the development of movement skills necessary for performing technical procedures. All these factors facilitated the acceleration and quality conduct of the training and refinement process of junior football players' technical elements in training.

Thus, the obtained results confirm the effectiveness of the developed method for junior football players, to the extent that the effectiveness of their subsequent football activities depends on the level of technical procedure preparation and their ability to continuously perform these procedures.

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MOTIVATION, THE ESSENTIAL COMPONENT OF CONTINUOUS PSYCHOMOTRICAL, PROFESSIONAL BONDING OF THE MILITARY

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Motivation has an essential role in managing the human mental and physical potential for the rapid growth of professional performance as well as being able to quickly and efficiently adapt to the specific effort of the body necessary to achieve the proposed professional goals. Permanently maximizing the military morphological and functional indices in the system of order and public security will influence the development of the motivational mechanism together with the psycho-motor potential, finally obtaining positive effects that will effectively influence the continuous professional technical-tactical behavior.

The intensive and continuous development of motor and mental qualities creates visible biochemical transformations in the body, demanding at a high level the capacity of the respiratory, cardiovascular and mental apparatus in direct accordance with the development of the entire body in the military. Applied professional physical training is conditioned on the professional psycho-motor track by the high level of specific training and the practical capitalization of the conditional and coordinative capacity, increasing the possibilities of practical capitalization of specific professional skills in solving daily professional attributions.

The professional mental training aims at the rapid creation of optimal conditions for the aptitude behavior of the law enforcement and public security forces to resist the increased overload of the morphological and functional indices as well as the negative factors coming from the environment that disrupt the smooth running of their professional activity.

Keywords: motivation, effort, psycho-motor, military, specific training.

STRUCTURE OF THE TRAINING PROCESS FOR QUALIFIED RUGBY PLAYERS

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One of the issues in modern sports theory is the problem of optimizing the training process, transforming training activities into a adequately manageable process.

Certain conditions are required for this. Firstly, the training process should be considered not locally and unilaterally, but its essence and components should be analyzed from various perspectives. Secondly, the factors limiting athletic achievements should be known and scientifically justified. Thirdly, the connections and interrelationships of components of competitive, and consequently, training activities have been defined and studied. Fourthly, means and methods of monitoring the level of development of individual aspects of preparedness have been developed, and most importantly, methods of assessing integral preparedness.

Relevance: The specific feature of competitive activity in team sports lies in the structural and substantive complexity characterized by diverse multifunctional activities of athletes with different playing roles. These characteristics are also inherent in rugby.

In sports theory, the concept of "competitive activity" holds fundamental significance. This significance encompasses numerous aspects of activity, and competitive activity is not only viewed as an object but also as a subject of human activity in general [2,3,4,8].

Research Objectives:

To achieve the set goal, the following objectives were determined:

1. Identify the structure and content of competitive activity among qualified rugby players.
2. Develop the content of training activities for rugby players considering the structure and content of competitive activity in rugby.

Research Methods:

The following research methods were employed to address the stated objectives:

1. Analysis of scientific and methodological literature.
2. Summarization of coaches' experience.
3. Pedagogical observation.

The structure of the training process for qualified rugby players is based on objectively existing patterns of athletic development and the establishment of sports

mastery. These patterns are determined by a range of factors that influence the effectiveness of competitive activities and the optimal structure of preparedness.

Numerous studies on the structure and content of the annual training cycle for team sports have shown that the preparatory period exhibits a progressive dynamic growth in all performance indicators. Authors concur that the structure of the preparatory period should comprise three stages: general preparatory, specific preparatory, and pre-competitive stages.

The first stage of the preparatory period is the general preparatory stage. During this stage, there is a significant increase in the volume and intensity of training loads, primarily focusing on volume growth. The main content of training sessions involves general physical preparation 60% and specific physical preparation 40%.

Second Stage of the Preparatory Period - Specific Preparatory Stage. During this stage, there is a cumulative reduction in training volume and an increase in intensity. The ratio between general preparation and specific preparation is 30% to 70%. The training methods clearly emphasize specific preparatory and competitive exercises. Alongside the elevation of functional capacities and specific physical qualities associated with morpho-functional system adjustments, the preparatory period addresses the improvement of individual aspects of preparedness. It is crucial to optimally align the components of preparedness in the training process.

The third stage is the Pre-Competitive Stage, identified as most suitable for the upcoming competitive activities. During this stage, the training process structure shifts its focus towards tactical preparation, addressing both technical and physical preparation tasks. Training sessions incorporate game-based and competitive methods. Teams participate in various tournaments that enable more effective preparation for the main competitions.

The duration of the preparatory period, its length, structure, and the content of its stages, as defined by various authors, show significant variations. The determining factor in establishing specific preparation timelines is the sports calendar of the upcoming season. The scheduled dates of major competitions have determined the periods during which athletes' preparation should be planned [4,5,6].

For qualified rugby players, the competitive period is single-cycle, from April to October. Maintaining optimal athletic form throughout an extended competitive period with a high density of competitions is quite challenging. Therefore, coaches are compelled to plan a fluctuating development of athletic form during the competitive period, gradually peaking the team's performance for the most crucial matches.

In the training process, the means and methods constitute the content of the preparation structure and are shaped in accordance with the patterns of achieving sports mastery. As known, regarding the actions performed by athletes in competitive activities, all exercises are categorized into competitive and preparatory. Preparatory exercises are further divided into specific preparatory and general preparatory exercises.

The transition period is highly important in the year-round training of qualified rugby players, as the extended and intense season results in significant expenditure

of physical and nervous energy. Naturally, to begin a new cycle, adequate time for complete physical and psychological recovery is essential.

Conclusions

An analysis of scientific and methodological literature indicates that the structure and content of competitive activity are paramount in addressing the tasks of programming and conducting the training process.

Exercises with an integral focus should closely align with the structure and content of competitive activity, and their development stands as a priority direction in enhancing the training process.

Keywords: Structure, training, process, rugby, physical preparation, technical preparation, tactical preparation, psychological preparation, integral preparation.

STUDIES ON COGNITIVE DISTORTION TO ATHLETES

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The paper given focuses on the applied aspects of sports psychology. In the cognitive-behavioral approach, special emphasis is placed on expressing concepts in operational terms and empirically validating the treatment using both group and individual experiments. Most of the therapy is focused on the present, it is helping athletes to make the changes they want in their lives. At the same time, therapy focuses on learning coping and problem-solving strategies.

Detecting cognitive distortions, we can intervene through a wide range of therapeutic interventions, which achieve an important influence such as self-control, which is based on self-observation, self-evaluation and self-reward. These components make it possible to explain the cognitive constructs that are to the basis of attribution and self-instruction. Even more complex is rational-emotive therapy, used to treat depression. Mental preparation supports physical preparation, they cannot be separated in any way.

The priority objectives in mental training-automation, verbalization and awareness offer concrete solutions on the theoretical and performance side of top athletes and successful coaches.

The purpose of the work is: monitoring the level of stress, aggressive thinking and behavior, the application of intervention methods in cognitive distortions.

Six subjects from the specialized school of boxing, freestyle wrestling and kickboxing and four subjects from the specialized swimming sports school in Chisinau were involved in the investigation. Stress level was assessed using the Level 100 scale, anxiety using the "Beck" test, physical examination using the "Emery" test, behavior using the "Shephard" test, aggression using the "Asinger" test, and innate intelligence using the "Sgov" test. Based on stress observations, it was found that two subjects who practice fighting, have intense stress, physical anxiety symptoms that are caused by medical conditions and were not diagnosed in time. Aggressive behavior is characterized by a demonstration of superiority in strength. The proposed questionnaire revealed to us the scores for the five scales of aggression, two subjects have a score greater than five, which indicates a high degree of aggression. Two other subjects who practice kickboxing, the level of stress and aggression being with a score of four, three others (two – boxing, one – swimming) – with a score of three, and the other 3 subjects who practice swimming have a score of two.

According to the concepts of aggression, subjects with a score on the five scale

have "reactive" aggression, and subjects with a four scale have proactive aggression. Using the "Beck Anxiety" inventory, we found that reactive subjects have a high level of anxiety, which is caused by physical symptoms caused by previously undiagnosed chronic medical conditions.

So thanks to the "Asinger" test, they detected aggressive behavior and we can prevent it through psychotherapy and medical interventions.

In the case of subjects who practice swimming, we notice that the stress level is reduced, we do not have anxiety and aggression. Swimming enables the development of positive values such as perseverance and tenacity. It has a tonic effect on the nervous and cardiovascular system. In the case of athletes who practice swimming, we detected two subjects with innate intelligence. We can say about swimmers that they have a high degree of adapted behavior, making them less receptive to stress. Cold water swimming is cross-adapted, which reduces the physiological stress response.

Research confirms that subjects who have the ability to control anxiety during crucial moments are high achievers. Relaxation in sport means reducing stress levels to an optimal level of functioning. In this case, the progressive "Jacobson" technique is the best technique.

The results obtained identified a strong intensity in the relationships between anger and violence, which confirms the presence of anger and the manifestation of violent behavior through a strong increase in the effect for the relationship between cognitive distortions and violence, results that reinforce the role of cognitive mechanisms involved in committing violent acts.

In order to prevent cognitive distortions, it is necessary to periodically assess the subjects, build supportive and trusting relationships, combat impulsivity through psychotherapy, if necessary medication, in gaining self-control skills, optimism and hope, manifesting positive thinking.

Keywords: neurocybernetics, kinesthetic-motor feedback, endurance, distortion, cognitive-behavioral therapy.

ANALYSIS OF EFFORT ZONES PARAMETERS DURING FOOTBALL TRAINING IN 6-8-YEAR OLD CHILDREN

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Actuality. Achieving outstanding results in modern football is impossible without quality training in young players. The individual approach specific to the age of 6-8 years is a task to be solved taking into account some characteristics and difficulties. It focuses on the optimal anatomo-functional and cardiovascular combination and on the physical effort parameters as well. The analysis of effort zones and the effect of the recovery interventions after football training sessions is debatable because of the lack of studies conducted in field situations. The use of GPS technology for this purpose is still relatively new and evolving. This research provides a new in-depth perspective on the range of its use in team sports, mainly football at this age. There are also limitations regarding the values reported and the high-speed running which involves rapid changes of direction.

Purpose. The research intends to analyze the parameters of the training effort zones in the football game in 6-8-year-old children.

Methods of research.

10 football players aged 6-8 years of the Concordia Sports Club Ilfov participated in this research conducted in October 2022, at CS "Concordia" Chiajna sports complex, on the field covered with pressure balloon. The training session lasted 58.25 min; topics of the lesson – as planned. Research methods used: bibliographic study, observation method, test method, experimental method (exploratory stage), statistical-mathematical. The Polar Team Pro program was used to evaluate physical effort parameters and effort zones. Measured variables and information: Heart rate (minimum, average and maximum) as beats and as percentage of maximum; Time spent in each heart rate zone; Distance (total and distance per minute); Speed (maximum and average); Distance in each speed zone; Training load and recovery time. The statistical analysis used the KyPlot 6.0 (Kyenslab, Tokyo, Japan) program to calculate the basic descriptive indices and the Pearson correlation coefficient between the measured variables indices (specific and general). The relation of the significant connections between the variables measured at $p < 0.05$.

Findings and results.

The analysis of effort zones parameters variables was performed by dividing the specific and general indices. Regarding the specific indices, the statistical calculations highlight: HR min (bpm): changes by 30% above the group mean of 92.1 bpm (46.5%) with values (Min and Max) between 81 – 105 bpm; at HR avg (bpm) – 60% values above the mean of 149.5 bpm (74.9%) with an interval between 136 – 166 bpm and at

HR mx (bpm) – 50% values above the mean of 200.8 bpm (100.5%) with values between 190 – 213 bpm. Time in HR zones (Z) (min): at Z1 - 9.56% of total playing time by zones (56.862 min); Z2 – 25.52%; Z3 – 31.94%; Z4 – 21.84%; Z5 – 11.14%. Distance in Speed zones (Z) (m): 61.8% at Z1 from total playing distance by zones (2546 m); Z2 – 30.2%; Z3 – 7.3%; Z4 – 0.7%; Z5 – 0%. Number of accelerations / intervals according to items 1-9 of table (m/s²) reveals a higher weight at Number of accelerations by 34.27% at interval (-0.99 - -0.50 m/s²) and 27.8% at (0.50 - 0.99 m/s²).

For the general indices, the calculation results show: Total distance [m] is 2853.7 m with 10.8% distance difference compared with the distance of the speed covered in effort zones. Distance / min [m/min] includes values between 45 and 58 m/min. Maximum speed [km/h] has values from 14.9 to 19,0 km/h; average speed [km/h] has values between 2.8 and 3.7 km/h and a maximum number of 9 Sprints. Training load score has values between 67 and 145; Cardio load has values from 65 to 141; Necessary recovery time [h] has a mean of 10.19 h with values between 6 and 19.9 h; Calories [kcal] lost – a mean of 67% related to Max of 338 kcal.

Comparing the indices of effort zones parameters highlighted calculation differences between total values and HR time zones of 1.39 min and 307.7 m; these values were used during breaks (free time).

The correlation analysis reveals 119 connections from 5 calculation matrices between combined indices (n=21) and 189 connections in matrix 6 between individual indices (n=9) and combined indices. As for the combined indices correlation, one can notice 4.2% strong connections at p<0.05 and p<0.01 of total correlations. Thus, in matrix 1, strong connections of 26.7% are observed between HR (bpm) and Time HR zones (min) indices at p<0.05 (negative) and p<0.01 (positive). In matrix 2, the correlation between the indices HR (bpm) and distance in Speed zone (m) shows 6.7% strong connections at p<0.05 (negative). The correlation results between specific and general indices highlight 18.5% strong connections (14.8% positive and 3.7% negative) with 10.1% at p<0.05, 5.3% at p<0.01 and 3.1% at p<0.001. The correlation results are insignificant at p>0.05 in matrices 3, 4 and 5.

Conclusions and recommendations.

The following conclusions can be drawn:

1. The analysis of the specific indices results show changes in HR (bpm) related to the average value by 30% at HR min, 60% at HR avg and 50% and HR max; the share of times in HR zone with 31.94% higher value at Z3; by 61.8% distance in speed zones at Z1 and by 34.27% number of accelerations in the interval (-0.99 - -0.50 m/s²).

2. The results of correlation analysis between the specific indices reveal 4.2% strong connections between HR values with HR time and the speed distance by effort zones.

3. The correlation between the specific and general indices highlight strong connections with 8.9% between training load score, Cardio load, recovery time and Calories with HR min and avg values; also, with 9.5% between indices of total distance, distance / min, Maximum speed, Average speed and Sprints with Distance in Speed zone la Z2, Z3 and Number of accelerations at different intervals.

All these data contribute to developing a training program meant to adjust the physical effort parameters based on cardiovascular indices changes in the footballers aged 6-8 years.

Keywords: heart rate, distance, speed, acceleration, recovery, statistical analysis.

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POTENTIAL POSSIBILITIES OF CREATIVE USE OF IDEAS OF ORGANIZATION OF PHYSICAL EDUCATION OF ROMANIAN SCHOOLCHILDREN IN THE MODERN EDUCATION SYSTEM OF UKRAINE

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The authors of the article highlighted the potential possibilities of creative use of the ideas of the organization of physical education of schoolchildren in Romania in the modern education system of Ukraine, determined the conditions of relevance of modern historiographical researches, namely such works should answer complex and controversial questions of the historiographical process, present achievements and gains, on the one hand, and the consequences of defeat, on the other. It has been proven that physical education and school sports in general secondary education institutions of the country are defined as a mandatory discipline provided for in educational schedules with a differentiated number of hours, approved by the Ministry of Education and Science and organized within the framework of school sports associations. That is, school physical education is complemented by systematic extracurricular activity - "school sports", a network of clubs, sections, studios organized by the school sports association. According to the authors, the software directly covers two educational subjects - "Physical education" and "Play and movement" (primary school), "Physical education" and "Sports training" (secondary school). Another general trend was the strengthening of the idea of "removing the compulsory status" from the physical education lesson, the motive of which was the strengthening of group and sectional work at school. Romanian pedagogues identified the advantages of the "obligation" of physical education - the teacher's knowledge of students, their number, gender, content, features and the number of allotted hours; opportunities for teachers to adapt the content of lessons to the level of training of pupils. It is the solution of these problems that is the impetus for the continuous development of the physical education lesson at school.

Keywords: Game and Movement, physical education, school sports.

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DEVELOPMENT OF COORDINATION ABILITIES IN SECONDARY SCHOOL STUDENTS BY USING THE MEANS OF RHYTHMIC GYMNASTICS IN PHYSICAL EDUCATION AND SPORTS LESSONS

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"The Development of Coordinative Abilities in Secondary School Students by Using the Means of Rhythmic Gymnastics in Physical Education and Sports Lessons", is a study that wants to become a source of information, development, applicability in life for both students and for teachers. The research approach was carried out by physical education and sports teacher Cătălina Julieta Țugulan, teacher of the Avram Iancu Secondary School in Bucharest, as a third-year student at the Doctoral School of the State University of Physical Education and Sports of the Republic of Moldova. Doctorate leader is the professor Conf. Univ. Dr. Viorica Calugher.

The main purpose of the theoretical approach will be to observe the development of coordinative abilities in secondary school students by using the means of rhythmic gymnastics in Physical Education and Sports lessons, because I consider it is an essential element for the socio-professional integration of the child, for the physical development and coordinative capacities, by using a special programme for the development of coordinative capacities.

To modernize the physical education lesson, the use of means such as those specific to rhythmic gymnastics for the development of coordination capacities, the development of motor skills can be very beneficial, due to the use of a wider palette of exercises that can contribute to the multilateral development of this capacity.

Coordination is a complex quality, defined by most specialized authors as the individual's ability to use his body and its moving segments with precision, safety, fluency and promptness. Practicing physical exercise in school leads to the development of motor skills that ensure students optimal health and prepare them for social life. The research objectives sought to determine the particularities of carrying out recreational activities and the formation of coordinative capacities through the means of rhythmic gymnastics with an impact on the social development of 11-13-year-old students, to investigate the particularities of the morpho-functional, intellectual, psychomotor and motor states of students aged 11-13, to develop a program for the strictly directed training of co-ordinative capacities through the means of rhythmic gymnastics with an applicative character to students of 11-13 years and to argue the effectiveness of the experimental application of the program for the training of co-ordinative capacities through the means of rhythmic gymnastics with a character applicable to students aged 11-13.

Exercise programs have been created that aim to develop coordination abilities

(but also other motor qualities, reaction speed, execution speed, endurance) and development through free exercise complexes, with portable objects (sticks, hoop, ball, rope, scarves), accompanied by musical accompaniment in such a way that the attractiveness of the lesson is also based on the use of special means. Music was used both within the complexes of harmonious physical development and within the themes as such. At the secondary school, the curriculum includes, as mandatory, very few elements of rhythmic gymnastics. The learning contents that I used in the realization of this work were based on the content elements according to the 5th and 6th grade curriculum. At the beginning, the work plan was developed, specifying the purpose and working assumptions. Several educational resources and specialist works were selected and included in the bibliography. Then the collectives of students from the 5th and 6th grades of the "Avram Iancu" Secondary School, sector 4, Bucharest, were selected, and the classes for the experiment were determined. In order to obtain effective results in this research, operational models were created for the experimental group and some sets/programs of exercises needed to implement the experimental study. Then, in order to highlight the working hypotheses, the most appropriate samples and tests were designed and selected, and their periodicity and working technique were established. Tables were also designed for recording and recording the data obtained with the students.

The following research methods were used for this work: bibliographic study method, observation method, pedagogical experiment method, result measurement method, statistical-mathematical method, graphic method. In order to investigate the hypotheses, 4 classes were selected in the research - two experimental, 5th and 6th grade, and two control, also 5th and 6th grade, classes that benefit from the curriculum two lessons a week, during the school year.

The experimental groups were administered the independent variable (training models - exercise sets/programs composed of means specific to rhythmic gymnastics), and the control groups were not administered this variable. The subjects of the four groups have the same chronological age and the same concerns. The application of training models - sets/programs of exercises composed of means specific to rhythmic gymnastics were carried out within the physical education lessons. The subjects were examined under similar conditions, applying the same specific tests and samples. In carrying out the research, the subjects were tested before and after the application of the training programs - exercise sets/programs, through the following examinations and tests: determination, measurement of somatic indices height and weight to determine the height of the students and the body weight of the students, the test of balance measurement "Flamingo" or Standing Stork test, through which we assessed the ability to maintain a balance position, the test for the development of rhythmicity-musicality, the Matorin spatio-temporal orientation test, to measure general coordination and balance and the motor coordination test. The research was carried out in three stages: Stage I - took place at the beginning and during the first semester of the 2021-2022 school year and had as tasks the initial establishment of the level of somatic development (height and weight) and the initial testing of balance tests ,

spatial-temporal orientation, movement coordination and rhythmicity-musicality; Stage II - took place during the 2021-2022 school year, in the second semester and consisted in the application of the training programs to the experimental groups, with the aim of their assimilation as possible. Stage III - took place in the 2022-2023 school year, by carrying out the final tests and aimed to highlight the changes that occurred throughout the research at the level of the analyzed components.

The general hypothesis of this study started from the fact that in the physical education and sports lessons in the gymnasium by using the training programs composed with specific means of rhythmic gymnastics will develop the coordination capacities that will have maximum efficiency in the physical education lesson. The following working hypotheses were verified: The selection of sets/programs of exercises composed with means specific to rhythmic gymnastics (those considered to be effective) and their permanent application in physical education lessons, can induce a qualitative leap in the development of coordinative capacities. The use of these sets/programs of exercises composed with means specific to rhythmic gymnastics during a school year (in the hall and outside) contributes to the increase of the results in the specific control tests. All sets/programs of exercises composed of specific means of rhythmic gymnastics carried out during a school year, can finally lead to the development of methodical models for the development of coordinative capacities in secondary school students. The use of operational models can contribute to the achievement of the objectives of physical education, in the motor development plan but also the development of the student's personality by integrating and educating the creative-artistic side.

The research was carried out at the Avram Iancu Secondary School, sector 4, Bucharest, where I am a teacher at the department of physical education and sports, the school having a very good sports material base. Physical education lessons were held twice a week, according to the timetable, with all classes having afternoon classes. The initial testing and the teaching of the sets of training programs were carried out and led by me in the experimental classes, and in the control classes by a colleague of mine, a teacher of physical education and sports, being her mentor, training her and explaining to her the exercises for the test and how to perform the initial and final tests. The research will contribute to the development of coordination capacities for secondary school students (age period 11-13 years), through the specific means of rhythmic gymnastics of using these components in physical education lessons during the school year, in order to develop these skills at a higher level abilities and their application with good results later in everyday life.

Keywords: coordinative abilities, rhythmic gymnastics, exercises.

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OPTIMIZING THE FITNESS LEVEL IN ADULTS THROUGH THE CIRCUIT METHOD

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Over the past decade, most of the activities associated with fitness have evolved significantly. Physical activity guidelines, as well as international research, have highlighted the importance of developing maximum strength, improving cardiovascular fitness and optimizing body composition. These aspects are essential to bring significant health benefits to people of all ages and to improve the quality of life of people affected by various diseases, including cancer. The phenomenon of exercise, also known by the general names of "fitness", "exercise", "conditioning", "resistance training", or even "fitness training", is a complex reality. The term "fitness" can be associated with a number of activities commonly performed in fitness centers or gyms. In the context of 2023, one of the most widespread training methods is resistance circuit-based training. This method promotes the idea of combining aspects of aerobic conditioning, muscle endurance and neuromuscular and strength adaptations in a single workout. In the past, the circuit method was recommended as a preferred training option for people who had no previous exercise experience or who had a lower basic fitness level. This recommendation was based on the fact that this type of training had the potential to improve both maximum upper body strength and VO₂ max (the maximum volume of oxygen consumed during exercise). VO₂ max is a common indicator used to assess a person's fitness level. The application of the circuit method can lead to significant changes in body composition, in the sense of reducing body fat and increasing muscle mass, especially in adult men. In terms of fat loss, most studies have shown significant decreases in body fat when workouts are performed 2-3 times a week. However, the author's research indicated a 9.2% decrease in body fat in active individuals, even after just two training sessions per week.

The hypothesis of this study suggests that by applying the circuit training method, significant improvements in strength development and other motor qualities will be observed, while simultaneously contributing to strengthening overall health. The aim of this research is to investigate the effects of circuit training on strength development in adults, with the aim of demonstrating that this training method is effective in this regard.

The main objective of this research is to increase segmental muscle strength and at the same time improve fitness levels in adults. Specific objectives: Assess the impact of circuit training on muscle strength development in adults involved in the studio;

Analysis of changes in the general physical condition of participants because of applying the circuit method; Evaluation of effects on body weight in adults following participation in circuit training; Comparing results at the end of the study with baseline data to assess progress.

Proposed circuit for model study participants

The structure of the circuit is as follows: Ex 1: Lying back, arms at the side of the body with palms resting on the ground, waving of lower limbs (working time: 30", pause: 40"). Ex 2: Standing, legs apart at shoulder level, squats with 3 presses, return to starting position (working time: 30", break: 40"). Ex 3: Standing, legs apart at shoulder level, dumbbells in hands (2 kg), carrying arms sideways, return to original position (working time: 30", pause: 40"). Ex 4: Lying sideways with sandbags at the ankles (1 kg), raising the leg sideways/up – right/left, returning to the starting position (working time: 30", break: 40"). Ex 5: Sitting with a dumbbell in your hands (3 kg), lifting the dumbbell to your chest followed by stretching your arms and raising the dumbbell above your head, returning to its original position (working time: 30", pause: 40").

The participants in this research consist of a group of 20 adult women, aged between 25 and 35. The location of the study was Wondergym Hall in Suceava, between January 15 and April 15, 2023. To achieve the proposed goals, subjects participated in 4 training sessions per week, on Mondays, Tuesdays, Thursdays and Fridays. Each training session lasted 60 minutes, of which 10 minutes were allocated to warm-up, 45 minutes to actual training, and 5 minutes to relax through stretching exercises.

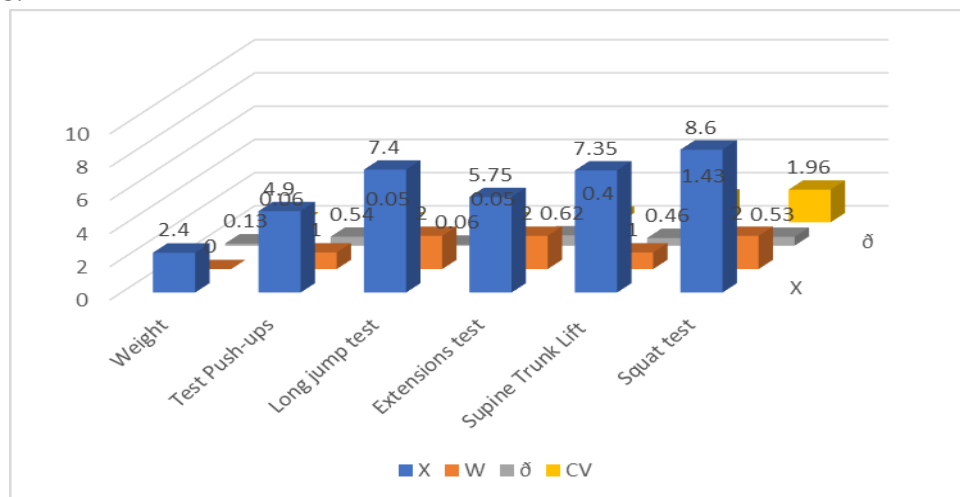


Fig.1 Statistical Indicators for Physical Fitness Tests

The statistical interpretation for X-values (averages) for each test is as follows: Weight: The mean value of weight at IT is 62.2 kg and at TF it is 59.8 kg. The average difference between TI and TF is 2.4 kg. Test Push-ups: The average value of the number of push-ups at TI is 10.1 and at TF is 15. The average difference between TI and TF is 4.9 push-ups. Long jump test: The mean difference between TI and TF is 7.4 cm. Facial Lying Trunk Extensions test: The mean value for trunk extensions at TI is 28.3 and at TF is 34.1. The average difference between TI and TF is 5.75 extensions.

Supine Trunk Lift Test: The mean value at TI is 20.6 and at TF is 27.9. The average difference between TI and TF is 7.35 supine trunk lift. Squats test: The average value for squats in TI is 17.6 and in TF is 26.2. The average difference between TI and TF is 8.6 squats. Overall, average values indicate a significant improvement in performance across all tests between TI and TF. The variability coefficients show that the variation in performance was moderate in most cases, except for the push-up test, where the variation was greater.

Conclusions: The circuit training method is a form of training that involves performing a set of different exercises in a certain order. This method can be used to improve muscle strength, endurance and/or weight loss; For a proper training program, a few basic steps must be followed, namely: choosing exercises, setting the number of repetitions, time and duration of the circuit. The choice of exercises will take into account that different muscle groups will be worked. We can choose basic exercises such as squats, push-ups, shoulder lifts, isolation exercises (for biceps or triceps). It is important to choose exercises that are tailored to our fitness goals and current fitness level; The data obtained from the study demonstrates the hypothesis and proposed objectives were successfully met. This is clearly reflected in the enhanced motor indices observed in each participant during the final tests in comparison to their initial performance. At the same time, we also noticed the existence of a positive attitude of the subjects towards circuit training, an increasing motivation from one session to another and at the same time, there is a good development of muscle strength.

Keywords: optimization, fitness, adults, circuit method

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STUDY ON THE PROFESSIONAL EMPLOYMENT OF HIGHER EDUCATION GRADUATES OF PHYSICAL EDUCATION AND SPORT IN THE REPUBLIC OF MOLDOVA

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Actuality. Higher education can ensure, directly and indirectly, the progress of the entire society. In an era in which information and knowledge in general become the main factors of development, it is expected that the importance of the university will increase. The role of higher education is growing under the conditions of the economic, political and social crisis. Moreover, education and, first of all, higher education must be seen as a strategic factor for development and exit from the crisis. Education is the foundation of national economic, social, ecological, ethnic security.

According to the Education Code of the Republic of Moldova, higher education is a key factor for the cultural, economic and social development of a society increasingly based on knowledge and a promoter of human rights, sustainable development, democracy, peace and justice.

Thus, the higher education of physical education and sport is an important pillar in the activity of raising awareness of the importance of physical education and sport and its integration at as many levels of society as possible.

The purpose of the research is to study the professional insertion of the graduates of the higher education of physical education and sport in the Republic of Moldova.

Methods of research: study of specialized literature, sociological survey; analysis of documents and materials regarding the professional insertion of graduates, observation, mathematical processing of statistical data and their graphic presentation.

Findings and results. Knowledge of the labor market insertion process of young graduates from the Republic of Moldova, as well as the characteristics of this process, has become a priority both in the formulation of employment and educational policies.

As a result, by evaluating the degree of professional insertion of young physical education and sport graduates, we obtain, on the one hand, an image of the transition of young people from university to work, of the degree of concordance between demand and supply existing at a given moment on the labor market, and, on the other hand, essential information regarding the effectiveness of the relevant educational act.

At the same time, following the study we will obtain results regarding the degree of employment of graduates specialized in physical education and sport and the utility of the program for employment in the labor field. Graduates will also express their degree of satisfaction regarding the quality and usefulness of university studies for the labor market. Monitoring the insertion of graduates into the labor field is a

mandatory indicator to be met for the accreditation of study programs, provided for in the External Evaluation Guide for Higher Education Programs, approved by the ANACEC Governing Board.

At the same time, we note that the market's requirements, always changing, require a reformation of the skills necessary for the young specialist to be employed in the field of work. In this context, one of the fundamental objectives of the higher education of physical culture resides in the formation of a specialist in the field capable of adapting to the constantly changing conditions of the labor market.

Conclusions and recommendations. Monitoring the professional insertion of graduates specialized in physical education and sport is a very important indicator for the efficiency of the educational process of the profile and the external evaluation of the study program. However, insertion on the labor market is a priority of the responsibility of the Faculty of Physical Education and Sport, a fact also reflected in the Faculty's Development Strategy for the years 2021-2025.

The study carried out allowed us to highlight the degree of employment of graduates specialized in physical education and sport from the Republic of Moldova. The labor market being always changing requires a reformation of the necessary skills for the profile specialist, focused on the "customer orientation" principle.

Keywords: Insertion, higher education, physical education, development, strategic factor, monitoring.

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CREATIVE ATTITUDES - IMPORTANT ASPECT IN THE TRAINING PROCESS OF SPECIALISTS IN THE FIELD OF PHYSICAL EDUCATION AND SPORT

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Currently, the most important objective of the education process involves the formation of creative, innovative personality, with an increased level of thinking and imagination, as well as with a spirit of accuracy, observation and precision in the activity they carry out, but also initiative, thinking appropriate to the activity, the aesthetic taste, pursuing the development of the capacities of the maximum level of human potential. The human fate will depend, to a considerable extent, on the level of the school, as well as on the education of the youth who have divergent, but also pragmatic thinking.

In the era of great transformations, but also in the future, managers from different fields will be required to be able to make quick, wise, difficult decisions. This objective can be achieved if we anticipate the demands, the needs of the society in perpetual development, training the young generations from the school benches. The speed with which things change at the current stage requires us to be better and better prepared, to choose and to weigh the alternatives, the actions, but also with the same tempo. This is why the greatest expectations are from the educational system: the purpose of training in creative problem solving is to develop the creative person, capable of changing the state of affairs in all fields.

In the structure of competences, the role of attitudes is axiological orientation and affective and motivational energization of action, interacting in this sense with the socio-affective skills of the person. As fundamental units of character, attitudes leave their mark on the person's character profile and influence the level of competence through character traits such as: autonomy, responsibility, fairness, perseverance, conscientiousness, the feeling of a job well done, etc.

From the multitude of factors involved in creativity, attitudes have a great importance.

The development of creative attitudes of specialists in the field of physical education and sport is more current and important than ever for several reasons:

In an era of technology and sedentary lifestyles, specialists in the field of physical education and sport play a crucial role in inspiring and motivating young people to be active. Creative approaches are essential to make physical activity attractive and relevant to young people.

Society is changing rapidly and health, fitness and sport trends evolve with it, and the specialists in the field of physical education and sport must be creative in addressing the ever-changing needs and preferences of the population.

The ability to find creative and innovative solutions is essential in the face of unforeseen situations such as pandemics that can affect the way sports activities are conducted.

The purpose of the research is to study the importance of creative attitudes in the training process of specialists in the field of physical education and sport.

Methods of research: study of specialized literature, sociological questioning, observation, mathematical processing of statistical data and their graphic processing.

Findings and results

The development of the creative spirit, promoted by interactive pedagogy, must be correlated with the education of thinking by combating conformity. The progress of the cognitive approach to solving problems depends on creativity. The education of creativity requires the formation of a positive attitude towards progress, towards new elements and towards their introduction into one's own actions; the readiness to accept the new as an indication of progress, innovations and human creativity; encouragement through character and original results; training and development of skills and abilities to create, rethink work strategies and integrate into dynamic, flexible and efficient systems; the formation and development of creative abilities to achieve something new: connections, ideas, theories, ideal or material models, material products, etc.

In the research, we proceeded to evaluate the creative attitudes necessary for a specialist in the field of physical culture and sport with the help of the creative attitudes questionnaire and significant results were obtained t being 2.94 and $P < 0.01$, which proves the effectiveness of the activities of development of creative potential, in the training process of specialists in the field of physical education and sport.

In conclusion, the development of creative attitudes in the field of physical education and sport derives from the need to respond to the challenges and opportunities in a constantly changing world. The specialists in the field of physical education must be prepared to innovate, adapt and inspire to make meaningful contributions to the promotion of health, performance and well-being in society.

Following the evaluation of creative attitudes, we can conclude that they emphasize the interest with reference to the new, the involvement and active participation of the research subjects in the creative process, in the initiation of new, non-traditional and original works. The increased interest of the subjects to participate in scientific events with scientific articles, in seminars in the field of physical culture, but also an increased motivation towards employment in the work field was highlighted.

Keywords: creative attitudes, physical education, innovation.

MANAGERIAL SKILL OF THE HIGHER EDUCATION INSTITUTION HEADS

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The current management evolution trends are characterized by the fact that it encompasses all areas of economic, social, educational, political life, allowing a better understanding of market problems, under the conditions of defining a large number of interconnections and restrictions. In a high-performance management, the ability to identify transformations and to report needs is affirmed, promoting *professional competition*, optimally manage resources, communicate effectively, develop innovative management strategies.

For these reasons, today's constantly changing society, progress in various fields requires decision-makers to consolidate a modern way of thinking, to actively promote the abandonment of outdated leadership and organization mentalities and methods, in order to emphasize the training and management of human resources, to capitalize and stimulate the individual personality qualities of heads in educational institutions, including those of higher education, in the perspective of training managerial skills.

Likewise, we mention the fact that the current higher education system has been facing various problems in recent decades, including: the sudden drop in the number of students; decreasing access to quality education; low results in national and international tests; high level of dropping out of university studies, showing a low level of motivation for learning. This set of problems is deduced from the study "*Comprehensive evaluation of the educational sector in the Republic of Moldova*", but also from the analysis of various reports, based on studies *the student, as a subject of education*.

The persistence of the bureaucratic management model, rooted in the culture of higher education institutions and not only, the value system of teaching and managerial staff incongruent with the value system promoted in educational policy documents, but also the inconsistency of the distribution of managerial functions vertically and horizontally, represent factors that determine the decrease in motivation for a career in the field of education. Only in an educational institution, managers are the ones who promote the change, they feel that they should first know the conditions that determine the change and understand the attitudes and motivations that produce it.

So, the role of change agent highlights the manager's concern for improvement and adaptation to the changes imposed by the environment. Exercising this role requires the manager to identify and exploit opportunities, but also to develop the ability to initiate changes to direct the institution towards the defined goals [115, pp.36-37].

In these described realities, the process of developing managerial skills in the leaders of higher education institutions becomes an essential desire to ensure effective and successful leadership, to respond to educational needs and challenges.

Thus, we deduce the actuality and importance of researching the particularities of the managerial skill development among the educational institution heads, a spectrum that involves:

a) double professionalization of the educational institution heads, reflected in the knowledge and qualities that emphasize professional skill, on the one hand, and the skill to lead managerially, on the other;

b) the ability to develop an efficient system of relations in the institutional environment, aimed both at relations with subordinates and relations between subordinates, in order to establish a work climate favourable to performance;

c) modeling a proper managerial behaviour, which positively influences the actions of subordinates, orienting them towards effective activities to obtain concrete results, corresponding to the established objectives;

d) the authority with which is invested is on the one hand formal, specific to the position held by the manager in the institution;

e) managerial creativity is necessary at a higher, innovative level to successfully face the demands generated by technical, technological, social changes, etc.

f) the power of managerial resistance to requests is typical of the managers' activity, in particular, who are subject to decisional stress, time pressure, responsibility in the conditions of an open and sometimes/often contradictory pedagogical context;

h) increased sense of managerial responsibility realized and continuously perfected by the manager as a superior attitude, internalized at the motivational, affective and character level, giving a superior social status in front of subordinates and superiors.

The system of *educational management* must be oriented towards flexibility, diversity, generation, development and implementation of new ideas.

Emerging from these ideas, we mention the fact that the dynamism of contemporary life, determined by the impressive changes in all spheres of activity, requires a continuous adaptation of the higher education system to the new orientations and realities. The orientation towards democracy and openness can ensure the success of the Republic of Moldova only if education forms personalities capable of capitalizing on new ideas, values, models of thinking, promote new individual behaviours, characteristic of a democratic society.

But, the theoretical and empirical approaches differ at the level of particularities through which the success or efficiency of an educational institution is operationalized. In recent years, the importance of organizational factors for the quality of education has been highlighted, beyond strictly educational or didactic indicators.

Therefore, the managerial staff in higher education institutions will orient the entire management activity of the institutions in the directions drawn by the mission

of education and the educational ideal, by capitalizing on managerial skills and experience in the field, being accompanied by the ability to take initiative, to correctly approach problems, the ability to use one's own strengths and relationships and to assume potential risks. So, *educational services* represents a set of specialized activities, carried out through specific methods and techniques, developed and carried out within public institutions or organizations, belonging to a community, which aims to solve various categories of problems regarding the education and instruction of various categories of beneficiaries from the respective community.

For these reasons, the development of the managerial skills of management staff from higher education institutions requires self-reflection, self-direction, self-appreciation and behavioral reconstruction, through self-assumption of changes, through professional awareness and responsibility. However, this requires the provision of continuous renewal and restructuring of one's own purchasing device, flexibility and responsiveness in relation to the circumstances that emerge along the way.

From the problem described above, we deduce that *the quality of educational services* is determined by a multitude of factors, including the managerial skills of the educational institution heads, which requires the employment within the managerial system of competent, competitive, creative managerial staff with managerial performance, intrinsically motivated for quality managerial activity, for continuous development, with a pro-active attitude towards change. However, managerial staff is based on a certain amount of previously acquired knowledge, which will be used in different combinations, associations; correlations. *The ability to solve problems* depends, to a large extent, on the quality and richness of its cognitive repertoire, being subjected to restructuring and transformation, in order to obtain the desired solution.

MOTOR ACTION CONTROL IN THE PROCESS OF TECHNICAL TRAINING OF SKILLED LONG JUMPERS

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Topicality. Control of athletes' motor actions in the process of technical training is closely associated with the activity of sensory systems - a set of auxiliary formations, receptors, nerve pathways and centers, irritation of which leads to the emergence of a specific sensation characteristic of a given sensory modality.

Sensory typology is widespread in psychology. The criterion of characterological differences between individuals is the key sensory system or the modality of human perception of information coming from the surrounding world. Three types of people are distinguished: visual learners, auditory learners, and kinesthetic learners. Each person possesses all these types of perception, but some of them play a dominant role in his/her activity.

The study topicality is related to the determination of the sensory system dominant type of skilled long jumpers to target their strengths and thus improve the effectiveness of motion control in the process of technical training.

The objective of the study is to improve the efficiency of motor action control in the process of technical training on the basis of determining the predominant type of sensory system of skilled long jumpers.

Research methods: analysis and generalization of scientific and methodological literature, testing (determining the type of the key sensory system); methods of statistical analysis.

Results. The study involved 33 skilled long jumpers, representatives of Ukraine and China, among them: three athletes were Masters of Sports, one was a Candidate Master of Sports, 26 were second-class athletes, and two were first-class athletes.

It was found that the visual sensory system is the key one in the majority of skilled long jumpers. Thus, 14 athletes have dominant indices of this sensory system most of them are second-class athletes. Indices of the kinesthetic sensory system prevail in 6 athletes.

It is just this system that is dominant in elite sports, information about the degree of change in joint angles, skeletal muscle contraction, tendon tension, is necessary for the regulation of motor acts and postures. The indices of the auditory sensory system are predominant in 9 long jumpers. It is important to note that 4 athletes are characterized by the same indices of visual and kinesthetic sensory systems.

Conclusions and recommendations. The effectiveness of motor action control in the process of technical training depends on the dominance of indices of a certain sensory system. Among 33 skilled long jumpers, the key sensory system is visual - 43 %, auditory - 27 %, kinesthetic - 18 %. The same indices of manifesting visual and kinesthetic perception of information have 12 % of athletes.

Long jumpers with dominant indices of the *visual sensory system* (43%) should be guided mainly by visual landmarks while performing exercises (e.g., look at a certain object during taking-off, place landmarks on the track to improve the tempo-rhythmic structure of the run-up, accuracy of hitting the take-off board), watch videos, observe the technique of highly skilled athletes, control and analyze on the basis of video recording the technique of long jump attempts or other exercises, draw jump diagrams, etc.

The process of technical training of long jumpers with predominant *indices of the auditory sensory system* (27%) will be more efficient on the basis of the use of the verbal method by the coach, that is, the implementation of feedback through the word, intonation, voice instructions in a concise form. Listening to audio recordings with closed eyes, repeating aloud the coach's instructions, using various sound reference points for mastering the tempo-rhythmic structure of the run-up, sound leader (a device that allows the athlete to control the time of the exercise execution, focusing on the sounds that are given at intervals), musical accompaniment can be useful for these athletes.

The dominance of *kinesthetic sensory system indices* in long jumpers (18%) allows one to focus the process of improving motor actions mainly on the perception of one's own body, the feeling of interaction with the support, the feeling of time and space (e.g., performing long jumps from different run-ups, on a hard and soft track, executing special exercises with a change of pace, or with closed eyes, etc.).

For athletes (12 %) with the same indices of visual and kinesthetic sensory systems, focusing on the feeling of their own body, the feeling of interaction with the support during taking-off, the feeling of time, space, and orientation to visual references during exercise performance are advisable.

Keywords: technique, sensory system, long jump, skilled athletes.

NEW TRENDS IN FUNCTIONAL KYPHOSES RECOVERY

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Kyphosis is an acquired or congenital deformity of the spine. It is the object of study of many scholars and specialists in the field. The recovery of kyphosis depends on the correction of all deviations from the normal, namely the deformation of the physiological curves of the spine, the head and neck tilted forward, the shoulder blades apart and separated from the ribcage, the shoulders brought forward, the chest sunken or in flexion, a deviation of vertebrae. Physiotherapy is constantly coming up with new ideas, programs and protocols, addressed to people diagnosed with functional kyphosis.

Specialists in the medical field are constantly looking for new possibilities for the diagnosis and treatment of functional kyphosis. The therapeutic activity is directed towards new ways of recovery in the field of rehabilitation and physical therapy, because it is a field of educational, social, professional activity that aims at the full restoration of the lost functional capacity. Based on the fact that, in recent years, these deviations from the normal are becoming very common in medical practice, it was decided for the need for a wider kinetotherapeutic approach to the investigated problem, in order to reduce it.

Research objectives:

- studying the specialized literature with reference to the types of kyphosis, the diagnostic and testing methods as well as the recovery of functional kyphosis;
- identification of methods, procedures and techniques for the correction of functional kyphosis;
- development and implementation of the Physical Exercise Program for the recovery of functional kyphosis in children and adolescents;

Most of the time, the factors that cause kyphosis to appear are unknown. Among the factors we mention: genetic factors, metabolic factors, the defective balance system, constitutional asymmetries, the biomechanical factor.

The triggering of the pathological mechanism depends on a series of causes, which can be sudden growth, incorrect posture, kyphotic attitude, the "coil" position of the child when sleeping - the muscles of the buttocks, the posterior part and the femurs are stretched, and the muscles of the anterior part of the femurs are contract and shorten.

Starting from the objectives of this study, we carried out the research on a group of ten patients, which are children of different ages between 3 and 14 years old, who were diagnosed with functional kyphosis. We mention the fact that the children

attended the physical therapy sessions individually, not in groups, and the results presented in the table and graphs represent a sum of them. At the initial and final stage, anthropometric measurements such as height, chest circumference, chest excursion and somatoscopic examination of the research subjects were made. The theoretical milestones presented above helped us to develop a program for the recovery of functional kyphosis in children and adolescents, which we implemented for 6 months at the Neokenetics Center in Chisinau. The program includes a set of exercises for the recovery of spine deficiencies in children and adolescents, which can be applied both within the Center and at home, under the supervision of parents.

The kinetic program was based on active, passive mobilizations, dynamic, static and corrective exercises. Thus, according to the results presented, in all children the thoracic perimeter increased by one cm, which proves that the program proposed by us has a beneficial effect on children with kyphosis. To establish an appropriate program, we took into account the anamnesis of each child: medical antecedents - personal, physical, pathological, motor activities - sports, bicycle, rollerblades, habits, culinary preferences, the physically deficient, underweight has a reduced appetite and the necessary protein deficiency of good growth and harmonious development.

This was due to the fact that the examined children continuously attended the physical therapy sessions and taking into account the fact that the patient is in the growth period, we managed in a relatively short time to tone the supporting muscles of the spine and correct the postural defects due to the effectiveness means, procedures and programs carried out.

Conclusions:

1. Functional kyphosis is a condition that requires treatment as soon as possible for the prevention and prophylaxis of attitude deficiencies and the study of specialized literature identified a series of methods and means of correcting kyphosis that served as a theoretical basis in the development of the Recovery Program.

2. The recovery of functional kyphosis includes the correction of the vicious position, the realignment of the spine, the restoration of vertebral mobility, the toning of the paravertebral, abdominal, pectoral muscles, the emphasis being on the extensor muscles of the spine.

3. Physiotherapy is the most effective means in the recovery of functional kyphosis in children of prepubertal and pubertal age, demonstrated by the results obtained in the research.

Keywords: Kyphosis, spine, deviation, recovery, active mobilization, posture.

SLOVAK NATIONWIDE TESTING OF PHYSICAL INDICATORS AND MOVEMENT PREREQUISITES OF 1ST GRADE ELEMENTARY SCHOOL STUDENTS

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Introduction

The goal of study was to update the data about somatic indicators and selected physical abilities of 6- and 7-year-old female students by the nationwide testing of students in Slovakia in 2018, which we then compared with the Eurofit norms.

Methods

The national testing was attended by pupils of the 1st year of elementary school from all over Slovakia, but we only worked with girls. Physical and sports education teachers were responsible for testing. They measured body height and body weight. From the movement tests, we evaluated only selected fitness skills such as the 4x10 m shuttle run, the long jump from the standing position, the endurance in the overhand bend and the multi-stage endurance shuttle run of 20 m. The data collection of the motor tests took place all at once on one day, while the measurement of somatic indicators could be carried out a day in advance. When processing the obtained data, we calculated mathematical-statistical characteristics, for the creation of TV, TH and BMI standards we used 5-point standards, but for the selected movement abilities we chose to sort the data according to a 9-point scale when creating the standards.

Results

We assumed that the norms of physical indicators and selected movement skills would be different in terms of age, which we managed to confirm. We also found mathematical differences in selected tests with a comparison of official data published on the website of the Ministry of Education.

Conclusion

Nationwide testing served as the first selection of children for sports. According to the literature, this is a basic selection of talented youth, when the widest possible

coverage of the population of children of the same age should be ensured. According to our standards, talented children in specific tests are in standards 8 and 9. However, it is necessary to respect the structure of sports performance in each sport.

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