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JUNIOR CHESS PLAYERS ANALYSIS IN THE RUSSIAN FEDERATION AND THEIR GENDER COMPOSITION

Akimushkin R.V.
Gabbazova A.Ya.

Abstract: it has been analyzed the number of young school-age chess players in the Russian Federation and the number of skilled chess players depending on their age and gender, and revealed the percentage of young chess players by year of birth. The research results suggest the existence of such a phenomenon as “female constant in chess”, which is 23%.

Keywords: young qualified chess players, junior chess players, RCF rating list, age, gender characteristics

Introduction. Despite the fact that chess is gaining more and more popularity in Russia the scientific and methodological support of the system of sports training of chess players and the management of the development of chess in the country lags behind the real needs of society - there are not enough qualified coaches and teachers, the state order for their training is also very insignificant, the standard of sports training was developed without the involvement of specialists in the field of chess and requires improvement on the basis of large-scale and multidirectional (sociological, pedagogical, psychological, medico-biological) scientific research.

The aim of this research is to analyze the contingent of young qualified chess players of school age in the Russian Federation and to study their gender composition.

Method: statistical analysis of the rating list of the Chess Federation of Russia (CFR).

Results and discussion. The analysis of the RCF rating list dated February 22, 2021 [1] suggests that currently there are 203,015 qualified chess players of school age in the Russian Federation. Figure 1 shows the dynamics of the number of qualified chess players by age, starting from 2014 birth (6-7 years old) and ending in 2002 (17-18 years old) - this is the age of students in children's and youth sports schools.

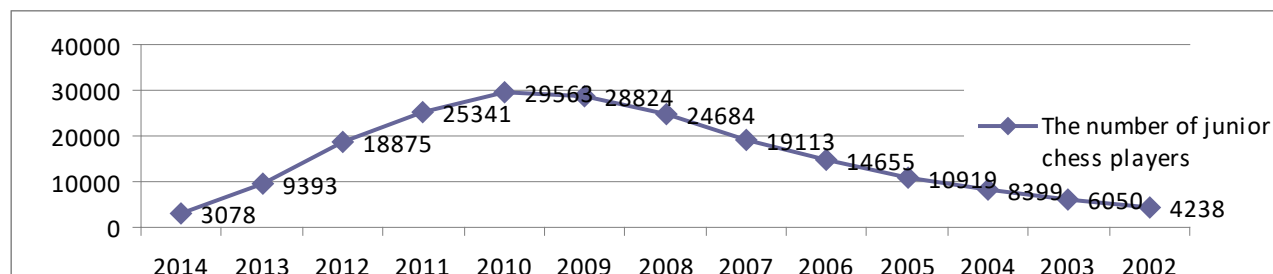


Figure 1 - Graph of the dynamics of the number of young qualified chess players in the Russian Federation by year of birth (2014-2002)

The graph of the dynamics of the number of junior chess players has the shape of a Gaussian normal distribution curve with positive asymmetry. There has

been a steady increase in the number of persons engaged in skilled chess at the age of 6 to 10 years inclusive (the peak at 10 years is 29,554 people). From the age of 11, the number of young chess players has been steadily falling year by year, reaching its minimum by the age of 17-18 – 4 238 people.

Figure 2 shows the percentage of young chess players by age (from 6 to 18 years). According to the data obtained, the largest percentage of those who go in for chess are children 9-10 years old (30% of the total number of junior sports schools), 13% - 11-year-olds, 12% - 8-year-olds, 10% - 12-year-olds, and so on in decreasing order.

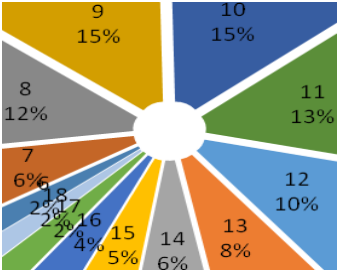


Figure 2 - Percentage of young qualified chess players by age (from 6 to 18 years old)

Thus, the main participants in children's chess competitions are young chess players aged 8 to 12 years (65% of the total number of junior sports schools).

The gender composition of the young chess players is interesting. Figure 3 shows a histogram with the number of children by year of birth - boys and girls, differentiated. The histogram was obtained by splitting the data presented in Figure 1. In general there are 157 386 boys and 45 629 girls in the Russian Federation.

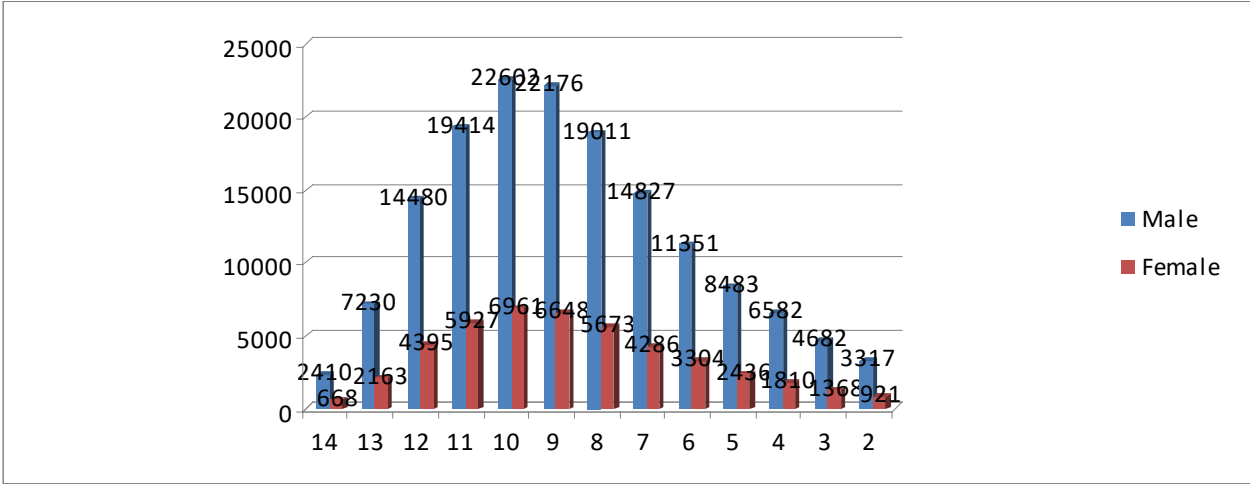


Figure 3 - Graph of the dynamics of the number of young qualified chess players and female chess players in the Russian Federation by year of birth (2014-2002)

The analysis of the histogram allows us to conclude that the trend of an increase in the number of chess players at the age of 8-12 years and a steady decline by the age of 17-18 has no gender differences, the peak in the number of boys and girls involved in chess falls at 10 years old. Both graphs are in the form of a Gaussian normal distribution curve with positive asymmetry.

Figure 4 shows the percentage of young qualified chess players and female chess players by year of birth.

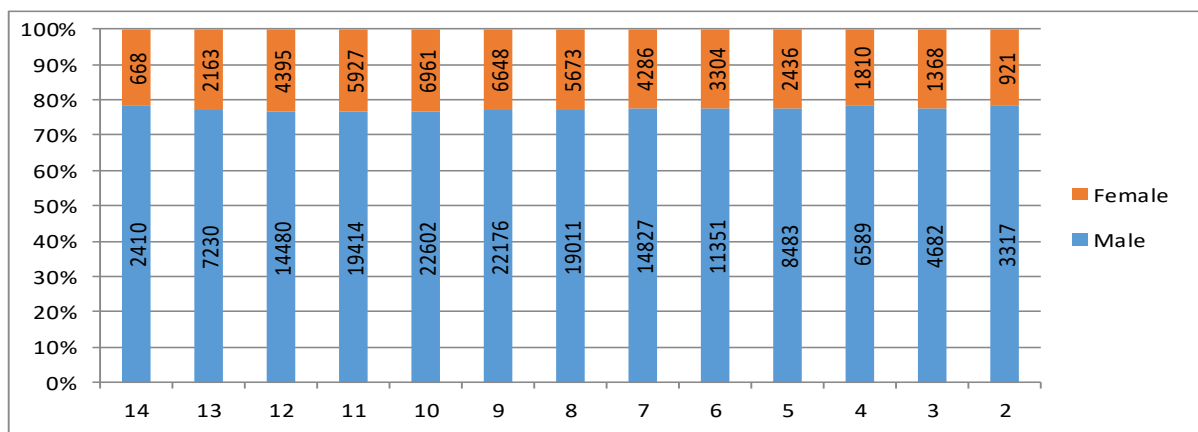


Figure 4 - Percentage ratio of young qualified chess players and female chess players by year of birth

We have revealed a unique fact - in each age group 22-23% of girls are skilled in chess (in the total sum of junior sports schools from 6 to 18 years old - 22.5%). We called this phenomenon “the female constant in chess” and it requires additional research.

Conclusion:

1. It was that nowadays there are just under 203,000 Russian schoolchildren engaged in elite chess. The peak involvement in chess occurs at age of 9-10 years (30% of the total contingent of qualified junior chess players), and the main contingent of those participating in chess competitions are presented by the 8-12 year-old athletes (65%).

2. Within each age developmental period (by year of birth), 22-23% of junior chess players in the Russian Federation are girls (22.5% of the entire chess players aged from 6 to 18 years). We called this phenomenon “the female constant in chess”, and it requires additional investigation and research.

Therefore, the study findings can be used to improve the system of sports training of junior chess players, develop relevant directions of scientific research in chess sport and scientific and methodological support of the age- and gender-sensitive educational system.

References

1. RCF rating list - <http://www.ratings.ruchess.ru/>. - 22.02.2021.

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АНАЛИЗ КОНТИНГЕНТА ЮНЫХ ШАХМАТИСТОВ В РОССИЙСКОЙ ФЕДЕРАЦИИ И ЕГО ГЕНДЕРНЫЙ СОСТАВ

Аннотация: в статье проведен анализ контингента юных шахматистов школьного возраста в РФ, проанализировано количество занимающихся квалифицированно шахматами в зависимости от их возраста и пола, выявлен процентный состав юных шахматистов и шахматисток по годам рождения. Результаты исследований позволяют утверждать о наличии такого феномена как «женская константа в шахматах», которая составляет 23%.

Ключевые слова: юные квалифицированные шахматисты, рейтинг-лист РШФ, возраст, гендерные особенности

THE DIFFERENCES IN THE FUNCTIONAL READINESS OF HIGHLY QUALIFIED FOOTBALL PLAYERS WITH VARIOUS ROLES

**Alhakeem Alaa
Zakharyeva N.N.**

***Abstract:** the article presents an analysis of the functional readiness of highly qualified football players with different playing roles. The examination of the players was carried out using the following methods: examination, questionnaire, electrocardiography, echocardiography, tonometry. The conclusion are made about the functional fitness and physical performance of football players of various roles.*

***Keywords:** highly qualified football players, functional fitness, electrocardiography, echocardiography, physical performance*

Relevance. Functional fitness of football players characterizes the state of the organs responsible for the transport of oxygen. In a football team, there is a clear distribution of functions between the players: goalkeeper, forward and central defenders, midfield players. Assessment of the functional readiness of the football team, depending on the playing role, provides better coherence and allows you to take into account the individual characteristics of athletes in the training process.

The purpose of this study: to evaluate the criteria of functional fitness according to the data of physical, echocardiographic and electrocardiographic

studies and the indicator of physical performance in highly qualified football players.

Research methods. The following methods were used in the scientific research: 1. Sociological methods (survey), 2. Electrocardiography-ECG recording was performed at a tape speed of 50 mm/sec, with the duration of 1 mm being 0.02. 12 leads were used, when recording the ECG. 3. Echocardiography was performed on a domestic device using the method of transthoracic echocardiography (Aloka SSD-3500 ultrasound scanner). 4. Blood pressure and pulse were measured by tonometry. 5. Methods of mathematical statistics.

Base science experiment served as a laboratory "Medical and biological support of sports teams of the Sports Medicine Centre, research Institute for Sport and Sports medicine Russian State University of Physical Education, Sport, Youth and Tourism. The studies were conducted from September 2018 to February 2020, during the preparatory sports training period.

The results. A survey of the Russian State University of Physical Education, Sport, Youth and Tourism (SCOLIPE) national football team was conducted. 17th highly qualified football players were examined, the average age was 18.54 ± 0.9 years; the experience in football was 12.46 ± 1.08 years. All athletes regularly train in the Sports Academic Club of the city of Moscow and had high sports categories. The majority of the team's players in 56.45% (9 people) had a history of professional injuries: concussion of the brain; rupture of the ligaments of the ankle joint; rupture of the quadriceps femoris; fracture of the fifth metatarsal bone; fracture of the clavicle; injury to the meniscus of the left leg; heel spurs; torn ligaments in the ankle of both legs. g1-defenders (n=5); g2-midfielders (n=5); g3 - forwards (n=5) and g4 - goalkeepers (n=2). As the results of the observation showed, all the players performed their functional duties in the team, according to their role, in full.

Physical examination and 3-fold tonometry revealed sports bradycardia in all comparison groups: g1 - 63.4 ± 10.11 (bpm); g2 - 62.01 ± 18.51 (bpm); g3 - 52.11 ± 8.91 (bpm); g4 - 56.11 ± 9.13 (bpm), more pronounced in the attackers. The players of the 1st and 2nd groups have an average resting heart rate of 62.01 ± 18.51 beats/min, which also reflects high fitness. The blood pressure data g4 systolic blood pressure – 144 ± 2.83 (mmHg) and diastolic blood pressure - 80 ± 5.28 (bpm) differ at rest only in the 4th group, which may reflect the individual norm of the body's response to physical activity.

To assess the function and structure of the heart, the method of transthoracic echocardiography (Aloka SSD-3500 ultrasound scanner) was used. Due to strong physical exertion in the body of football players, adaptive changes occur, associated with changes in hemodynamic characteristics. Lang R.M. et al. (2006) defined the normative values of the studied indicators. Significant inter-group differences in the "Final diastolic" (ml) parameters were revealed between the 1st and 3rd comparison groups $p_1 > p_3$ ($p < 0.05$). The heart rate indicator has significant intergroup differences in the 1st and 3rd comparison groups; 1st and 2nd comparison

groups; 2nd and 3rd comparison groups; 1st and 4th comparison groups (by the method of echocardiography).

According to ECG data, defensive players in 100% of cases showed signs of a physiological sports heart: sinus bradycardia with episodes of supraventricular pacemaker migration in 76%. In this group, it was revealed: increased QRS voltage in 100% of cases; early ventricular repolarization syndrome in 76% of cases. We noted the presence of these indicators on ECG and echocardiography, which are the most significant indicators that characterize the formation of a sports heart, even if they are not deviated from the norm.

When predicting the potential capabilities of football players, it is of particular importance to determine the maximum oxygen consumption by the body's tissues and their resistance to oxygen deficiency. According to V.B. Shvarts (1977, 1984), these indicators are determined genetically and the share of heritability is: 73-79% or more.

According to experts in the field of football, during training, the oxygen "ceiling" can be increased by no more than 20-30%. It was found that the highest level of BMD was recorded in 21-22 years and was 3827 ml. The relative value of BMD at this age was 51 ml/kg. Studies of changes in the basic physiological functions of highly qualified football players have shown that during the game 60-80% of the time they work in the mode of 80-100% of the value of the maximum oxygen consumption, which places increased demands on their aerobic capabilities. The average amount of oxygen consumption during the game for highly qualified football players ranges from 3.3 to 4.5 l / min. During testing, the following indicators of PWC₁₇₀ rel (w/kg) were revealed: g1 - 31.36±6.92 (kgm/min. W.); g2 - 27.91±2.59 (kgm/min. W.); g3 - 23.8±2.59 (kgm/min.W.); g4 - 33.25±9.26 (kgm/min. W.). The significance of differences between g2 and g4 was revealed (p<0.05). Goalkeepers and defenders have the highest physical performance indicators. Forwards had the worst physical performance in the comparison groups, which can cause a difference in endurance in different periods of football play and lead to difficult situations associated with a difference in endurance in different players.

Conclusions: 1. Highly qualified football players with different playing roles in the preparatory period of sports training differ in the indicators of cardiohemodynamics according to transthoracic echocardiography, indicators of physical performance in the two-stage PWC₁₇₀ test with submaximal load. 2. In defensive players, according to the results of ECG and transthoracic echocardiography, signs of a physiological sports heart were noted, which is expressed in: increased QRS voltage in 100% of cases; early ventricular repolarization syndrome from the lower and lateral walls in 76% of cases; sinus bradycardia with the Wenckebach phenomenon and a change in the BWW/MML ratio. The athletes-midfielders showed signs of myocardial overstrain. Defensive players and midfielders require the dynamic supervision of a cardiologist.

Midfielders must undergo an in-depth examination by a cardiologist once every 6 months with mandatory monitoring of ECG and echocardiography.

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РАЗЛИЧИЯ В ФУНКЦИОНАЛЬНОЙ ПОДГОТОВКЕ ВЫСОКОКВАЛИФИЦИРОВАННЫХ ФУТБОЛИСТОВ С РАЗЛИЧНЫМ АМПЛУА

Аннотация: в статье представлен анализ функциональной подготовленности высококвалифицированных футболистов различного амплуа. Обследование игроков проводилось с использованием следующих методов: осмотр, анкетирование, электрокардиография, эхокардиография, тонометрия. Приводятся данные о функциональной подготовленности и физической работоспособности футболистов различного амплуа.

Ключевые слова: футболисты высокой квалификации, функциональная подготовленность, электрокардиография, эхокардиография, физическая работоспособность

ON THE EXPERIENCE OF USING JI.T.SI PLATFORM IN DISTANCE EDUCATION AT UNIVERSITY OF PHYSICAL EDUCATION

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Udalova M.Yu.

Abstract. *The article gives an analysis of various online educational platforms and describes the experience of using Jitsi platform by Foreign languages and linguistics department in distance education during COVID-19 pandemic.*

Keywords: *distant education, Jitsi online educational platform*

The coronavirus disease 2019 (COVID-19) was detected in China in December 2019, spread throughout the world within a few months and was declared a pandemic by the World Health Organization on March, 11th, 2020. Russian State University of Physical Education, Sport, Youth and Tourism had to

close the campus down together with other Universities around the world in March of 2020 and shift all the academic programs online. Many Universities were not prepared for such a transition from classroom-based education to completely online education. Most of them initially lacked infrastructure and strategies.

There has been many advances in educational technology in the last few years. It proved to be immensely useful during this pandemic. The MOODUS online platform to support online education was available at our University, which made it possible to effectively start distant education. Nevertheless, it was a challenge to map the educational activities in an online space as professors and students faced a wide range of logistic, technical, financial, and social problems. The professors of the University had to seek platforms to dispense course material and information related to their courses, and deliver live lectures through. The University MOODLE system has access to BigBlueButton but the platform is not used by all University Institutes.

Foreign languages and linguistics department had to compare the existing online tools for the educational process. Zoom is a cloud-based video conferencing service widely used now. The services include video and audio conferencing, collaboration, chat, and webinars. It supports both desktop and mobile users. There is a free version of Zoom that is perfect for very small groups, but there is a catch. The meetings are limited to 40 minutes. You can host unlimited meetings, which is a workaround for this limit. The platform is easy to use and has certain advantages. However, the limit of 40 minutes is not good enough for educational use. Zoom has a lot of disadvantages:

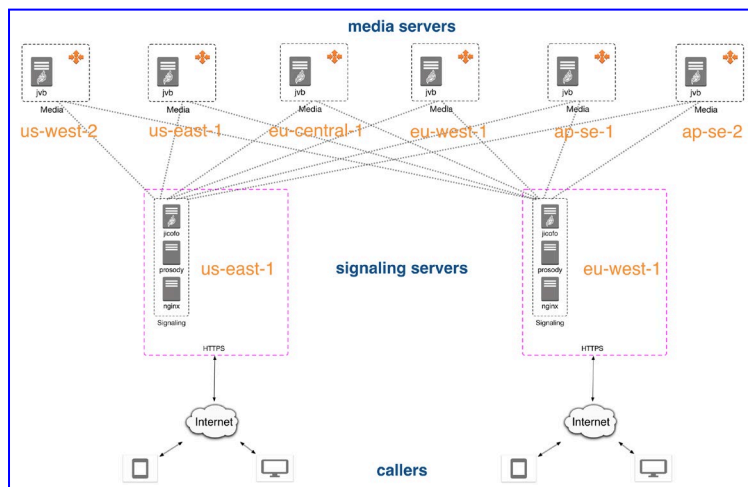
1. A big part of any online event is the ability for people to comment and message each other in a live chat. Zoom does lack one very important feature: the ability to delete inappropriate comments on the fly.

2. Zoombombing is a new occurrence on the platform that results in unwanted individuals crashing a conference call. Typically, this will result in loud or inappropriate behavior by someone not affiliated with anyone on the call with the intention to disrupt it for fun.

3. Unlike most other conference platforms, Zoom does not work without downloading an app for your browser.

4. You can store all of your meetings in the cloud depending on your plan. Each plan has different limits on the storage capacity of your cloud. There are many instances where these videos can be many times bigger than normal and this can be quite a problem for those with limited space and poor internet connections. Recent reports have brought Zoom under fire due to security concerns. Numerous users have identified that Zoom hackers are sharing undesirable content and joining public meetings. New York Department of Education does not recommend ZOOM usage for educational objectives.

Having studied the pros and cons of using ZOOM and other best platforms like Lifesize, Google Hangouts, Skype, Twitch, Jitsi, Join.me, Webex Foreign languages and linguistics department made its choice in favor of Jitsi.



Improving scale and media quality with cascading SFUs

Jitsi is a collection of free and open-source multiplatform voice, video conferencing and instant messaging applications for the web platform, Windows, Linux, macOS, iOS and Android. Jitsi is said by the experts to be easy to use, reliable with the video quality and audio quality both great—noticeably sharper and crisper than on Zoom or Webex.

As practice showed Jitsi allowed instant video conferences, efficiently adapting to the demands of the department on the number of participants. It is enough to download the link once to get access to the conference any time and from any device without downloading the application. There are no artificial restrictions on the number of users or conference participants. Jitsi could support up to 75 different callers at the same time. And, unlike Zoom, there is no time limit for calls. Server power and bandwidth are the only limiting factors.

The experience of using the Jitsi platform by the Foreign Languages and Linguistics Department of the Russian State University of Physical Education, Sport, Youth and Tourism during the pandemic turned out to be effective, and received a positive assessment from both teachers and students. On the results of its successful experience the Department recommended the Jitsi platform for use at the University.

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ИЗ ОПЫТА ИСПОЛЬЗОВАНИЯ ПЛАТФОРМЫ JIT.SI В ДИСТАНЦИОННОМ ОБРАЗОВАНИИ В УНИВЕРСИТЕТЕ ФИЗИЧЕСКОГО КУЛЬТУРЫ

Аннотация. В статье дан анализ различных онлайн-образовательных платформ и описан опыт использования платформы Jitsi кафедрой иностранных языков и лингвистики в дистанционном обучении во время пандемии COVID-19.

Ключевые слова: дистанционное обучение, образовательная онлайн-платформа Jitsi

EXERCISE IS MEDICINE: THE FUTURE OF FITNESS AND WELLNESS INDUSTRY

Baier T.A.

Abstract. *The article gives an overview and analysis of various evidence-based safe and effective fitness and clinical fitness programs to support a culture of wellness. It focuses on preventative health, exercise and nutrition intervention, and effective behavior change strategies.*

Keywords: *wellness programs, healthy lifestyle, exercise is medicine*

The MUSC Wellness Center is a facility dedicated to good health. The center fosters the development of healthy lifestyles through the promotion of wellness attitudes and practices. More than a health club, the MUSC Wellness Center focuses on the development of total well-being, with the belief that wellness is a balance of social, emotional, spiritual and physical health. Affiliated to the Medical University of South Carolina the Wellness Center is open to the entire community, for adults over 18 years of age.

The values of the MUSC Wellness Center are Compassion, Collaboration, Respect, Integrity, Innovation

The goals are:

- Advance New Knowledge and Scientific Discoveries
- Embrace Diversity and Inclusion
- Foster Innovative Education and Learning
- Commit to Patients and Families First
- Build Healthy Communities

MUSC Wellness Center provides evidence-based safe and effective fitness and clinical fitness programs to support a culture of wellness for MUSC students, faculty, staff, and the Charleston community. Excellent health coaching, nutritional counseling, and specialized programs are available at the center. The overweight, obesity, and chronic disease program has won two national awards. The Wellness Center takes pride in building health communities with a focus on preventative health, exercise and nutrition intervention, and effective behavior change strategies.

All the programs offered at the center are developed on the basis of scientific research carried out at the Medical University. A number of programs are certified medical programs used in the United States. Here are the main programs of the center:

Piece It Together

This comprehensive program designed for teens and young adults with high functioning Autism Spectrum Disorder, as well as other mild neurodevelopmental disabilities. The goals of this program are to increase physical activity, improve body composition, promote healthy food choices, broaden social skills, teach relaxation skills and improve mood and calmness.

Recovery Program

This program is specially designed for individuals' interested in exercise programming and nutrition intervention to create healthy habits that support the neurobiology of addiction, and promote a positive mental state, improved sleep, and release stress and anxiety.

Rock Steady Boxing

Rock Steady Boxing gives people with Parkinson's disease hope by improving their quality of life through a non-contact boxing based fitness curriculum. Rock Steady Boxing classes focus around exercises emphasizing gross motor movement, balance, core strength, and rhythm which favorably impact range of motion, flexibility, posture, gait, and activities of daily living.

Breast Cancer Survivors Fit Club

The Hollings Cancer Center and the MUSC Wellness Center invite breast cancer survivors to enroll in the new Survivors' Fit Club. The 10-week exercise, nutrition, and behavior change program focuses on improved cardiovascular fitness, muscle strength, body composition, fatigue, anxiety, depression, self-esteem and several quality of life factors specific to cancer survivors.

Exercise Is Medicine

In 2007, the American College of Sports Medicine (ACSM) and the American Medical Association (AMA) co-launched Exercise is Medicine® (EIM) – a United States-based health initiative that has since been coordinated by ACSM.

“The overarching goal is to connect clinicians with fitness professionals and to view physical activity as a vital sign,” said Susan Johnson, Ph.D., director of health promotion. Students who go to Student Health or Counseling and Psychological Services (CAPS) will be asked how many days a week they exercise and for how long. Care providers will refer students who exercise less than 150 minutes per week – or half an hour for five days – to the Wellness Center for a consultation with an Exercise is Medicine-certified trainer. The voluntary 45-minute session will help students identify what’s keeping them from exercise and come up with strategies to incorporate exercise into their day. Students who already meet the recommended amount of physical activity are also welcome to meet with the trainers.

During October, which is “Exercise is Medicine on Campus Month,” students could attend three lunch-and-learn sessions called “Working Out Wellness.” Topics in these sessions included optimal nutrition for exercise, the benefits of yogic breathing and how to avoid being sedentary during long study hours.

The vision of Exercise is Medicine® (EIM), a global health initiative managed by the American College of Sports Medicine (ACSM), is to make physical activity assessment and promotion a standard in clinical care, connecting health care with evidence-based physical activity resources for people everywhere and of all abilities.

EIM encourages physicians and other health care providers to include physical activity when designing treatment plans and to refer patients to evidence-based exercise programs and qualified exercise professionals. EIM is committed to the belief that physical activity promotes optimal health and is integral in the prevention and treatment of many medical conditions.

The future of fitness and wellness centers is with the long-term vision for health care providers to routinely assess physical activity as a “vital sign” at every

patient interaction, provide brief advice, and refer patients to evidence-based fitness resources. Exercise and many drugs are similar in terms of their benefits. Exercise interventions SHOULD be considered as a viable alternative to, or alongside, drug therapy and PHYSICAL ACTIVITY needs to become the prescribed “PILL” of the future!

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ФИЗИЧЕСКАЯ АКТИВНОСТЬ КАК ЛЕКАРСТВО: БУДУЩЕЕ ФИТНЕС И ВЕЛНЕС ИНДУСТРИИ

Аннотация. В статье представлен обзор и анализ различных научно обоснованных безопасных и эффективных программ фитнеса и клинического фитнеса для поддержки культуры хорошего самочувствия. Основное внимание в ней уделяется профилактике заболеваемости, упражнениям и питанию, а также эффективным стратегиям изменения поведения.

Ключевые слова: оздоровительные программы, здоровый образ жизни, упражнения как лекарство

THE STUDY OF THE ENGLISH-LANGUAGE TERMS OF RHYTHMIC GYMNASTICS IN THE PROCESS OF TRAINING AT HIGHER SCHOOLS OF PHYSICAL EDUCATION

Balbekova V.V.
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Abstract. *This article deals with the importance and necessity of learning a professionally oriented foreign language, particularly English, by the physical education students. Good knowledge of English will help students to form and improve their future coaching career. The authors admit that the teaching of the rhythmic gymnastics terms at higher physical education institutions should be structural and systematic.*

Key words: *foreign language; sport; rhythmic gymnastics; professionally oriented vocabulary; professional development*

The role of foreign languages in the training of specialists in the field of physical education and sports is steadily increasing nowadays. Russian athletes,

coaches and sports functionaries take an active part in the international competitions and forums of various levels. The Russian Federation has recently increasingly become a venue for major international competitions, ranging from European Championships to the Olympic Games. The ability to communicate internationally is becoming a necessary quality of athletes and all other representatives of the world of sports, as it forms not only the image of individual Russian athletes, sports teams, coaches, but also a certain image of the country as a whole in the eyes of the foreign public.

Rhythmic gymnastics is very popular all over the world; it is one of the most prestigious sports in Russia. This fact is based on some causes. First of all, it is known that competitive rhythmic gymnastics began in the 1940s in the Soviet Union; therefore we can consider that this kind of sport was originated in Russia being the legal successor of this country. The Fédération Internationale de Gymnastique (the International Gymnastics Federation (FIG)) formally recognized this discipline in 1961, first as *modern gymnastics*, then as *rhythmic sportive gymnastics*, and finally as *rhythmic gymnastics*. The second cause is that Russians among the strongest nations in this event in the world. Russian mentors and coaches occupy a leading position in the world; they enjoy authority and recognition as masters of their craft. For many years, athletes from the Russian Federation have occupied high places in the ranking of the sports classification.

As rhythmic gymnastics is a sport that combines elements of ballet, gymnastics, dance, and apparatus manipulation, in the course of its terminology formation the terms were mainly borrowed from French language (choreographic terms), Italian language (musical terms) and Russian (gymnastic terms). The Cambridge Academic Content Dictionary gives the following definition of the word term – “a word or expression used in relation to a particular subject, often to describe something official or technical.”

But the circumstances have developed in such a way that the terminology of rhythmic gymnastics on the international level is used in English. It is no secret that Russian masters train not only domestic, but also foreign athletes. Thus English is necessary in a coaching career.

We have conducted a questionnaire survey of rhythmic gymnastics coaches in order to find out the degree of English language proficiency.

The questionnaire survey showed that only 9% of respondents are fluent in English (good knowledge), 23% of them can speak with a dictionary only (satisfactory knowledge), and 68% of coaches haven't got sufficient knowledge of the language to use it in the process of training foreign athletes (poor knowledge).

In our opinion, in order to overcome these difficulties and improve English language knowledge, an in-depth study of the English language in general, and the study of gymnastic terms in particular, should be at the forefront of training future coaches in higher schools of physical education and sports. Moreover, according to the Federal State Educational Standard 3++ concerning the Bachelor's degree level of higher education, the working program of the discipline

"Foreign language" should lead to the Universal competence (UC) achievement. The given UC means the ability to carry out business communication in oral and written forms in the state and foreign language(s). So the acquired skills and abilities will ensure the profound knowledge of English among the future coaches and specialists in the field of physical education and sports.

The purpose of this article is to describe the resources and methods of effective English language rhythmic gymnastics language teaching used at the Volgograd State Academy of Physical Education. To demonstrate this we should like to show a piece of practice which is involved in the process of education.

Within the competence of the course "Sports and pedagogical improvement" as an experiment we developed together with the English language teachers methodological recommendations for the study of gymnastic terms in a foreign language. We have divided the terms necessary for coaches to conduct training sessions into 3 groups:

1. Exercise without an object (balance, pirouette, illusion, jump, etc);
2. Exercises with objects (hoop rotation, roll of the ball, throw with clubs, etc);
3. Movement and direction (body waves, twisting, bending, direction, etc).

In addition, to help the trainers to conduct the lesson, we divided the words and expressions into 2 groups:

1. Possible errors (bent knees, relaxed body, raised shoulders, etc);
2. Remarks (stretch your hands; straighten your knees, etc.).

In these areas, we are updating the dictionary of English terms.

Experimental classes are held with the second year students. For the classes of the discipline "Sports and pedagogical improvement" each student prepares a practical part of the lesson in English, receiving advice from the teachers of gymnastics and English language. At the beginning of the lesson, the student presents the necessary words and expressions and conducts a fragment for 10-15 minutes. We must admit that all the students have a positive attitude to this form of teaching and would like to continue this practice.

We are currently developing a model lesson on the use of such practices, which we would like to demonstrate for the exchange of experience with other specialists.

To conclude we must admit that the teaching of the rhythmic gymnastics terms at higher physical education institutions should be structural and systematic. Professional English language learning by the future rhythmic gymnastics coaches will improve their knowledge and help them to form successful coaching careers. In such a way the students' motivation to their study and future job will be enlarged.

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ИЗУЧЕНИЕ ТЕРМИНОВ ХУДОЖЕСТВЕННОЙ ГИМНАСТИКИ НА АНГЛИЙСКОМ ЯЗЫКЕ В ПРОЦЕССЕ ОБУЧЕНИЯ В ВУЗАХ ФИЗИЧЕСКОЙ КУЛЬТУРЫ

Аннотация. В данной статье представлены важность и необходимость изучения профессионально-ориентированного иностранного языка, в частности, английского языка студентами ВУЗов физической культуры. Хорошее знание английского языка поможет студентам сформировать и усовершенствовать будущую тренерскую карьеру. Авторы полагают, что обучение терминам художественной гимнастики в физкультурных ВУЗах должно быть структурным и носить систематический характер.

Ключевые слова: Иностранный язык; спорт; художественная гимнастика; профессионально-ориентированный словарь; профессиональное развитие

METHOD OF REDUCING THE INTERFERENCE OF THE FIRST FOREIGN LANGUAGE USING COGNITIVE MODELING

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***Abstract.** The article focuses on native language interference in learning the first and second foreign languages can be minimized.*

***Key words:** interference, first foreign language, second foreign language, simulation of human language ability, mental representations*

The interference is a major factor affecting the quality of foreign language education. In linguistics, the interference is the interplay of two or more language systems. The interference usually occurs under bilingual conditions when a person speaks a non-native language. A foreigner can always be learned by accent in pronunciation and by grammatical errors. Word selection is always different from language medium word selection. This is interference of the native language of the speaker.

The interference is both a linguistic and linguadidactic problem. In linguistic, it often equates to a comparative (or constrasting) study of language systems with the highlighting of similar and different phenomena in different languages. Such an approach allows to record the phenomenon of interference, but does not allow to explain which mechanisms cause it. The whole language

system is focused on the person who uses, transmits, receives and think using the language code. The linguist's focus should be not just language as a system of signs but language personality (speaking person). According to Y.N. Karaulov, the idea of language personality permeates all aspects of language learning and simultaneously destroys the boundaries between disciplines of those studying the person because it is impossible to learn the person outside his language [2. P..3]. It is obvious that if speech activity is excluded from consideration, the study of interference will inevitably turn into a comparison of isolated language facts.

The theory of the language personality of Y.N. Karaulov served as a starting point for the development of the theory of the secondary language personality of I.I. Haleeva. The focus is on modeling the process of formalizing foreign language consciousness of students. Accordingly, the secondary language personality model is a level (or hierarchical) structure. It includes the zero level or level of the verbal network reflecting the main language code of the foreign language being studied; the first level of formation of thesaurus ties in vocabulary and grammar reflecting the linguistic picture of the world of foreign language society. The second level or level of use of the association-verbal network for communication tasks in intercultural communication.

Thus process of forming a secondary language personality is the creation on the basis of the native language and the language consciousness, of a base of the foreign language being studied taking into account the general knowledge of the world and the picture of the world of the corresponding language societies.

According to this concept in the course of teaching a foreign language in addition to obtaining information, students should have a new system of obtaining, storing and processing information. And this system will differ from that of the native language. These tasks coincide with the principles of cognitive linguistics, which is not only well aligned with the concept of secondary language personality, but also provides important methodological principles for dealing with specific language material.

Cognitive linguistic is based on the notion that semantics of a language unit include the knowledge of a designated fragment of validity that is currently present in a given language society. According to cognitive representations of language unit semantics there is a two level structure consisting of an external level (all signs of knowledge of the student) and depth level (conceptual interior). The same structure has the model of speech activity of the individual. Analyzing the message received during communication, the person clarifies for himself its meaning. Then he determines the meaning content of his reaction and verbalizes this sense message by forming an appropriate statement.

This thought transition is called the transition to the level of mental repositions. This transition is of particular importance in simulating an individual's speech activity in a foreign language. The interference of the native language manifests itself primarily in the fact that speaking in a foreign language,

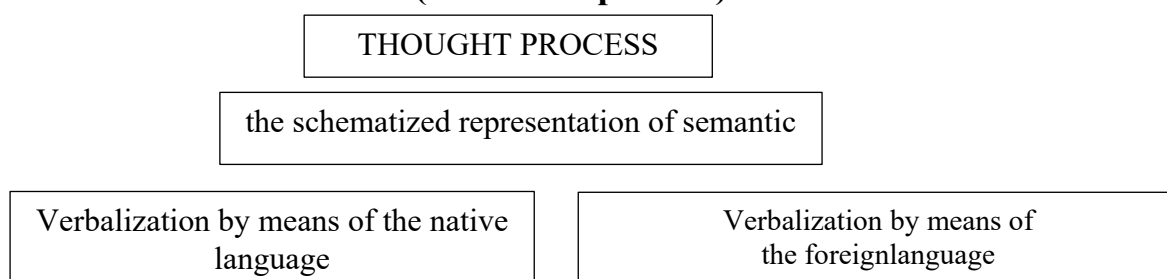
the learner first mentally verbalizes some meaning using his native language and only then mentally translates the statement received into a foreign language. Of course, such a spontaneous process inevitably generates a large number of errors in a foreign language.

In order to minimize the influence of the native language, it is necessary to make process of verbalizing a message in a foreign language manageable by using a certain rejection of the thought content from the particular verbalization. The essence of the proposed model can be represented as following scheme:

Scheme 1

Process of verbalization of meaning content in a foreign language

(controlled process)



This scheme focuses on the fact that in order to minimize errors and increase the efficiency of teaching a foreign language, it is necessary to achieve a direct transition from expressed thought content to verbalization by means of the language studied. Influence of native and studied language, both first and second will manifest in any case, it is impossible to completely exclude it. It will be kept to a minimum, as the speaker in the course of speech activities in a foreign language will not resort to thought transition from the native language. In the scheme, the relationship between the students' native language and the foreign language is shown by a dashed line.

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МЕТОД СОКРАЩЕНИЯ ИНТЕРФЕРЕНЦИИ ПЕРВОГО ИНОСТРАННОГО ЯЗЫКА ПРИ КОГНИТИВНОМ МОДЕЛИРОВАНИИ

Аннотация: в статье показано, что интерференцию родного языка при изучении первого иностранного языка, а также интерференцию родного и первого иностранного языка при изучении второго иностранного языка можно минимизировать, если исходить при введении нового иноязычного материала не из сопоставления разных языков, а из концептуальных представлений (обобщенных смыслов), стоящих за изучаемыми языковыми формами.

Ключевые слова: интерференция, первый иностранный язык, второй иностранный язык, моделирование языковой способности человека, ментальные репрезентации

THE BIRTH AND DEVELOPMENT OF OLYMPIC TRADITIONS (1896-1936)

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Abstract. The article is devoted to the birth of traditions of the modern Olympic movement. The origins of them came from Ancient Greece. A unique phenomenon - the Olympic Games, regularly held in Olympia for more than a thousand years and forgotten for many centuries, were again in demand at the end of the 19th century.

Keywords: Olympic Games, ceremony, traditions, Olympic symbols and attributes

Introduction. The basis of the formation of modern Olympic traditions is the historical facts about the Olympic Games in Ancient Greece. The very name of the Games testifies to the continuity of traditions, ceremonies, symbols that came from ancient times. The chronology of the Games, regulations for the Opening and Closing ceremonies, Olympic symbols and attributes and other aspects of the Games organization were defined already at the First Games of the modern Olympiad.

Main study. The ceremonial opening of the Games of the I Olympiad in 1896 initiated the tradition that the head of state would announce the official opening of the competitions. The Games were opened by King George I of Greece. Athletes were present at the stadium during the ceremony, but there was no parade of participants.

The Games of the II Olympiad and the Games of the III Olympiad in 1900 and 1904 were held during the World Fairs and went almost unnoticed by the

international sports community.

At the Games of the IV Olympiad in London in 1908 the opening of the competitions was proclaimed by King Edward VII of Great Britain. The first "parade of nations" was held with 18 national teams participating under the flags of their countries during the official opening of the Games. At the first three Games of the Olympiad there was no Closing Ceremony.

At the Games of the V Olympiad of 1912, the opening ceremony was held at the Royal Stadium of Stockholm. The Swedish King Gustav V, together with members of the IOC, led by Pierre de Coubertin, was seated in the Guest of Honour box. After that a parade of athletes from 28 countries began at the Olympic Stadium. The closing ceremony of the Games at the Stockholm Royal Stadium consisted of awarding medals and diplomas to the winners, which were presented personally by the King.

Games of the VI Olympiad (1916) were canceled due to World War I.

The next Games of the VII Olympiad in Antwerp in 1920 contributed to the further development of Olympic traditions. At the opening ceremony of the Games, the Olympic oath of athletes, the idea of which belonged to Pierre de Coubertin, was pronounced for the first time by the famous Belgian athlete Victor Boin. For the first time the Olympic flag was raised at the stadium. Another innovation was the Closing Ceremony of the Games, at which the Olympic flag was handed to Pierre de Coubertin by the representative of the Belgian NOC, and then to the Paris City Council, the organizer of the next Games of the Olympiad. This tradition still exists today.

At the Games of the VIII Olympiad in Paris in 1924, the IOC president proclaimed the official closing of the Games and the lowering of the Olympic flag to the sound of fanfares and fireworks for the first time. At the Games of the IX Olympiad of 1928 in Amsterdam the Olympic flame was lit for the first time. At the Games of the X Olympiad in 1932 no fundamental changes were made to the procedure of the ceremonies. The Games were opened in the "Los Angeles Memorial Coliseum" Stadium.

At the opening ceremony of the Games of the XI Olympiad in 1936, the Olympic Torch Relay was first held, starting in Olympia, where the flame was lit, and carried to Berlin via Athens, Delphi, Thessaloniki, Sofia, Belgrade, Budapest, Vienna, Prague and Dresden by 3000 torch-transfer runners. The flame was lit at the Olympic stadium after the Olympic flag was raised and the Olympic anthem was sung. A special feature of these Games was the first live television broadcast,

as well as Leni Riefenstahl's film "Olympia", based on documentary materials from the Olympic competitions. During the Closing Ceremony, the flag bearers of the participating countries paraded to the stadium to the music of the orchestra, and the Olympic flag was lowered. Count Henri de Baillet-Latour, president of the IOC, officially declared the Games closed.

Conclusions. Thus, the basis for the formation of modern Olympic traditions and rules were the opening and closing ceremonies, as well as the symbols and attributes, which originated in the early history of the Olympics in the period from 1896 to 1936.

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ЗАРОЖДЕНИЕ И РАЗВИТИЕ ОЛИМПИЙСКИХ ТРАДИЦИЙ (1896 – 1936 гг.)

Аннотация. Исследование посвящено зарождению традиций современного олимпийского движения, истоки которых берут начало в Древней Греции, Уникальное явление – Олимпийские игры, регулярно проводившиеся в Олимпии более тысячи лет и забытые на долгие века, оказались вновь востребованы в конце XIX века.

Ключевые слова: Олимпийски игры, церемония, традиции, олимпийская символика и атрибутика

THE IMPACT OF ADDITIONAL EXERCISE FOR PROMOTION WORKING CAPACITY OF PRIMARY SCHOOL STUDENTS

Bolshova A. P.

Abstract: *This article tells about the influence of additional physical exercises based on the use of gymnastics tools to improve the performance of primary school students.*

Key words: *physical exercises, means of gymnastics, junior schoolchildren, a lesson at school, working capacity*

Introduction. The research topic is relevant, since today, the educational school program is structured in such a way that children spend most of the day sitting at a desk, both during classroom activities and homework, which leads to a decrease in physical activity.

With reduced motor activity, coordination of movements is impaired, attention is weakened, and as a result, the level of working capacity decreases. The presented work allows us to evaluate the effectiveness of the compiled complex of physical education minutes, based on the means of gymnastics.

The purpose of the work is to study the effect of additional physical exercises based on the use of gymnastics means to improve the performance of younger school students.

Main part

To determine the impact of the experimental program on the performance of primary schoolchildren, the dynamics of the expression of basic physical skills was investigated, and a questionnaire was conducted using the SAN method. The experiment involved 24 primary school students. During the experiment, two tests were carried out: before and after the experiment. This made it possible to determine the dynamics of changes occurring in the body under the influence of physical work in general, as well as the dynamics of individual indicators. The generalized comparative data of the research results, expressed as a percentage, are presented in table 1.

Table 1. Average test values before and after the experiment

Test	Shuttle run (sec)	Long jump (sm)	Lifting the torso in 1 minute	Forward tilt (sm)	Lying Hang Pull-ups	Total value
before	9,53	143,88	31,04	3,88	13,04	40,27
after	9,21	144,38	31,88	4,96	13,25	40,73
%	3,51%	0,35%	2,68%	27,96%	1,60%	1,14%

The table shows that after the introduction of the set of our special exercises into the educational process, positive shifts were recorded in all tests.

Smaller differences in results were obtained when performing tasks for strength skills. The difference in the tests results "Lifting the torso in 1 minute" and "Lying Hang Pull-ups" before and after the study is 2.7% and 1.6%, respectively.

Changes in the results in the test "Shuttle run 10x3 m", aimed at improving coordination and speed abilities, showed an increase of 3.5%.

The SAN test was specially developed for younger students. It clearly describes the various possible conditions associated with well-being, activity and mood.

In the questionnaire, there were three answer options worth from 1 to 3 points, which correspond to the values satisfactory, good and excellent.

Let us compare the data obtained during the primary and control questionnaires, both in general and in individual categories (Table 2).

Table 2. Average values of the results before and after the experiment

	Wellbeing (S)	Activity (A)	Mood (N)	Total value
before	2,10	2,14	2,28	21,67
after	2,74	2,64	2,63	26,75

To determine the overall effectiveness of the study, after each questionnaire, the results of all students were summed up, and the average value was found. Thus, we calculated the values before and after the experiment, which were equal to 21.67 and 26.75 points, respectively.

Based on the results of the above table, we can say that an increase in results is observed in each of the presented categories. The average score for each of the studied characteristics increased by 0.35 - 0.64 points.

Findings

Analysis of information sources showed that the selected topic has not been sufficiently studied. As a result of the study, it was revealed that the topic of the

influence of physical education minutes on increasing the efficiency of primary school students in the conditions of a comprehensive school is relevant today.

With the help of the introduction of a specially developed program of physical education minutes, it was possible to increase the efficiency of younger students. The criteria for working capacity were physical fitness and results of the questionnaire survey according to the SAN method.

Physical fitness of schoolchildren, in general, increased from 40.27 points to 40.73 points, which amounted to 1.15%.

The average total value according to the results of the questionnaire survey using the SAN method increased from 21.67 to 26.75 points.

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ВЛИЯНИЕ ДОПОЛНИТЕЛЬНЫХ УПРАЖНЕНИЙ НА ПОВЫШЕНИЕ РАБОТОСПОСОБНОСТИ УЧАЩИХСЯ НАЧАЛЬНОЙ ШКОЛЫ

Аннотация. В статье рассказывается о влиянии дополнительных физических упражнений, основанных на использовании средств гимнастики, на повышение работоспособности учащихся младших классов.

Ключевые слова: физические упражнения, средства гимнастики, младшие школьники, урок в школе, работоспособность

TECHNOLOGY OF TARGET COORDINATION TRAINING OF FIGURE SKATERS

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Dunaev K.S.

Abstract. *The model of organization of target coordination training is developed for figure skaters at the stage of sports specialization. Its development is based on the principal model and features of the target competitive activity (the calendar of the main competitions for the season, the predicted value of the sports and technical result) of figure skaters.*

The predicted group models of performance levels of skaters can be the starting points in assessing the individual level of performance of an athlete and determining the objectively available sports result for him in the main competitions of the upcoming sports cycle.

Keywords: *methodological concept, coordination training, target training program, technical result, figure skaters*

Introduction

Individual dynamics of sports results, in contrast to the predicted group models of performance levels of skaters, may have some features dictated by the specifics of training and competition programs, individual morphofunctional and mental characteristics of the skater, as well as the length of training, the age of the athlete, the strengths and weaknesses of his fitness, etc. [2].

Based on the predicted sports results, as well as the analysis of the dynamics of special coordination readiness of skaters in the previous season, a model of the dynamics of special coordination readiness of athletes has been developed, which provides for a systematic "exit" to the level of coordination readiness, ensuring the achievement of high sports results in the upcoming main competitions of the season.

The presented model includes complex indicators (estimates) of the ability to accurately differentiate kinesthetic spatial parameters of movement, to orient in space, to complex reaction, to dynamic and static balance, to rhythm, statokinetic stability, to assess the angle of inclination of the skate and the degree of pressure on the ice by one or another part of it, evaluated by the results of control exercises (tests) [1].

The results of the research and their discussion

The total amount of training load is planned within 1176 hours; the number of training days-294; The number of training sessions – 1176. Simulator for improving coordination readiness-124 hours [1].

Technical training to improve the quality of the elements is planned to increase the number of hopping attempts performed after exercise in challenge mode with faster access to model characteristics of competitive activity with a

minimum number of drops, breakdowns and step-outs. A significant number of attempts are planned in near-competitive and competitive training conditions, which will ensure high reliability of performing elements in specific conditions of competitive activity. Elements without load, simulation, execution of elements using a simulator for skaters, are aimed at increasing the level of coordination and technical training-as a special base, working out the main elements and improving them.

The annual macrocycle includes three micro-stages with blocks of coordination training. First block (June-August) It contains concentrated training tools aimed at primarily developing and improving specific "fundamental" coordination abilities, the second block (September-November) - at improving specific coordination abilities in conjunction with the technical component, using training devices in the training process, and the third block (December-May) – at improving coordination readiness directly in competitive exercises.

According to the general pattern of sports form development, the mesocycles of the preparatory period have a stepwise sequence of increasing the training load [2]. The system of target coordination training of skaters at the stage of sports specialization in the annual training cycle, implemented in the model of its organization, has a single target setting. In each period, stage of preparation, specific tasks are solved, but they are not in contradiction: the solution of the previous tasks contributes to the successful solution of the following ones. The mesocycle is a temporary form of organizing coordination training, which is the primary source (framework) and the link in creating a complete annual cycle of its process.

Conclusions

1. On the basis of the working hypothesis, a strategic line for building the process of coordination training and its methodological concept are developed, which are implemented in the methodology for developing the coordination abilities of figure skaters at the stage of sports specialization, the model of the dynamics of coordination readiness and in the training program. The strategic line of building coordination training was expressed in a gradual increase in the specialization of the applied tools and actions so that its highest level was reached by the time of the responsible competitions. The rate of improvement of various aspects of coordination training is ahead of the rate of increasing the requirements for performing highly specialized motor actions, which allows us to develop a stable psychomotor and motor foundation for the study of complex coordination

jumping elements and systematically prepare the athlete for the development of multi-turn jumps.

2. The methodological concept of the target coordination training of figure skaters at the stage of sports specialization, expressed in its fundamental model, was that the target coordination training should, first, ensure a gradual increase in the training effect on the body by introducing means (loads with a higher training potential) into the training process and, secondly, ensure a systematic preparation of the body to perform a competitive exercise.

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ТЕХНОЛОГИЯ ЦЕЛЕВОЙ КООРДИНАЦИОННОЙ ПОДГОТОВКИ ФИГУРИСТОВ

Аннотация. Модель организации целевой координационной подготовки разработана для фигуристов этапа спортивной специализации. В основу ее разработки

положена принципиальная модель и особенности целевой соревновательной деятельности (календарь главных соревнований на сезон, прогнозируемая величина спортивно - технического результата) фигуристов.

Прогнозируемые групповые модели уровней результативности фигуристов могут являться отправными точками в оценке индивидуального уровня результативности спортсмена и определении объективно доступного для него спортивного результата в главных соревнованиях предстоящего спортивного цикла.

Ключевые слова: методическая концепция, координационная подготовка, целевая тренировочная программа, спортивно-технический результат, фигуристы

PRACTICAL HOME-BASED FITNESS RECOMMENDATIONS FOR COVID-19 REHABILITATION

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Abstract. *Practical fitness recommendations for rehabilitation after COVID-19 at home were considered. Rehabilitation measures designed to restore the patient's quality of life to the fullest extent possible have been analyzed, as rehabilitation is necessary for many diseases and conditions. The conditions, under which fitness rehabilitation should be provided, gradually increasing the body load, are described.*

Keywords: *rehabilitation, fitness, recovery*

Introduction. In general terms, when speaking of medicine, rehabilitation includes a wide range of medical, psychological, pedagogical and social activities that contribute to the recovery of lost personal capabilities. Disorders of the functions of the various systems and organs of the human body, caused by an injury or illness, change the habitual rhythm of activity of the individual and sometimes impair the quality of his or her life to the point of loss of mobility or self-sufficiency. All rehabilitation measures are designed to restore the patient's quality of life to the fullest extent possible, so rehabilitation is necessary for many illnesses and conditions.

The rehabilitation complex is also important in the recovery of COVID-19 patients, the spread of which around the world has given health professionals the task of quickly diagnosing an infection caused by a new coronavirus, Specialized medical care, rehabilitation and secondary prevention.

The outbreak in the People's Republic of China (PRC) of a new coronavirus infection (the causative agent was temporarily named 2019-nCoV) occurred in late 2019. On February 11, 2020, the World Health Organization (WHO) designated COVID-19 («Coronavirus disease», 2019). The International Committee on Virus Taxonomy named SARS-CoV-2 on 11 February 2020.

The most common clinical manifestation of the new variant of coronavirus infection is bilateral pneumonia, in 3-4% of patients the development of acute respiratory distress syndrome (SARS) is registered.

Thus, in Volgograd and the region on 28.01.2021 found 42,623 COVID-19 patients. There is now a decline in the spread of the new infection among the inhabitants of Volgograd and the region (40,660 persons have recovered).

At the moment, there is a situation in which reliable professional information about medical assistance for medical rehabilitation of patients with COVID-19 is not sufficient, as this disease is new. We focus on a possible set of fitness exercises for COVID-19 patients to be performed by patients accompanied by a team of medical rehabilitation specialists (Attending physician, therapeutic physical education physician, physiotherapy physician, therapeutic physical education instructor, nurses and other specialists trained under special supplementary vocational education programs) aimed at restoring functions of external respiration, transportation and oxygen recovery by tissues, organs and systems, restoration of tolerance to loads, psycho-emotional stability, daily activity and participation.

Research results. In our study we defined, that patients who have undergone COVID-19 can be recommended with the best suitable exercises for recovering. First of all, while any kind of exercise that you enjoy and feel well will comply with the law is one particular type of exercise can be useful after COVID-19. Secondly, when you go back to sports, it's perfect to choose a movement that supports lymphatic flow, a fluid that contains infectious white blood cells all over your body. Support of the lymphatic system in recovery speeds up the process of disposing of the body of all accumulated toxins that accumulated during illness and sedentarization.

At third, some exercises such as the chin on the trampoline, yoga training, or even rope jumping or jumping can help launch the lymphatic system into high shape. Some specialists also recommend starting with 20 and work up. Other kinds of exercise you can try are walking, warm-up, jogging, or a light bicycle.

It is necessary to remember that the slow start of training will make you feel better, faster in the long term - so start slowly, listen to your body and always talk to your doctor if you feel something wrong during or after the exercise. Starting slowly with your exercises is extremely important. Even if you feel "out of shape" because you've been sitting for weeks, you want to make sure you're not pushing too hard to continue your recovery and not cause further inflammation.

Some people may want to return to their strict exercises after having been with the coronavirus. However, it is crucial to slow down and listen to your body at this time. Too much pressure can damage overall progress. During the healing process, your body still encounters inflammation of the lungs and other tissues. Also, it is necessary to watch for signs that you may be pushing too hard, like shortness of breath, pain, or feeling tired or tired. Body energy reserves have not yet been properly restored. The best way to avoid further setbacks in implementation is to proceed gradually and progressively. If you feel a little bit more shortness of breath, fatigue, pain, etc., it may indicate that you pushed too hard. So, at first, you need a rest for few more days until you try again. Ultimately,

it will be a question of listening to your doctor and your body until you can return to your former level.

Conclusions. Thus, medical rehabilitation may concern both the physical and psychological state of the individual. At home, with a team of health professionals, fitness rehabilitation is needed, gradually increasing the body burden. The set of exercises referred to above contributes to the recovery of the patient who has suffered COVID-19.

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ПРАКТИЧЕСКИЕ ФИТНЕС РЕКОМЕНДАЦИИ ДЛЯ РЕАБИЛИТАЦИИ ПОСЛЕ COVID-19 В ДОМАШНИХ УСЛОВИЯХ

Аннотация. Рассмотрены практические фитнес рекомендации для реабилитации после COVID-19 в домашних условиях. Проанализированы реабилитационные меры, призванные максимально восстановить качество жизни пациента, так как при многих болезнях и состояниях реабилитация является необходимой. Описаны условия, в которых необходимо организовывать фитнес реабилитацию, постепенно увеличивая нагрузки на организм.

Ключевые слова: реабилитация, фитнес, восстановление

FEATURES OF GENDER SOCIALIZATION IN BALLROOM DANCE.

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Abstract. The scientific article is devoted to the study of the features of gender socialization in ballroom dancing. This article systematizes the results of sociological research and reveals the features of socialization in ballroom dancing.

Key words: gender, gender socialization, gender stereotypes, masculinity, femininity.

The relevance of this study is due to the fact that sports activity has a great impact on the sexual differentiation of athletes, contributes to the blurring of clear boundaries between female and male. So, masculine sports form a “male” model of motivation and behavior (activity) in athletes of both sexes [1]. At the same time, practicing more “feminine” sports promotes an increase in the level of femininity in women, but not in men [5].

Research on gender issues has been done authors such as E.P.Ilyin, I.S. Klecin, I.A.Kon, etc. The majority of authors agree that the concept of gender itself is not redundant, as it defines the system of interpersonal relations on the poles: «dominance - dependence», «rivalry - cooperation». This problem is especially relevant in such a form as sports dances. Because it's in the dance that the traditional gender-role style of relationships is modeled. Ballroom dancing is a two-sport sport where the roles of a man and a woman are separated to achieve the same goal - emotional and exemplary performance. The partner is represented by the image of beauty, brightness, softness. The partner assumes the role of a leader in the couple and sets the pace without losing his artistic personality. Thus, the feminine sport is more directed to the personal development of girls according to the concepts of «real» images of men and women. But like any sport, it forms an androgynous personality. Let's see what's different about the gender socialization of athletes doing ballroom dancing.

Hypothesis of research - it is assumed that gender socialization in sports ballroom dances has its peculiarities:

- ballroom dancing from childhood helps to assimilate the model of traditional gender relations;
- ballroom dancers make "inflated" requirements for appearance, when choosing the second half;
- the formation and continuation of a sport career in ballroom dance is influenced by stereotypes formed in society.

The aim of our study was to reveal the main features of gender socialization of males and females in ballroom dancing.

We set and solved the following tasks:

- 1) to analyze the approaches to the issues of socialization of athletes;
- 2) to reveal similarities and differences in the gender socialization of males and females involved in ballroom dancing and other sports;
- 3) to identify the main gender stereotypes that have been developed in ballroom dancing athletes;

4) In addition, our task was to develop practical recommendations for overcoming gender stereotypes in ballroom dancing.

Data for this study was collected using three methods:

- 1) We used the following methods of research such as a literate survey. This method helped to delve into the topic of the research;
- 2) The method of sociological questionnaire. This method is usually considered to be reliable because everyone is responding to the same questions. The questionnaire consisted of three sections and included 25 questions. The questionnaire helped to identify the characteristics of the socialization of athletes and gender stereotypes. This method helped to gather information;
- 3) And mathematical statistics. We used the method of calculating the arithmetic mean of the received data. This method helps to process the data and interpret the results of the study.

In the course of this study, modern works on gender issues were analyzed by authors such as I.S. Conn, I.S. Kletsina, E.P. Ilyin, E.E. Maccoby, C.N. Jacklin, S.L. Bem. As part of the analysis of scientific literature, theoretical and methodological approaches to gender socialization in sports were considered and concepts such as "gender", "gender socialization", "gender stereotypes" were defined. Gender - socially formed features of masculinity, as social expectations regarding the appropriate behavior of men and women [3]. Within the framework of this work, gender socialization is considered as a process of assimilation by a person of the cultural structure of gender of the society in which he lives, that is, the social difference between the sexes. [4]. Gender stereotypes are stable everyday ideas about what men and women should be, formed in a certain culture and manifested in the form of prescriptions about the preferred and undesirable characteristics of the personality and behavior of representatives of a particular gender [2].

To solve the second problem, a sociological study was carried out, in which athletes, participants in the MFTS championship in the category "Juniors-2, Combined" and "Youth, Combined" were interviewed. In total, the study involved 236 people aged 14 to 18 years.

Comparison of the results of our survey with the results of research on other sports [5], helped to identify the features of gender socialization of athletes in ballroom dancing:

1. Athletes engaged in ballroom dancing learn the model of traditional gender relations through the example of interaction with a partner since childhood. So, for example, 82% of respondents believe that thanks to dancing they have learned how to communicate correctly with the opposite sex. While only 29% of respondents involved in other sports noted this relationship between their sport and gender relations. This suggests that ballroom dancing lays down patterns of behavior of partners in relation to each other and forms certain images that, on an unconscious level, influence relationships with the opposite sex. Also, 74% of an athlete-dancer relate to bodily contact easier than athletes from other

sports and do not attach much importance to bodily contact, for example, they can easily take the hand of a person of the opposite sex and note that this does not mean anything more than what they do.

2. "Inflated" requirements for appearance, when choosing the second half. As a result of the survey, 68% of respondents noted that dance sport forms in theme specific "inflated" requirements for appearance when choosing a second half in life. The fact is that dance sport from childhood forms in the mind of a dancer the fact that appearance is the most important aspect by which he is judged both on the floor and in life. In the process of creativity, dancers cognize beauty and feel beauty in all its manifestations. Therefore, most dancers have a habit of being very attentive to their appearance and demand the same from others.

3. The influence of stereotypes on socialization in dance sports. 64% of dancers noted that at least once in their dance career they would have liked to finish it because of the stereotypical opinion of others that dancing is a female sport. This testifies to the influence of stereotypes on the socialization of young men in dance sports. 71% of girls in sports ballroom dancing noted such qualities as leadership, endurance, determination, confidence, high level of intelligence in their dance partners. Girls describe their partners as mostly masculine, which refutes the stereotype of the femininity of young men in dance sports. Young men who go in for dance sports have excellent physical fitness, reveal their charisma and masculinity, know how to communicate with girls correctly, in dance they are responsible for their partner and the couple in general, the above facts confirm the masculine model of behavior of young men in dance sports.

The results of the study show that ballroom dancers have distinctive features in gender socialization:

- ballroom dancing from childhood helps to assimilate the model of traditional gender relations;
- ballroom dancers make "inflated" demands on appearance when choosing the second half;
- the formation and continuation of a career in dance sports is influenced by stereotypes formed in society.

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ОСОБЕННОСТИ ГЕНДЕРНОЙ СОЦИАЛИЗАЦИИ В СПОРТИВНЫХ БАЛЬНЫХ ТАНЦАХ

Аннотация. Научная статья посвящена исследованию особенностей гендерной социализации в спортивных бальных танцах. В данной статье систематизированы результаты социологического исследования и выявлены особенности социализации в танцевальном спорте.

Ключевые слова: гендер, гендерная социализация, гендерные стереотипы, маскулинность, феминность.

THE PROBLEM OF ANTI-DOPING RULES VIOLATIONS IN OLYMPIC SPORTS IN THE AGE ASPECT (ON THE EXAMPLE OF ATHLETICS)

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***Abstract.** The article is dedicated to information of the anti-doping rules violations in Russian national athletics teams. The article presents statistics of disqualified athletes in four age groups and possible reasons for doping in sports. The survey was conducted at the Volgograd State Physical Education Academy in March 2020. Participants answered questions about doping in sports.*

***Keywords:** athletics, doping, disqualification*

Introduction. The proliferation of doping in modern sports has become a serious problem. Doping damages the health of athletes and the values of the Olympic Movement [3].

In June 2015 WADA published statistics on the cases of doping violations around the world. As for 2013 the Russian Federation ranked the second in terms of violations discovered. In November 2015, the athletes of the national team were suspended from competitions held under the auspices of the IAAF. In June 2016, the International Olympic Committee supported and approved the IAAF decision. Russian athletes were not allowed to compete at the Olympic Games in Rio de

Janeiro in 2016. There is a possibility that the Russian team will not be allowed to participate in the XXXII Olympic Games in Tokyo.

The problem of doping is a global problem. Athletes use doping around the world [1, 2]. It is also necessary to understand that it is important to find a solution in doping problem in the Russian Federation. Nowadays it is necessary to find new ways to solve this problem [1]. One aspect of the problem is the fact that doping in the Russian Federation is used not only by highly qualified athletes, but also by young athletes. We think that the information about age, qualifications and sports specialization can help to develop activities aimed at the spread of doping countering. It is also necessary to consider the reasons for the use of doping by athletes.

Main points. 327 respondents took part in the survey at Volgograd State Physical Education Academy in March 2020.

The urgency of the problem of doping in sports is recognized by 90% of the respondents.

90% of athletes think that it is necessary to develop educational programs.

91% of athletes think that anti-doping education programs should be targeted towards their intended target audience.

40% of athletes said that anti-doping programs would be effective between the ages of 15-20 years old, 10-15 years old – 26%, below the age of 15 – 14%, 20-25 years old – 8%, below the age of 10 – 7%.

41% of athletes think that the reason for doping is the desire to become a leader, 46% – the desire to obtain material benefits, 12% - represent our country with distinction.

There are 81 Russian athletes, who serve a sentence for doping (for the 12th of November, 2020). We analyzed the personal data of 71 athletes. We have identified the number of disqualifications in four age categories.

Table 1 - The number of disqualifications in four age categories

Age category	Number of athletes
Main team	56
Junior squad (20-22 года)	10
Junior squad (18-19 лет)	2
Junior squad (16-17 лет)	3

Table 2 presents the data in percentage terms.

Table 2 - The number of disqualifications in four age categories in percentage terms

Age category	%
Main team	78,8%
Junior squad (20-22 years old)	14%
Junior squad (18-19 years old)	2,8%
Junior squad (16-17 years old)	4,2%

The largest group of anti-doping rule violators was divided into 4 subgroups.

Table 3 - The number of disqualifications in main team

Age category	Number of athletes
23-26 years old	17
27-30 years old	20
31-34 years old	13
35-36 years old	6

Table 4 presents the data in percentage terms.

Table 4 - the number of disqualifications in main team in percentage terms

Age category	%
23-26 yearsold	30,4%
27-30 yearsold	35,7%
31-34 yearsold	23,2%
35-36 yearsold	10,7%

Conclusions.

1. The problem of doping is not only in the main team of Russian athletes, but also in junior squads.

2. Analysis of the survey results confirms that the development and implementation of educational anti-doping programs can be an effective tool to combat the use of doping in sports.

3. The factors that determine the use of doping by highly qualified athletes and younger athletes include the desire to adequately represent the country at the international level and become an absolute leader, which makes high demands on athletes, as well as the desire to obtain material benefits. Also, the most obvious reasons are little knowledge of the social, psychological and medical consequences of doping.

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ПРОБЛЕМА НАРУШЕНИЙ АНТИДОПИНГОВЫХ ПРАВИЛ В ОЛИМПИЙСКОМ СПОРТЕ В ВОЗРАСТНОМ АСПЕКТЕ (НА ПРИМЕРЕ ЛЕГКОЙ АТЛЕТИКИ)

Аннотация. Статья посвящена проблеме применения допинга в современной легкой атлетике. Статья содержит информацию о спортсменах сборных команд России по легкой атлетике, на данный момент отбывающих наказание за нарушение антидопинговых правил. Приведены возможные причины употребления запрещенных веществ. Содержатся результаты анкетирования по вопросам применения допинга в спорте.

Ключевые слова: легкая атлетика, допинг, дисквалификация

ANALYSIS AND COMPARISON OF RESULTS FROM GHANA AND BOSNIA AND HERZEGOVINA NATIONAL TEAMS AT THE FIFA WORLD CUP 2014 IN BRASIL

Djozic A.
Assio K.

Abstract. *Bosnia and Herzegovina and Ghana participated in the 2014 FIFA World Cup in Brazil. Bosnia and Herzegovina and Ghana did not manage to place in the knockout phase, but they left an extremely good impression in the opinion of relevant sports journalists and managed their younger players to a very high performance standards.*

Key words: *football, Bosnia and Herzegovina national team, Ghana national team, FIFA World Cup in Brazil 2014*

Participation in the FIFA World Cup is demanding, considering the process that each team must go through in the qualifications.

Ghana and Bosnia and Herzegovina (B&H) come from two different continental football federations, Ghana from the Confederation of African Football (CAF) and Bosnia and Herzegovina from Union of European Football Associations (UEFA).

At the 2014 FIFA World Cup in Brazil, Ghana and B&H were in different groups, Ghana in Group G with the USA, Germany and Portugal, and B&H in Group F with Argentina, Nigeria and Iran.

Ghana was one of the 5th African participants country, and B&H was one of the 13th European participants country in the 2014 FIFA World Cup in Brazil.

The structure of the FIFA World Cup 2014 was composed of two phases: group and knockout stages.

B&H and Ghana did not go through the group stages and that is why we dedicated our analysis to the matches they played in the group stages and some positive outcomes for those two national teams, after the FIFA World Cup in Brazil.

The group stages of the FIFA World Cup in Brazil 2014 had three rounds and has been the rules established by FIFA for such competition and has been practiced for over 40 years.

The organization of the research work was divided into two etaps, starting with analyzing FIFA Official results from World cup 2014 in Brazil and finishing with synthesis of information.

The methods used in the research work are: analysis and synthesis.

In the first round, in June 15th, B&H played against one of the favorite teams and the second-placed country in this tournament, and that is Argentina.

Argentina won 2-1, and B&H, according to leading sports journalists, showed a good game, but failed to withstand the pressure of a strong Argentina led by Lionel Messi.

In the first round, Ghana played against the USA on June 16th, which was an equal rival.

With a bit of luck, the USA managed to win 2-1, and Ghana lost the draw in the last minutes.

In the second round, B&H played against Nigeria on June 21st, which was an equal rival.

With a little luck and a few mistakes by the referees, Nigeria managed to win 1-0.

In the second round on June 21st, Ghana played against the main favorite and world champion at the FIFA World Cup in Brazil 2014, that is Germany.

Ghana showed a very good game against Germany and played a 2-2 draw, in which the young players of Ghana played a big role.

In the third round, on June 25th, B&H played against Iran, which was an equal opponent.

B&H played a very good game and won with the result 3-1, in which the young football players of B&H showed a very good performances and who later made good transfers to bigger and stronger football clubs.

In the third round on June 26th, Ghana played against one of the stronger teams, which two years later became the European champion, and that is Portugal.

Although Ghana showed a good game, Portugal led by Cristiano Ronaldo managed to win 2-1.

In Group F, Argentina won the first place with 9 points, Nigeria the second place with 4 points, B&H the third place with 3 points and Iran the fourth place with 1 point.

In Group G, the first place was won by Germany with 7 points, the second place by the USA with 4 points, the third place by Portugal with 4 points and the fourth place by Ghana with 1 point.

Conclusion: Ghana and BiH performed at the World Cup relatively successfully.

Although they failed to move into the knockout phase, they managed to play very good matches against the first two national teams at the 2014 World Cup in Brazil: Germany and Argentina.

One of the main success during the FIFA world cup was the promotion of young players from Ghana and B&H, who later made important transfers and became an important skeleton of their national teams, around which the team was later formed.

Comparing the result of B&H and Ghana, we noticed that B&H made a little more results, having one victory, while Ghana had a draw, but considering that Ghana had tougher opponents than B&H, then we can say that the success of these two teams is equal.

This research work is part of an overall study of football progress in Ghana and B&H.

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АНАЛИЗ И СРАВНЕНИЕ РЕЗУЛЬТАТОВ СБОРНОЙ ПО ФУТБОЛУ ГАНЫ И БОСНИИ И ГЕРЦЕГОВИНЫ НА ЧЕМПИОНАТЕ МИРА ФИФА 2014 В БРАЗИЛИИ

Аннотация. Босния и Герцеговина и Гана участвовали на ФИФА чемпионате мира по футболу 2014 года в Бразилии. Боснии и Герцеговине и Гане не удалось выйти в плей-офф, но они оставили чрезвычайно хорошее впечатление, по мнению авторитетных спортивных журналистов, и сумели проявить молодых игроков.

Ключевые слова: футбол, сборная по футболу Боснии и Герцеговины, сборная по футболу Ганы, ФИФА чемпионат мира по футболу в Бразилии 2014

BOSNIA AND HERZEGOVINA NATIONAL FOOTBALL TEAM ON MEN'S FIFA RANG LIST

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***Abstract.** In this research work we was analysis of movement of Bosnia and Herzegovina men's national football team on FIFA rang list from 19. January 2000 to 10 December 2020 and compare obtained results with some other national football teams (male).*

***Key words:** football, Bosnia and Herzegovina national team, men's FIFA rang list*

If we agree, that football is improving every year, then coaches and scientists must find the secret of success of countries that are constantly playing in major tournaments [1].

Any attempt to control the team without a plan is unrealistic and a significant step towards to good control is the measurement and analysis of the previous results of the team [2].

FIFA, as the biggest football federation in the world, has its own ranking list of national teams that can be followed on the FIFA official website.

The ranking list of national teams starts from December 31, 1992 until the last release of the list on December 10, 2020.

On the FIFA ranking list, national teams are scored in relation to the matches they play.

The last rule of scoring change was made after the 2018 FIFA World Cup in Russia, and that document can be found on the official FIFA website.

During one year, a ranking of the FIFA list is published 12 times, one for each month, but it happens that it is published less than 12 times during one year.

In our research work, we collect data from the first publication of FIFA rang list in 2000, which was at January 19, to the last publication of FIFA rang list in 2020, which was at December 10.

We wanted to analyze a whole of 20 years of the national football team of Bosnia and Herzegovina, but also other national teams that we choose for our research.

The national football teams we took for analysis and comparison are the republics of the Ex-Yugoslavia: Serbia, Croatia, Slovenia, Montenegro and Macedonia and two other national teams: Russia and Belgium, which have an interesting results from 2000 to 2020.

Each of the national teams in the work, began to exist before 2000. The exceptions are Serbia and Montenegro, which were one country until 2006, so we wrote them the same ratio of points from 2000 to 2006.

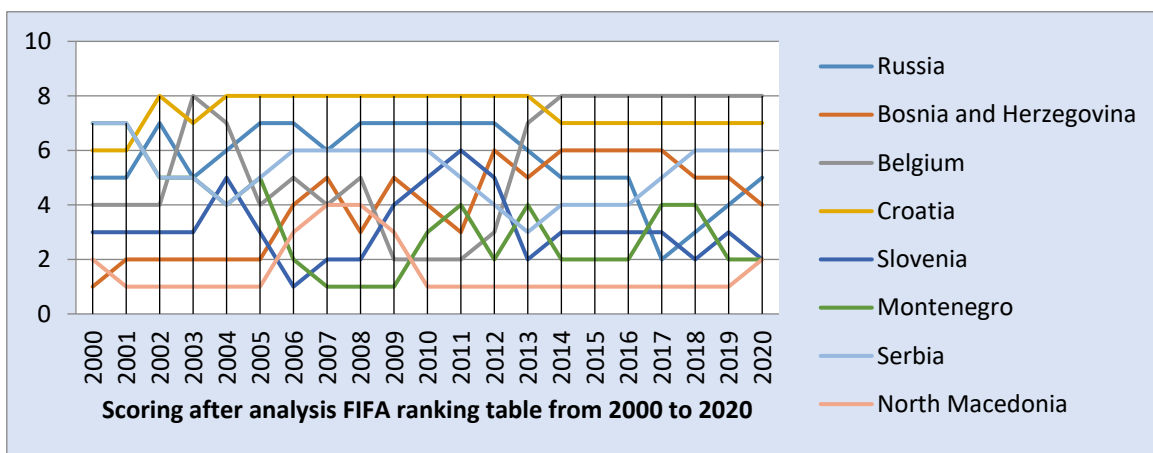
The organization of research work was divided into few etaps, started with noting of all published FIFA rankings in the range from 2000 to 2020 and finishing with analysis and comparison of obtained results.

The methods used in the research work are: analysis, synthesis and descriptive statistics.

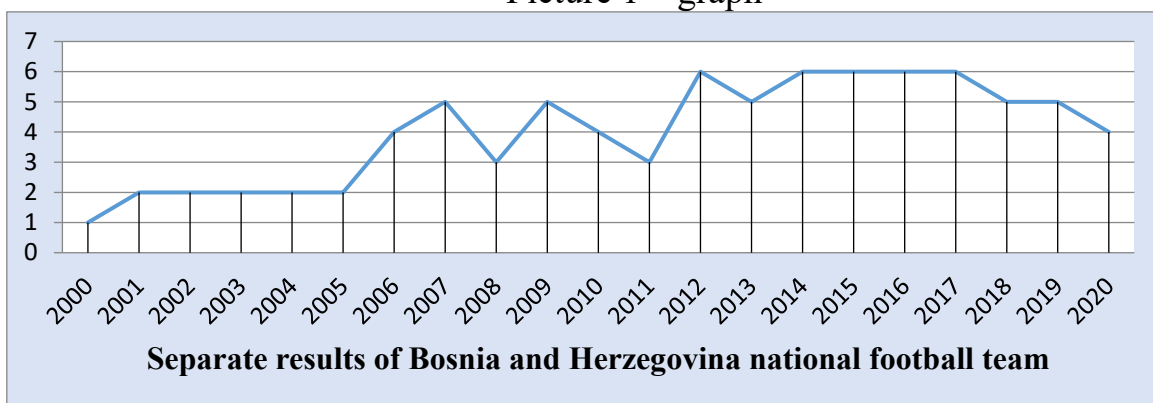
The results obtained in the research work showed us how the national football teams progressed and regressed on the FIFA ranking list, we have a graphical presentation of the results in picture 1.

The next result showed us progression and regression of Bosnia and Herzegovina national football team. During the period from 2000 to 2020, the worst period for the national football team of Bosnia and Herzegovina was from 2000 -2005, and the best period was 2012-2017, from 2018, the results are in regression and this is shown in picture 2.

Performing the arithmetic mean for each team and comparing these results with each other tells us that Bosnia and Herzegovina is above Northern Macedonia, Slovenia and Montenegro, but below Serbia, Russia, Belgium and Croatia with results and this is shown in picture 3.



Picture 1 – graph



Picture 2 – graph



Picture 3 – graph

Conclusion: The results we obtained clearly determined the progress and regress of the men's national football team of Bosnia and Herzegovina from the period 2000 to 2020.

Also, useful information we received in the research results is a comparison of progress and regress with other countries of the former Yugoslavia, Belgium and Russia in period 2000 to 2020.

This research work will be used as a basis for further development of this topic.

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СБОРНАЯ БОСНИИ И ГЕРЦЕГОВИНЫ ПО ФУТБОЛУ НА МУЖСКОМ МИРОВОМ РЕЙТИНГЕ ФИФА

Аннотация. В данной исследовательской работе мы проанализировали движение мужской сборной по футболу Боснии и Герцеговины по ранг листе ФИФА с 19 января 2000 года по 10 декабря 2020 года и сравнили полученные результаты с результатом других сборных по футболу.

Ключевые слова: футбол, сборная по футболу Боснии и Герцеговины (мужская), мужской мировой рейтинг ФИФА

THE CURRENT TRENDS IN SPORT GOVERNANCE: THE CASE OF CHINA

Dolmatova T.V.
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Abstract. *Being one of the world leading sport powers, China is known as a country with the strong practice of the direct state governance in sports. In recent years, the Chinese sports industry has been implementing a reform aimed at increasing the participation of the commercial sector in the sport development in the country. Using the example of football, which became the pilot sport in the reform process, it is shown how the participation of Chinese*

commercial companies contributes to the development of mass participation in football, as well as the development of football at the professional level. At the same time, despite the steady increase in the number of investors, the control of state administration in Chinese sports still prevails which remains a case for further investigation.

Keywords: *Chinese sport, sport reform, state governance*

Introduction

China is obviously one of the world leading sport powers. Since the last quarter of the XX century elite sport has become one of the key priorities of the Chinese government and is remaining so until today.

The Chinese national team remains in the top three at the last three summer Olympics and unambiguously aspires to enhance its positions in winter sports. The home winter Olympics-2022 in Beijing is considered to be the best instrument to implement this ambitious goal of the national government. Such a high growth in sports development in China became a consequence of the comprehensive sport policy at all levels.

Methods

The study applied an institutional approach, a case-study, analysis and generalization methods. The article analyzes the materials of the scientific articles on the identified theme and the data from the official government website of the State Council of the People's Republic of China.

Results and Discussion

It should be noted that the General Administration of Sport willingly uses new approaches in sport governance and one of the main current trends is a gradual withdrawal from total state control and state financing. As a result, a reform in Chinese sport was initiated in 2014 aimed towards increasing commercialization and involvement more participants into the decision-making process. Soccer became the pilot sport in the reform, which calls for a market-oriented approach and the separation of supervisory and management responsibilities [1].

Comprehensive measures were taken to reform the state-run management structure to allow professional leagues and the school system to prosper in a favorable environment and raise the game's profile. Under the reform plan, the Chinese Football Association was required to hand over decision-making powers to the Chinese Super League company, which was formed by 16 club shareholders in 2005 to run the top league. Besides the reform was aimed at promoting mass participation as the country aims to become a major football power on the world stage until 2050 [2].

Chinese government's goal is to make China a great sports nation, and the primary focus on football could be explained by several factors. The first is that football has a great social impact and it is loved by masses, and becoming a great sports nation will have a significant importance for the development of Chinese

economy. The second factor is that the Chinese government believes that progress of football in their country will largely improve the wellbeing of the average Chinese person. Besides football is an ideal sport to boost mass participation as a team sport. Generally, the elite development of any sport is mainly determined by its capacity to provide mass participation and promote of elite sport practices at mass level [3].

The interim results of the 6-year-period of the Chinese football reform are more than impressive. By 2020 in China 60,000 football fields have been built or renovated, over 27,000 primary and middle schools featuring football education have been established, 181 institutions of higher education have begun to enroll quality football players, and nearly 2,000 students have begun to be enrolled annually based on their special talent in football. Approximately 27 million students, 1,000 for each school on average, have been attending football classes at least once a week and participating in football training and competitions [4].

Conclusions

As a result of the reform Chinese companies and wealthy individuals were encouraged to invest heavily in events, teams, sports facilities, agencies, and sponsorships, both domestically and internationally. One of the case of this policy is that Evergrande Group – the Chinese real estate company – broke ground on April 16 2020 on what it asserts will be the world’s largest professional football stadium, with the venue in Guangzhou (in China) to be followed by a further three to five stadia boasting capacities of between 80,000 and 100,000 [5]. The stadium will sit next to the Guangzhou South Railway Station, and the development is planned to be completed by the end of 2022. With a floor area of around 150,000 square meters, the design has been inspired from a blooming lotus flower, and will kind of pay ode to Guangzhou’s status as China’s ‘Flower City’.

The other side of the trend of increasing of sport’s commercialization is a growth of the Chinese investment in foreign clubs which has also been exploded. Over the last couple of years, Chinese investors have acquired stakes in football clubs in England, Spain, France, and Netherlands. Recently they acquired 13% stake in Manchester City, 20% stake in Atletico Madrid, 56% stake in Espanyol, complete ownership of Sochaux and some more [6].

Thus, while supporting the commercial investors to participate in sport development and taking into account the interests of all parties, particularly in football, the Chinese state bodies however retaining their major influence and governance. The strong institute of central governance in its base allows to find compromises with growing number of commercial investors promoting the sustainable development of Chinese sports, both at mass and elite levels.

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СОВРЕМЕННЫЕ ТРЕНДЫ УПРАВЛЕНИЯ В СПОРТЕ: ОПЫТ КИТАЯ

Аннотация. Китай по праву является одной из ведущих спортивных держав в мире, где эффективно реализуется государственное управление в спорте. В последние годы в спортивной отрасли Китая реализуется реформа, направленная на увеличение участия коммерческого сектора в развитии спорта в стране. На примере футбола, который стал первым видом спорта в процессе реформирования, показано, как участие китайских коммерческих компаний содействует развитию массовому вовлечению в занятия футболом, а также развитию футбола на профессиональном уровне. При этом несмотря на устойчивый процесс увеличения числа инвесторов контроль

государственного управления в китайском спорте все еще преобладает, что представляет интерес для дальнейших научных исследований по этой теме.

Ключевые слова: спорт в Китае, реформа в спорте, государственное управление

VERIFICATION OF RELIABILITY OF STARTING MOTION TEST IN BMX-RACING

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Abstract. The article examines motor tasks included in to the methodology of pedagogical control of the technical preparedness of cyclists specializing in BMX racing, as well as their conformity with the reliability criteria for testing procedures.

Key words: BMX race, reliability of tests, average duration, starting motion

Introduction. A special place in BMX races is given to the start, as an opportunity to take an advantageous position on the competitive distance [5]. The actual task is its metrological verification given the previously developed methodology for the current pedagogical control of the technical preparedness of cyclists specializing in BMX-racing, [6]. We checked the reliability of the motor task "Starting motion", which is included in the methodology of pedagogical control of cyclists in BMX-racing.

Research methods and organization. The subjects were 17 BMX riders (4 elite and 13 non-elite) different age groups (age was 14.2 ± 3.63 years, body weight was 54.5 ± 13.08 kg, body length was 1.62 ± 0.124 m). The subjects were asked to perform ten attempts to start motion after the pre-warm-up during of 20 minutes of riding along BMX track. Each subject performed another attempt in five minutes rest interval. Lateral video filming was carried out using a Canon 550D camera (shooting frequency 50 Hz) to assess the duration of the starting motion. The duration of the task was calculated using the MPC-HC software from the moment the first light and sound signal was given (the appearance of a red traffic light in the frame) to the intersection of the line of the upper edge of the starting gate (after their complete fall) by the projection of the axis of the front wheel of the bicycle. Statistical analysis included pairwise comparison (T-Wilcoxon).

Research results and their discussion. Statistically significant differences between 10 attempts of performing the "Starting motion" were not found $p > 0.05$ (table 1).

Table 1 – Results of statistical analysis starting motion (n=17, Wilcoxon T test)

Tav.1 Mean ±SD (s)	Tav.2 Mean ±SD (s)	Tav.3 Mean ±SD (s)	Tav.4 Mean ±SD (s)	Tav.5 Mean ±SD (s)	Tav.6 Mean ±SD (s)	Tav.7 Mean ±SD (s)	Tav.8 Mean ±SD (s)	Tav.9 Mean ±SD (s)	Tav.10 Mean ±SD (s)
1.458 ±0.379	1.424 ±0.341	1.473 ±0.486	1.425 ±0.363	1.417 ±0.352	1.445 ±0.378	1.415 ±0.366	1.411 ±0.375	1.440 ±0.371	1.434 ±0.380

Analysis within individual differences in the duration of the starting motion in the group of subjects (n=17) showed the presence of a trend line. Three types of results distribution were identified: 1 - the duration increases from attempt to attempt (ascending trend line, 1 elite vs. 3 non-elite), 2 - duration decreases from attempt to attempt (descending trend line, 2 elite vs. 5 non-elite), 3 - the duration does not change significantly (horizontal trend line, 1 elite vs. 5 non-elite).

The correlation coefficient (R-Spearman) in attempts from the 1st to the 10th (n=17) ranged from 0.90 to 0.98, which corresponds to the excellent reliability. The coefficient of correlation (R-Spearman) in attempts from 1st to 3rd (n=17) ranged from 0.96 to 0.98, which corresponds excellent reliability.

Findings. The results of the research allow us to conclude that during the current pedagogical control of the “starting motion”. It is recommended to perform a preliminary warm-up within 20 minutes. The result is determined as the average duration of the three major attempts. The recording of the duration of the motor task is performed using a video camera with a recording frequency of at least 50 Hz; using a video player, it is necessary to measure the passage time of the measured segment. Examples of software may be Media Player Classic (MPC) or TEMA Automotive.

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ПРОВЕРКА НАДЁЖНОСТИ ДВИГАТЕЛЬНОГО ЗАДАНИЯ «СТАРТОВОЕ ДЕЙСТВИЕ» В ВМХ ГОНКАХ

Аннотация. В статье рассматриваются двигательные задания, входящие в методику педагогического контроля технической подготовленности велосипедистов, специализирующихся в ВМХ-гонках, а также их соответствие критериям надёжности, предъявляемым к процедурам тестирования.

Ключевые слова: ВМХ-гонки, надёжность тестов, среднее время, стартовое действие

EARLY INTERVENTION FOR ALZHEIMER'S DISEASE: PHYSICAL REHABILITATION OF PEOPLE WITH SUBJECTIVE COGNITIVE IMPAIRMENT

Everett A.A.
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Abstract: *Modern studies indicate not only memory problems connected with subjective cognitive impairment (SCI) but also organic cerebral changes indicating loss of function in some parts of the brain and compensatory activity in other parts of the brain. The Bredesen therapeutic program seems a good basis for rehabilitating people with SCI. Cognitive stimulation programs for people with SCI require further development.*

Key words: *subjective cognitive impairment, mild cognitive impairment, Alzheimer's disease, physical rehabilitation, Bredesen therapeutic program*

Introduction

Modern studies indicate that a condition called subjective cognitive impairment (SCI) can affect people in middle and older age. Before cognitive impairment becomes noticeable to others—mild cognitive impairment (MCI)—there is a prodromal period when changes are only noticeable to the patient—SCI, also called subjective memory impairment [1]. There is some evidence of a connection between SCI and a higher incidence of subsequent MCI, which is considered an early stage of Alzheimer's disease (AD). Some researchers define SCI as the earliest form of AD because patterns of brain degeneration resemble the AD dynamic.

Recent advances in neuroimaging show that SCI manifests not only in a function decrease but also in organic cerebral changes. These changes are rather mild and are compensated, but the clinical picture already shows not a perfectly healthy brain. Patients with SCI display hypometabolism in the right precuneus and hypermetabolism in the right medial temporal lobe, and their gray matter volume is reduced in the right hippocampus [2]. The cerebral metabolism in the parahippocampal gyrus is reduced by 18% as compared with comparably aged, healthy individuals without SCI [1]. The same changes are observed in the AD brain but to a greater degree.

Cognitive performance in SCI is still almost intact. Recent studies show that this is a result of compensatory mechanisms. While hippocampal activity is reduced, the right dorsolateral prefrontal cortex has more than usual activation during episodic memory recall in subjects with SCI [3].

According to a 1986 study, the period of SCI lasts about 15 years [4]. There is generally no proper intervention during this period. Cognitive impairments become noticeable when brain changes have gone too far.

Bredesen therapeutic program

Bredesen proposed treating AD with a combination approach as for other chronic illnesses [5]. He argues that amyloid build up and brain downsizing is strategic and protective against adverse conditions. He writes, “just as for other complex chronic illnesses such as cardiovascular disease, there may be many potential contributors to Alzheimer’s disease, such as inflammation, various chronic pathogens, trophic withdrawal, insulin resistance, vascular compromise, trauma, and exposure to specific toxins” [6]. He also notes evidence that “what is referred to as Alzheimer’s disease is a protective, network-downsizing response to several classes of insults: pathogens/inflammation, toxins, and withdrawal of nutrients, hormones, or trophic factors” [6]. These factors trigger the mechanism leading to the formation of amyloid plaques in the brain [7].

Bredesen developed a therapeutic program designed to counter the underlying causes of AD; it was effective for reversing cognitive decline in SCI, MCI, and the early-stage AD [7]. The program includes multiple ways to improve brain metabolism by addressing inflammation, toxicity, and nutrient withdrawal: low-glycemic, low-grain, plant-rich diets; exercise; 12-hour nightly fasting including 3 hours before bedtime; sleep optimization; dietary supplements (e.g., vitamins, minerals, probiotics and prebiotics); omega-3; MCT and coconut oil; herbal formulas; and hormonal agents based on individual deficits according to blood test results and other parameters of medical examination [7]. The program also includes brain stimulation based on plasticity-based adaptive cognitive training (IMPACT) [8]. The IMPACT method is designed to improve the speed and accuracy of auditory information processing using computer exercises: “time order judgment of pairs of frequency-modulated sweeps, discrimination of confusable syllables, recognition of sequences of confusable syllables, matching pairs of confusable syllables, reconstruction of sequences of verbal instructions, and identification of details in a verbally presented story” [8]. Memory and attention improvements with this method were superior to a standard cognitive stimulation program (viewing digital video educational programs and answering written quizzes after each training) in a multisite randomized controlled double-blind trial [8].

The positive results of Bredesen’s therapeutic program suggest that it can be a basis for rehabilitating patients with SCI, MCI, and early AD. The program should be administered under a doctor’s guidance and a more experienced, specialized doctor is needed for more advanced stages of cognitive decline requiring an individual approach with close monitoring of the patient’s reaction.

Conclusions

Prevention of MCI should emphasize treating SCI patients by rehabilitating their current cognitive functions and improving their physical condition. A main component is educating patients about the current understanding of the neurodegeneration causes. People can then make appropriate lifestyle changes with a higher level of compliance.

Cognitive stimulation programs are available online, but few older Russians use Internet. They could participate in cognitive stimulation programs through government-subsidized social services. Further development of SCI rehabilitation involves determining appropriate forms of cognitive and physical exercises and developing accessible cognitive training formats.

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РАННЯЯ КОРРЕКЦИЯ БОЛЕЗНИ АЛЬЦГЕЙМЕРА. ФИЗИЧЕСКАЯ РЕАБИЛИТАЦИЯ ЛИЦ С СУБЪЕКТИВНЫМ КОГНИТИВНЫМ НАРУШЕНИЕМ

Аннотация. Современные исследования указывают не только на проблемы с памятью при субъективном когнитивном нарушении (СКН), но и на органические изменения в головном мозге. Данные изменения свидетельствуют о потере функций в некоторых отделах мозга и о компенсаторной активности в других его отделах. Терапевтическая программа Бредесена может быть принята за основу физической реабилитации лиц с СКН. Программы когнитивной стимуляции для лиц с СКН требуют дальнейшей разработки.

Ключевые слова: субъективное когнитивное нарушение, умеренное когнитивное нарушение, болезнь Альцгеймера, физическая реабилитация, терапевтическая программа Бредесена

USE OF THE TECHNIQUE OF IMPROVING THE SECOND SET OF THE BALL IN THE PREPARATION OF PLAYERS "LIBERO" PLAYERS

Filimonov A.V.

Abstract This article examines the means, the use of which has a positive effect on the improvement of the technique of performing the second set of the ball by a player of the "libero" role. The results of a pedagogical experiment are presented, proving the effectiveness of the developed methodology for improving the "finishing" ball passing by a player of the "libero" role.

Keywords Set of the ball, libero, the technique of improving the "finishing" set of the ball by the libero player

Introduction. The gameplay in volleyball is very dynamic, it consists in alternating the actions of attack and defense. The main technique of attack is an attacking blow, which will not be possible without an accurate set of the ball. The Libero must be fluent in all types of sets, because in the game there are often times when the connecting player takes the ball in defense and the defender performs the set.

In the scientific and methodological literature in the field of volleyball, the biomechanical structure of the ball set is well described [1], and their classification has been developed [2], but there are no substantiated methods for improving the second set of the ball by the libero player.

The purpose of the study is to develop and test a methodology for improving the second set of the ball by a player of the "libero" role.

Research results and their discussion. The research carried out preliminary testing of the level of technical readiness of the libero, which allows to reveal the accuracy of the second sets, which are performed by the libero player: a set from above with two hands forward and backward; set from below with two hands forward and backward.

The results of preliminary testing (T1) showed that the accuracy of sets in the CG and the EG is as follows:

- In overhead pass to front in the CG - 60%, in the EG - 57%;
- In overhead pass to back in the CG - 37%, in the EG - 30%;
- In the underhand pass to front, the CG - 50%, in the EG - 52%;
- In underhand pass to back in the CG - 20%, in the EG - 21%.

Preliminary testing showed that the results for all set options are practically the same, both groups are homogeneous, no test revealed significant differences between the control and experimental groups.

Also, in the process of preliminary testing, pedagogical observation was carried out, during which services mistakes. These mistakes determined the tasks that will be solved in the developed methodology for improving the second set of the ball by the libero player: 1) Improving the correct positioning of hands before setting the ball from above; 2) Improving the accurate hitting the ball.

To solve the set tasks in the methodology, two sets of exercises of conjugate influence were used. This method allows you to improve two aspects of technique and physical qualities at once.

□ Complex 1 - aimed at the formation of the right counter shock movement, when overhead pass and backward and backward, as well as the upbringing of the explosive power of the muscles of the upper shoulder belt;

□ Complex 2 - aimed at improving the exit (raising the speed of movement) to the place and stop in it (coordination abilities).

The developed exercise complexes were used at each training session within 20 minutes after the general warm-up in a special preparatory stage. During this time, the control group performed exercises according to the generally accepted training program. Then control testing (T2) was carried out.

The results of T2 indicate that the accuracy indices of the second pass of the EG players in all variants of its implementation are higher than those of the CG players:

- In overhead pass forward in the CG - 62%, in the EG - 65%;
- In overhead pass to back in the CG - 40%, in the EG - 43%;
- In underhand pass forward, the CG - 55%, in the EG - 59%;
- In underhand pass to back in the CG - 24%, in the EG - 29%.

To determine the appropriateness of using the technique, we conducted a comparative analysis of intergroup shifts in T1 and T2, which gave the following results:

□ In the overhead pass forward in the CG it is equal to 2% in the EG 8%, which is 6% more.

□ In the overhead pass of the ball from top to back in the CG, the shift is 3%, in the EG - 13% (+ 10%).

□ In the underhand pass of the ball forward in the CG, the shift is 5% when in the EG - 7% (+ 2%).

□ In underhand pass to the back, a shift was shown in the CG 4%, and in the EG - 8% (+ 4%).

It can be concluded that the proposed methodology is more effective than the traditional one and it can be applied in the groups of sports improvement and higher sportsmanship of the SDYUSSHOR.

Conclusions

1. A methodology for improving the second set of the ball by the libero player has been developed.

2. As a result of the study, the effectiveness of the developed technique has been proved, the use of which allows to increase the accuracy of the performance of various sets by the player of the "libero" role.

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ИСПОЛЬЗОВАНИЕ МЕТОДИКИ СОВЕРШЕНСТВОВАНИЯ ВТОРОЙ ПЕРЕДАЧИ МЯЧА В ПОДГОТОВКЕ ИГРОКОВ АМПУЛА «ЛИБЕРО»

Аннотация. В данной статье рассматриваются средства, использование которых положительно влияет на совершенствование техники выполнения второй передачи мяча игроком ампула «либеро». Представлены результаты педагогического эксперимента, доказывающие эффективность разработанной методики совершенствования «доигровочной» передачи мяча игроком ампула «либеро».

Ключевые слова: передача мяча, либеро, методика совершенствования «доигровочной» передачи мяча игроком либеро

TACTICAL SIGNIFICANCE OF PUNCHES TECHNIQUE IN HAND-TO-HAND COMBAT

Fokina N.V.

Konakov A.V.

***Abstracts.** The article is devoted to the problem of tactical significance of punches technique in hand-to-hand combat. During the study, a large number of competitive duels were observed, thanks to which it was revealed that athletes use more striking techniques with their hands in their duels. But the effective use of these strikes largely depends on the outcome of the match. In this regard, the problem of effective tactical application of the technique of strikes in hand-to-hand combat is revealed.*

***Keywords:** hand-to-hand combat, punching, tactics*

Introduction. Many modern publications about hand-to-hand combat provide a lot of information about training hand-to-hand combat techniques and physics but not enough attention is paid to tactical training.

In this study, an attempt is made to study the tactical significance of punches for their effective use in the training process.

The aim of the study is to increase the level of tactical training with the use of hand-to-hand striking techniques in hand-to-hand combat.

Research methods: analysis of scientific and methodological literature, questionnaires, pedagogical observation, pedagogical experiment.

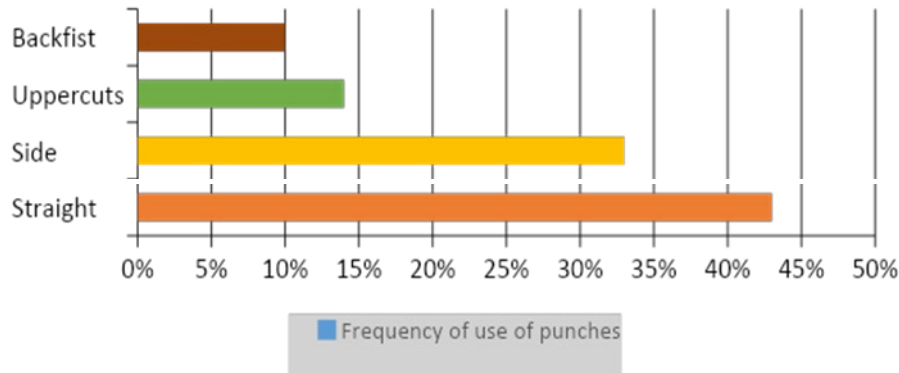
Results of the study. To study the technical and tactical features of performing hand strikes in hand-to-hand combat, a theoretical analysis and generalization of literature data were conducted, existing methods of training of hand-to-hand combat were evaluated, and a detailed analysis of the tactical actions of athletes was carried out.

To identify the opinion of experts on the main ways of conducting a sports match using hands striking techniques, a questionnaire survey was conducted. It involved athletes and specialists of various types of martial arts.

The majority of respondents believed that the tactical significance of punches in hand - to – hand combat is of primary importance – 43%, but at the same time, a slightly smaller number of respondents believes that it is of equal importance with kicking techniques-37%, secondary-20%.

For pedagogical observation it was applied to a video analysis of competitions in hand-to-hand combat. The analysis of the results of the athletes performances was carried out on the basis of video recordings of the matches of the Russian Championship in 2019. The semifinal and final matches were analyzed. It is believed that physical skills and moral qualities that athletes use at the maximum level during their fights most clearly show their individuality.

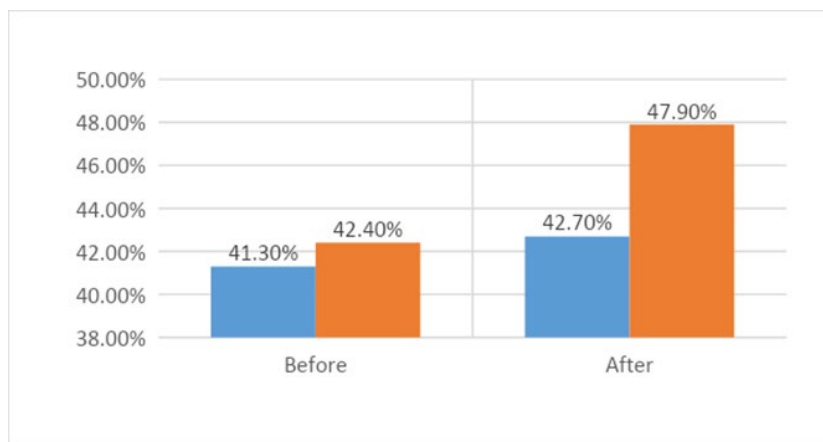
As a result, it was revealed that the greatest frequency of using punches belonged to direct and side punches. (Picture -1)



Picture 1 -Frequency of use of punches

To test the research hypothesis it was conducted a pedagogical experiment. For the experiment there were 2 groups of 18 people: control and experimental. Each group had its training according to their own methods. In the pedagogical experiment, it was supposed to test the degree of effectiveness of the developed exercises in the experimental group.

Below we can see the results of comparing two groups before and after the experiment (Picture-2)



Picture 2- Results before and after experiment

This graph shows that after the experiment, the results in the experimental group improved by 5.5%, while in the control group- only by 1.4%. We can say that our method is considered effective.

Conclusions

1) The analysis of scientific and methodological literature and video analysis has helped us to study the existing tactics of conducting duels and also allowed us to develop a plan of technical and tactical actions that can lead to an increase of a sport skills level.

2) As a result of pedagogical observation, the most frequently used types of punches in sports matches were identified: direct - 43%; side-33%.

3) On the basis of the conducted research, methodological recommendations were developed to improve the content of technical and tactical training of athletes, using percussion hands techniques, which leads to an increase of sport skills level.

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ТАКТИЧЕСКОЕ ЗНАЧЕНИЕ ТЕХНИКИ УДАРОВ РУКАМИ В РУКОПАШНОМ БОЕ

Аннотация. Статья посвящена проблеме тактического значения технике ударов руками в спортивном рукопашном бое. В ходе исследования было просмотрено большое количество соревновательных поединков, благодаря которым было выявлено, что спортсмены в большей степени используют в своих поединках ударную технику руками. Но эффективное применение данных ударов во многом зависит от исхода поединка. В связи с этим выявляется проблема эффективного тактического применения техники ударов в спортивном рукопашном бое.

Ключевые слова: рукопашный бой, удары руками, тактика

ROLE OF MARKET RESEARCH IN THE DEVELOPMENT OF TAEKWONDO CLUBS

Ganeeva L. D.

***Abstract.** This article examines the marketing component of the taekwondo industry. Conclusions are drawn about which marketing tools are more effective and appropriate to use. Such concepts as “commercialisation” and “monetisation of relationships” in taekwondo and what they lead to are presented.*

***Keywords:** taekwondo, sports club, marketing policy, sports and health services, sports industry*

Martial arts are undergoing a rapid transformation at the world and Russian national levels. In the new socio-economic conditions, Russia is witnessing a growing interest in physical activity among various population groups. This is leading to a greater need to create new subjects of physical culture and sports activities, which, in turn, can be either state or non-state. State entities include children's and youth sports schools and Olympic reserve schools that use a unified schedule to organise children's recruitment for martial arts classes and promote excellence in their sports training to achieve high results in competitions. These types of physical culture and sports organisations are typically considered non-profit. In turn, commercial organisations are private organisations that are more adapted to market conditions and are interested in expanding their client base.

The subject matter is relevant because private taekwondo clubs have become the organisational basis of a new line of entrepreneurship in the field of sports and recreation services.

It is important to note the characteristic features of the taekwondo sports industry as being [2]:

- providing high-quality services designed for various groups of consumers;
- providing consumers with a variety of complementary and related services;
- active marketing policy, prompt response to fluctuations in market demand, introduction of new services;
- discrimination of prices for services;
- a combination of personalised services and general customer service;
- active material incentives for service users;
- creation of a network of taekwondo clubs under one brand united by one ideology;

- use of intensive technologies for service production, serving a large number of consumers, thus generating profit.

Marketing initiatives aimed at popularising taekwondo in Russia are based on the desires and interests of consumers of sports and health services. In the book "Starting and Running Your Own Martial Arts School", this question is covered as follows: "People in today's consumer culture are used to comparing purchases. They choose products and services that are right for them. If their doctor, dentist, barber, or church does not listen to them, or does not meet their needs, they will find someone who will. In the eyes of the average American consumer, you are replaceable. But if you continue to listen and meet the needs of your students, you will remain an important part of their lives." [4] From this, we can conclude that customer loyalty depends on the flexibility of the organisation to their needs.

Customer feedback on the quality of the service offered is crucial. We shall consider the application of the survey method using the example of the club RSOO SKT North-West. Consumers were asked to give their opinion. Respondents were asked 20 specific questions. The survey results allowed to identify three main positions that will improve the quality of customer service:

1. Inform potential customers more often about free taekwondo trial training sessions;

2. Develop the online image component of the club to attract new audiences.

3. Divide Taekwondo ITF training into separate groups:

a group for those who plan to compete in competitions and a group for those who practice taekwondo just to keep fit (Figure 1);

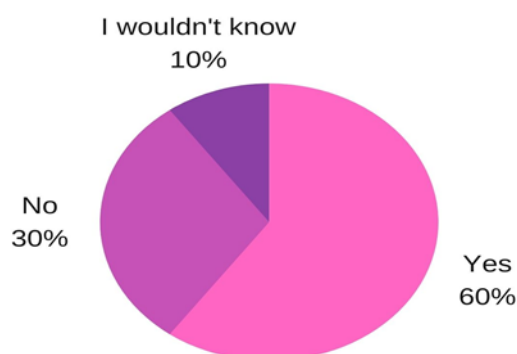


Figure 1 – Survey data of respondents: Answer to the question "Would you like to participate in ITF Taekwondo competitions in the future?"

In conclusion, it is important to note that the modern taekwondo club is characterised as an entrepreneurial structure with its specific economic functions. The number of sports clubs offering taekwondo services is increasing, which means that competition is growing. In this regard, the growth of competition among taekwondo clubs can be attributed to positive factors, as this is one of the levers for the modernisation of this sphere, and therefore for the development of this sport at the national level.

In today's world of rapidly developing Internet technologies, it is important to maintain constant feedback from consumers. The introduction of new technologies in the training process and a highly qualified coaching staff are an integral part of a successful and dynamically developing taekwondo club. Consequently, these components require continuous improvement.

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РОЛЬ МАРКЕТИНГОВОГО ИССЛЕДОВАНИЯ В РАЗВИТИИ ТХЭКВОНДО-КЛУБА

Аннотация. В представленной статье рассмотрена маркетинговая составляющая тхэквондо-индустрии. Были сформированы выводы о том, какие инструменты маркетинга более эффективны и целесообразны в применении. Представлены такие понятия как “коммерциализация” и “монетизация отношений” в тхэквондо и к чему они приводят.

Ключевые слова: тхэквондо, спортивный клуб, маркетинговая политика, спортивно-оздоровительные услуги, спортивная индустрия

PROSPECTS FOR THE DEVELOPMENT OF SAMBO IN SOUTH KOREA

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***Abstract.** The article deals with the development of sambo in South Korea. The state of work in the Federation of Sambo – Cheonbuk, which unites 60 professional clubs of sambo, aikido –sambo, wrestling – sambo, judo – sambo, is indicated.*

***Keywords:** sambo, South Korea, Cheonbuk*

Sambo is a domestic type of wrestling that attracts men, young men and teenagers to comprehend the art of self-defense without weapons in difficult life situations [1]. In 2018, the national SAMBO celebrated 100 years old. The term "Sambo" stands for "self-defense without weapons". Sambo was born down in the RSUPE (SCOLIPE) [2]. The main feature of this sport is its versatility and practicality, a variety of technical actions, and techniques, that have been systematized and classified over the years from the types of wrestling of various peoples of the former Union of Soviet Socialist Republics.

There are two types of SAMBO: sports and combat. Sambo is not only the only type of martial arts and a system of countering the enemy without the use of weapons, but also a system of education that promotes the development of moral and volitional qualities, patriotism and citizenship of the future generation. Sambo wrestling refers to sports with an extremely complex and diverse technique of movements. The sambo fighting technique consists of basic techniques and stands, their modifications, complex technical and tactical actions (combinations and counter-moves), elementary actions (movements, grabs, off-balance, ground floor insurance and self-insurance) and much more.

Athletes and coaches of the USSR and Russia raised and raise the prestige of SAMBO all over the world! On the International stage, athletes with ambitions show the versatility of this sport!

Sambo combines a variety of types of national wrestling of the former Soviet states. As a result, SAMBO began to attract representatives of other countries, and especially South Korea.

Sambo as a sport has been actively developing since 1938, and in South Korea, this type of martial arts received official status in 1974. This is the first important date in the history of SAMBO. Meanwhile, the International Wrestling Federation of PHILA recognized SAMBO as an international sport in 1966, with However, the further development of sambo in the world and in South Korea was suspended due to the Cold War.

After this difficult period of time, SAMBO received its official status in South Korea in 2003.

Sambo has been actively developing in South Korea for the last 10 years. In South Korea, as in Russia, there is a Federation of sambo-Cheonbuk, which unites 60 professional clubs of sambo, Aikido-sambo, wrestling-sambo, judo-sambo. The unification of traditional Korean taekwondo and sambo is noted, often

in Korea, there are common gyms for these martial arts. The Cheonbuk Sambo Federation was founded in 2003 and is a member of the Olympic Committee Federation and has 17 representative offices in South Korea. There are 730 male athletes and 85 female athletes registered in the South Korean Sambo – Cheonbuk Federation. In addition, SAMBO in South Korea is practiced by blind and visually impaired athletes.

Under the leadership of Cheonbuk-sambo, world championships are actively held with the participation of 100 sambo athletes from South Korea. South Korea is the first Asian country in the world to receive the right to host the 43rd World Sambo Championship. In addition, SAMBO athletes from South Korea actively participate in the Asian Sports Games. The International SAMBO Forum has been opened in South Korea. Currently, the most successful athletes are SAMBO athletes from South Korea: Jung Bog Kim, Lee Sang Soo, Park Giso, Joo Young Lim, Ko Seo Hyeon. In particular, from February 6 to 10, 2021, the 43rd World Championship was held at the Seoku Cultural Gymnasium at Cheongju University. The main competitors in the sports arena are SAMBO athletes from South Korea, who consider Russians ("Russians").

Sport, as we all know, is of great political importance. So in South Korea, in the sambo halls, "Russian" instructors from Russia are actively working, teaching Korean athletes "*... the wisdom of sambo wrestling...*" and strengthening friendship and useful cooperation between the peoples of Russia and South Korea.

As confirmation of this, the statement of the chairman of the Federation of Sambo – Cheonbuk Chon Geum Moon about the planning of the organization of the SAMBO Championship in South Korea named after the President of Russia - Vladimir Putin. At the prestigious International tournament "Memorial of Anatoly Arkadyevich Kharlampiev", South Korean athletes won their fights, and one of them became the winner in his weight category. In 2017, a historic event took place: for the first time in the history of SAMBO in South Korea, the title of World Champion in combat Sambo was won by Ko Seo Hyeon. Thanks to the high results of athletes, combat and sports SAMBO have become even more popular in Korea!

Chon Geum Moon noted in his interview that "*... if earlier martial artists were engaged in taekwondo, ku-do, aikido, wrestling and other sports, now they are increasingly switching to sambo.*"

Thus, more and more athletes come to the Sambo Federation of South Korea; even athletes who have already been engaged in martial arts, and are well versed in them, choose sambo as a priority type of martial arts!

Conclusions: 1. The main directions of sambo development in South Korea in the 20s years of the 21st century are sports and mass sports. 2. Technical and tactical actions of sambo athletes from the South Korea at the present time are the techniques of the Soviet school of sports sambo V.S. Oschepkov, G.Yak. Kharlampiev, based on the elements of Japanese judo and kyokusenkaï wrestling, as well as the French national wrestling and the national wrestling of the peoples of the Soviet Union.

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ПЕРСПЕКТИВЫ РАЗВИТИЯ САМБО В ЮЖНОЙ КОРЕЕ

Аннотация. В статье рассматривается развитие самбо в Южной Корее. Рассмотрено состояние работы в Федерации самбо - Чхонбук, объединяющей 60 профессиональных клубов самбо, айкидо-самбо, борьбы - самбо, дзюдо - самбо.

Ключевые слова: самбо, Южная Корея, Чхонбук

INFORMATION TECHNOLOGIES IN THE OLYMPIC MOVEMENT

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Abstract. *The article presents a model to popularize the Olympic movement by means of the information and telecommunication technologies of the Internet. It is based on the publication of popular science videos on various online platforms such as TikTok, YouTube and Instagram.*

According to the results of the investigation, it was revealed that the use of the model formed made it possible to create conditions for the attractiveness and availability of popular science information on Olympic topics. The publication of videos carried out an educational function and contributed to familiarizing various socio-demographic groups with the ideals and values of Olympism.

Key words: *Olympic movement, TikTok, popularization of the Olympic movement, information and telecommunication technologies*

Since the establishment of the International Olympic Committee in 1894, the search for effective means of spreading the ideals and values of Olympism has begun. In the beginning there were various print media, in the 1920s of the XX century they began to use radio, from 1936 television was widely applied, and in the 1990s the computer network "Internet" began to be used, thanks to which it became much more convenient and efficient to disseminate information [2].

Experts note that familiarizing of various groups of the population of our country with the ideals and values of Olympism is a complex social and pedagogical problem [1, 3].

The model of the Olympic movement popularization by means of the information and telecommunication technologies of the Internet is based on the popular science videos publication on online platforms such as «TikTok», Instagram, «YouTube», «Telegram», «VKontakte» and «Facebook».

During the period from January 1, 2020 to February 1, 2021, over 124 thousand people viewed videos on the hashtag «#olympicmovement». Moreover, they received over two thousand positive ratings from the users. It is natural that in the last days of the experiment, an average of 4 thousand people began to watch each new video on the subject of the Olympic movement. This indicates an increase in the level of the users' interest in the Olympic theme and the possibility of such services to cover a large audience with the problems of the Olympic movement [4,5].

Returning to the statistics, we can see that the rate of requests on the Olympic topics of Yandex Company increased in December. In December, the figure was 61 thousand, in January it decreased to 20 thousand. This decline, in our opinion, can be explained by the holidays, which lasted for almost half a month. The same trend was observed in 2019. At the same time, the January indicator in 2021 is 2 times higher than the January indicator in 2020. This indicates an increase in users' interest in the Olympic theme throughout Russia.

In this regard, we predict a further increase in the level of users' interest in comparison with the last 2020.

The study was carried out in four stages. At the first stage, the means and methods were selected with the help of which we found out which platform at a given time is best suited for publishing popular science videos. This service is best suited for posting videos, as it is currently one of the most popular platforms for this.

This application, for a short period of time, has gained more than 2 billion users worldwide, of which almost 23 million are the active population of Russia, of which 40% are children and adolescents from 8 to 18 years old.

At the third stage of the study, video clips were edited. Various images of athletes from the ancient Olympic Games and photographs of the modern Olympic Games and their participants were used.

In the future, in order to improve the level of information presentation, it is necessary to master such complex programs as Photoshop, Premier Pro, Video Maker and other applications for editing photos and videos. The edited videos were voiced by the created scripts and published on the service for viewing and creating short videos - "TikTok", under the hashtag "#olympicmovement" we created.

At the fourth stage, the results of the study were summarized. Over the period from December 1, 2020 to February 1, 2021, videos on the hashtag "#Olympic Movement" were viewed by over 120 thousand people and received almost two thousand positive ratings.

It is also natural that in the last days of the experiment, an average of 3 thousand people began to watch each new video on the subject of the Olympic movement. This indicates an increase in the level of user interest in the Olympic theme and the possibility of such services to reach a large audience throughout Russia with the problems of the Olympic movement.

Conclusion. Based on the presented research results, it should be noted that the proposed model of the Olympic movement popularization by means of the information and telecommunication technologies of the Internet network, made it possible to create conditions for the attractiveness and availability of popular science information on the Olympic topics.

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ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ В ОЛИМПИЙСКОМ ДВИЖЕНИИ

Аннотация. В статье представлена модель популяризации олимпийского движения посредством информационно-телекоммуникационных технологий сети «Интернет». Она базируется на публикации научно-популярных видеороликах на различных онлайн платформах, таких как TikTok, «YouTube», «Instagram».

По итогам исследование было выявлено, что использование созданной модели позволило создать условия привлекательности и доступности научно-популярной информации по олимпийской тематике. Публикации видеороликов осуществили просветительскую функцию и поспособствовали приобщению к идеалам и ценностям Олимпизма различных социально-демографических групп населения.

Ключевые слова: олимпийское движение, TikTok, популяризация олимпийского движения, информационно-телекоммуникационные технологии

RESEARCH AND ANALYSIS OF THE PROFESSIONAL COMPETENCE OF A PHYSICAL EDUCATION TEACHER IN THE FORMATION OF TOLERANCE

Haoshunag Wang
Yang Juan

***Abstract.** Tolerance is a topic of the present era, and it is of great importance in mitigating controversy and conflict. In the context of school education, the introduction of tolerance education helps teachers to objectively consider the differences of schoolchildren, actively face the doubts of schoolchildren, rationally treat the mistakes of schoolchildren, accept grievances and sincerely acknowledge the human weaknesses of schoolchildren. Tolerance is the new requirements for the quality and ability of modern teachers, which meets the requirements of the sports spirit and the essence of education in modern society, and should become an integral professional competence of teachers, especially physical education teachers.*

***Key words.** tolerance, physical education teacher, professional competence*

Introduction: The report “Education is Wealth in It”, presented to UNESCO by the International Commission on Education for the 21st Century, noted: “Education of tolerance and education of respect for others, as necessary conditions for a democratic society, should be seen as an inclusive and sustainable cause” Tolerance education is about understanding, respect, trust and tolerance, manifested by teachers in the differences, doubts, shortcomings and even offensive and human weaknesses of students, and goes through a holistic process of teaching and education. Tolerance is important for everyone, but it is especially important for physical education teachers because they are faced with a group of growing children. In the process of physical training and education, student mistakes are inevitable. In a sense, it is a process that helps students correct mistakes and avoid repeating mistakes. It is also the process of growing children. In fact, if a physical education teacher does not tolerate student mistakes, they will practically deprive children of the right to grow up in the process of education. This is how the teacher's tolerance is tolerance, understanding and forgiveness of the shortcomings and mistakes of children, and the expectation of their growth and development, and is also an integral part of the professional competence of a physical education teacher.

Purpose of the research: to develop and analyze the role and importance of tolerance in the formation of professional competencies of physical education teachers in modern society and use this as a basis for the formation of the internal psychological quality of physical education teachers and increase their professional abilities and quality.

In modern society, people must have a tolerant or tolerant spiritual character. Marx believes that the nature of man is social, that is, man is the existence of a relationship. Consequently, modern society inevitably requires educating people in order to learn to live with people with different value orientations, to respect, care for and understand others, to overcome their own narrow prejudices through mutual communication and interconnection, and then to form an understanding and recognition of diverse people, cultures, religions, etc.

It is important to note that at the present stage, higher requirements are imposed on physical education teachers for their professional competencies. In addition to higher demands on physical education and physical education skills and sports qualifications, their psychological moral and personal qualities have also become the keys to educating excellent physical education teachers. Socio-psychological elements of the professional competence of physical education teachers have become one of the main topics studied by scientists in the field of physical education in recent years. Research shows that the tolerance of physical education teachers is mainly reflected in the following aspects:

First, physical education teachers must be objective about student differences. Each child is unique, they have their own characteristics and laws of growth. Physical education teachers must properly recognize and fully exploit differences between students, know how to teach students according to their abilities, and create space for each child to grow and develop freely. Tolerance towards the different personalities of students is the most basic requirement for a teacher with a tolerant spirit, and it is also easy and must do. For example, due to differences in growth environment, family background, learning background, life habits, etc. Students show different academic performance, personality traits, behavior styles, etc. This is a manifestation of children's personality differences. Teachers must show sufficient understanding and respect.

Secondly, as a physical education teacher, we must actively confront student doubts. As a transmitter of knowledge and sports skills, the knowledge and sports skills of physical education teachers are tested by history and time. But a teacher is not a god, but just a normal person, and with the constant updating of teaching methods and methods, as well as with the advent of new technical actions, accidental mistakes in teaching physical education are normal. For this

reason, students may ask questions or doubts about teacher errors. In this case, physical education teachers should show sufficient tolerance or tolerance towards students, encourage them to ask questions and doubts, and guide them towards active thinking and innovation. It is also a manifestation of the educational wisdom of physical education teachers.

Thirdly, physical education teachers must rationally treat the shortcomings of students. There is an old Chinese saying, “A man is not a sage, no one can avoid being wrong,” especially for underage children. In the process of education, upbringing and preparation of sports knowledge, abilities and skills, students inevitably make mistakes. Physical education teachers should be patient with pupils' mistakes, promptly advise and help them, and provide them with opportunities for correction. For children who learn and accept poorly or who are more mischievous, we need to be patient enough to help them overcome learning difficulties, correct mistakes and solve problems, and never abandon students.

Conclusion. A high level of tolerance as a professionally important quality of the personality of teachers ensures a high level of assertiveness, tolerance, emotional stability, communication, and also ensures a high level of quality of teaching and preparation of physical culture, contributes to the implementation of the goals and objectives of raising children. Tolerance is not only an important element of the individual emotional qualities of physical culture teachers, but also the manifestation of their professional competencies.

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ИССЛЕДОВАНИЕ И АНАЛИЗ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ УЧИТЕЛЯ ФИЗИЧЕСКОЙ КУЛЬТУРЫ В ВОПРОСАХ ФОРМИРОВАНИЯ ТОЛЕРАНТНОСТИ

Аннотация. Толерантность — это тема нынешней эпохи, и она имеет огромное значение для смягчения противоречий и конфликтов. В контексте школьного образования внедрение воспитания толерантности помогает учителям объективно рассматривать различия школьников, активно сталкиваться с сомнениями школьников, рационально относиться к ошибкам школьников, принимать обиды и искренне признавать человеческие слабости школьников. Толерантность является новым требованием качества и способности современных учителей, которое соответствует требованиям спортивного духа и сути образования в современном обществе, и должно стать неотъемлемой профессиональной компетентностью учителей, особенно учителей физкультуры.

Ключевые слова: толерантность, учитель физической культуры, профессиональная компетентность

RESEARCH AND ANALYSIS OF THE PROFESSIONAL COMPETENCE OF A PHYSICAL EDUCATION TEACHER IN THE FORMATION OF TOLERANCE

Haoushang Wang
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Abstract. *Tolerance is a topic of the present era, and it is of great importance in mitigating controversy and conflict. In the context of school education, the introduction of tolerance education helps teachers to objectively consider the differences of schoolchildren, actively face the doubts of schoolchildren, rationally treat the mistakes of schoolchildren, accept grievances and sincerely acknowledge the human weaknesses of schoolchildren. Tolerance is the new requirements for the quality and ability of modern teachers, which meets the requirements of the sports spirit and the essence of education in modern society, and should become an integral professional competence of teachers, especially physical education teachers.*

Key words: *tolerance, physical education teacher, professional competence*

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education, student mistakes are inevitable. In a sense, it is a process that helps students correct mistakes and avoid repeating mistakes. It is also the process of growing children. In fact, if a physical education teacher does not tolerate student mistakes, they will practically deprive children of the right to grow up in the process of education. This is how the teacher's tolerance is tolerance, understanding and forgiveness of the shortcomings and mistakes of children, and the expectation of their growth and development, and is also an integral part of the professional competence of a physical education teacher.

Purpose of the research: to develop and analyze the role and importance of tolerance in the formation of professional competencies of physical education teachers in modern society and use this as a basis for the formation of the internal psychological quality of physical education teachers and increase their professional abilities and quality.

At the present stage, higher requirements are imposed on physical education teachers for their professional competencies. In addition to higher demands on physical education and physical education skills and sports qualifications, their psychological moral and personal qualities have also become the keys to educating excellent physical education teachers. Social-psychological elements of the professional competence of physical education teachers have become one of the main topics studied by scientists in the field of physical education in recent years. Research shows that the tolerance of physical education teachers is mainly reflected in the following aspects:

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ИССЛЕДОВАНИЕ И АНАЛИЗ ПРОФЕССИОНАЛЬНОЙ КОМПЕТЕНТНОСТИ УЧИТЕЛЯ ФИЗИЧЕСКОЙ КУЛЬТУРЫ В ВОПРОСАХ ФОРМИРОВАНИЯ ТОЛЕРАНТНОСТИ

Аннотация. Толерантность — это тема нынешней эпохи, и она имеет огромное значение для смягчения противоречий и конфликтов. В контексте школьного образования внедрение воспитания толерантности помогает учителям объективно

рассматривать различия школьников, активно сталкиваться с сомнениями школьников, рационально относиться к ошибкам школьников, принимать обиды и искренне признавать человеческие слабости школьников. Толерантность является новым требованием качества и способности современных учителей, которое соответствует требованиям спортивного духа и сути образования в современном обществе, и должно стать неотъемлемой профессиональной компетентностью учителей, особенно учителей физкультуры.

Ключевые слова: толерантность, учитель физической культуры, профессиональная компетентность

MOTOR COORDINATION TRAINING OF TRIATHLETES WITH VISUAL IMPAIRMENT AS AN EFFECTIVE COMPONENT OF THE INITIAL STAGE

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***Abstract.** This article presents the results of an experimental training program implementation designed for motor coordination development among triathletes with visual impairments at the sport training initial stage.*

***Keywords:** paratriathlon, blind sport, motor coordination of persons with visual impairments*

Introduction. Motor coordination takes an important part in a new technical skill mastering at the triathlon. Triathletes with visual impairments need to be able to correctly coordinate their actions during the passage of the competitive stages, as well as maintain balance when moving on a road cycling tandem, when changing body position in the first transit zone (changing the swimming stage to running to the transit zone, and then to the cycle stage), etc.

Women with visual impairments in comparison with their fully-abled peers have a lack of self-control and self-regulation of movements. This factor affects the movement coordination and the consistency of hands action in an utterly negative way, as well as the arms and legs movements integration. They are characterized by decreased coordination of visual-motor functions, impaired microorientation and tone of various muscle groups. In this regard, triathletes with visual impairments without the proper level of basic motor coordination will not be able to implement a training program in triathlon. This sport may become inaccessible to fulfillment for the reason of a great number of technical elements.

The purpose of the research is to study the influence of the experimental program on the motor coordination development of triathletes with visual impairment at the initial stage of sport training.

Search procedures.

1) Methods of the research. In accordance with the purpose and objectives of the study, we selected the following research methods: literature review; pedagogical observation; pedagogical testing; pedagogical experiment; methods of mathematical statistics.

2) Organization of the research. For the study, we selected control and experimental groups, which consisted of women with visual impairments from 18 to 24 years old. There were 8 women with visual impairments in each group.

3) We trained women with visual impairments 3 times a week for 90 minutes with guides participation for six months.

4) Our experimental programm included balance training exercises (for example, bosu platform), exercises in motion (for example, shuttle run), on-site exercises (for example, Rhomberg pose) and drill exercises on coach voice command.

Results. As the result of our experimental program we had statistically significant positive changes. Triathletes with visual impairment of the experimental group have increased the level of basic motor coordination (orientation in space, balance, response, differentiation of movement parameters, restructuring of motor actions, vestibular stability, voluntary muscle relaxation), which are necessary for the successful progression at the initial stage of sports training in the chosen sport.

Conclusion. In conclusion of the above, it should be noted that it is important to promote such sport as paratriathlon and attract people with visual impairment to this sport. In the triathlon training process women with visual impairments can increase their level of motor performance abilities which is important to improve their life quality.

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ВОСПИТАНИЕ ДВИГАТЕЛЬНО-КООРДИНАЦИОННЫХ СПОСОБНОСТЕЙ У ТРИАТЛОНИСТОВ С НАРУШЕНИЕМ ЗРЕНИЯ КАК ЭФФЕКТИВНЫЙ КОМПОНЕНТ СПОРТИВНОЙ ПОДГОТОВКИ НАЧАЛЬНОМ ЭТАПЕ

Аннотация. В данной статье представлены результаты внедрения экспериментальной методики, направленной на повышение уровня развития координационных способностей у триатлонистов с нарушением зрения на начальном этапе спортивной подготовки.

Ключевые слова: паратриатлон, спорт слепых, координационные способности лиц с нарушением зрения

THE INFLUENCE OF ACROBATIC ELEMENTS ON THE QUALITY OF POLE JUMPING PERFORMANCE

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***Abstract.** Sports acrobatics as sports has a good influence on different life spheres. Mastering basic skills helps people to navigate, land and fall. Acrobatics application has positive reviews. In this article we are going to explore the effect of acrobatic elements on different phases of pole jumping.*

***Keywords:** acrobatics, pole vault, sport, jumping*

Relevance. According to its structure, pole vault is considered to be a track-and-field exercise only in running up and pushing off, and in the following part is the strength gymnastic exercise turning into dynamic acrobatic action [1].

The Purpose is to define the effect of the acrobatic elements on the pole vault techniques.

Introduction

As pole vault is a difficult technical species and requires a good acrobatic training in some phases it is important to do a lot of acrobatic exercises. The main equipment is a crossbar, an acrobatic road, a trampoline and a platform. Using this equipment let us to form the required motor sensations and eliminate the mistakes in particular jumping phases.

Such exercises are going to be more effective if they are organized in specialized gyms with coaches.

To form particular motor skills it is necessary to do these exercises [2; 3]:

1. The skill of unsupported rotations of different types of difficulty, including the navigation skill in various motor situations:

- Crossbar: a back flip jump from swinging in the hang.
- Acrobatics: front flip, tuck, piked, piked-open, layout back flip.
- Trampoline: foot 1/2 back flip on the back, back 1/2 front flip with full turn on the back, pike-open front flip, back flip.

2. Handstand skill with different kinds of getting into it combined with the dynamic stability in different equal situations:

- Acrobatics: handstand skill from different starting positions and ways of doing it (by press, hang, jump, back roll), back roll into handstand, shoulderstand push-up into handstand.
- Crossbar: cast to stand, circle backward without touching to stand, giant circle backward.
- Trampoline: foot 1/2 back flip on the back, back 1/2 back flip to handstand[5].
- Rings: from swinging in hang circle to handstand (with lags catching the cable).

3. The skill of pushing off the hands from the handstand:

- Crossbar: from swinging in hang after a preliminary swing, back dismount.
- Acrobatics: curvet, rondate, front headspring and from the lying position bended down (from shoulder blades).

4. Landing technique skill:

- Crossbar: from hang of mixed grip an arch swing with circle vault to coming off landing on the back (on some mats).
- Trampoline: 1/2 back flip from the belly (on the back), 1/2 front flip from the back (into twist) on the back, 1/2 pike-open front flip turning around (into twist) on the back[5].

The results of the research

The results of the pole jump ($n=5$, $t_{table}= 2.571$, $p= 0.05$)

	Control group	Experimental group	Reliability of difference between the groups	
			t-Student's criterion	P
Pole vault	3.62±0,4	3.84±0,3	0.44	0,05

At the end of the experiment we ran a test of competitive actions - a pole vault. You can see on the diagram that a sportsman having done some acrobatic complexes has better results during his learning jumping techniques than before

doing it. So we can suppose that the elaborated complexes are good for learning the techniques of pole vault making it possible to master it in less time.

Conclusion

After learning gymnastic acrobatic exercises, movements similar in structure are transferred to the technique of competitive action in a jump. The mastered skills turn into a stereotype and become automatic later on account of lots of repetitions, giving a sportsman the ability to do the exercises without controlling the constantly changing actions in the final phases of the pole vault, effective and stable.

In the offered special complexes we examine exercises which develop a jumper's particular strength, speed and coordinating dexterity. The choice of motor actions, which are the basic elements of a pole vaulter's technical training, was the most important issue in the development of a methodology for special physical training of pole vaulters using gymnastics means. Therefore, we were interested in motor actions, which can become the basis for the special training of pole vaulters. These actions are complex in terms of coordination of movements, which are performed in the form of automated skills, mastering these actions at a high quality level will allow you to effectively solve the problems of special training of pole-vaulters [4]. In a special part of the warm-up, we used gymnastic exercises as lead exercises for performing technical exercises on a pole. At the beginning of the experiment, the complexity of the technical tasks related to the performance of acrobatic exercises gradually increased. At the end of the experiment, some of the exercises were more difficult and performed in more difficult conditions.

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ВЛИЯНИЕ АКРОБАТИЧЕСКИХ ЭЛЕМЕНТОВ НА КАЧЕСТВО ВЫПОЛНЕНИЯ ПРЫЖКА С ШЕСТОМ

Аннотация. Спортивная акробатика, как вид спорта, хорошо влияет на разные сферы жизни. Владение базовыми навыками позволяет правильно ориентироваться в пространстве, приземляться, падать. Прикладность акробатики имеет положительные отзывы. В данной статье рассмотрим влияние акробатических элементов на разные фазы в прыжке с шестом.

Ключевые слова: акробатика, прыжки с шестом, спорт, прыжки

FORMATION AND DEVELOPMENT OF GOLF IN THE XVI - EARLY XX CENTURIES

Ivashina P. I.
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Abstract. *The article is devoted to the main features of the formation and development of golf as a separate sport and an Olympic sport in the program of the Olympics in 1900 and 1904. Also dedicated to the development of golf as a sport in Europe and North America, creation of golf federations in the world. Establishment of European Golf Association (EGA) – governing body of golf in Europe.*

Keywords: *golf, Olympic sport, Olympic tournament, golf competitions*

Introduction. Golf as a modern sports game originated in medieval Scotland. Gradually, it became widespread in England, Wales, and Ireland. The oldest organizations which united enthusiasts of this game are the Golfing Union of Ireland, founded in 1891; the Ladies' Golf Union, founded in 1893; followed by the creation of the golf unions and associations in the United States (USGA) (1894), Scotland (1920), England (1924), Italy (1927), Austria (1931), Czechoslovakia (1931) and Spain (1932).

Main study. Many years of cooperation between European golf unions led to the creation of the European Golf Association (EGA) on November 20, 1937. It included Austria, Belgium, Czechoslovakia, Germany, England, France, Hungary, Italy, Luxembourg, the Netherlands, and Switzerland. Its main goals were defined as organization of national golf championships and strengthening of international relations. Later, Denmark, Norway, Scotland, Sweden and Yugoslavia were admitted to the EGA [1].

In the spring of 1939, it was decided to issue a booklet announcing all international championships and containing contact addresses. It was published by the EGA in November 1939 [1].

Golf came to the United States in 1888 when John Reid of Scotland built a three-hole golf course next to his house in the town of Yonkers, New York, and founded the St. Andrews Club Yonkers Club on a nearby 12-hectare course. Since then golf became one of the most beloved national pastimes in the United States [1].

The first 18-hole course in the United States appeared in 1893. It was the Chicago Golf Club in Wheaton, Illinois. The Amateur Golf Association of the United States (USGA), later renamed the United States Golf Association (USGA), was created on December 22, 1894. Professional Golf Association of the United States was founded in 1916 [3].

The first golf competitions in the Olympic Games were held in 1900. Competitions were held among men and women. In the men's competition, Charles Sands (USA) took 1st place, Walter Raterford (UK) took 2nd place, David Robertson (UK) took 3rd place. In the women's competitions Margaret Abbott (USA) took first place, Pauline Witter (USA) - second place, Daria Pratt (USA) - third place. The second Olympic golf competition was held in 1904. There were team and individual events for men [2].

Conclusions. Golf as a separate sporting activity dates back to the sixteenth century. Subsequently national and international golf organizations were established, which launched international competitions, including the Olympic tournaments, in this sport.

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СТАНОВЛЕНИЕ И РАЗВИТИЕ ГОЛЬФА В XVI – НАЧАЛЕ XX ВВ.

Аннотация. Статья посвящена основным особенностям становления и развития гольфа как отдельного вида спортивной деятельности, в том числе как олимпийского вида спорта в программе Игр Олимпиад 1900, 1904 гг.

Ключевые слова: гольф, олимпийский спорт, олимпийский турнир, соревнования по гольфу

CLASSIFICATION OF ROTATIONAL MOVEMENTS IN ARTISTIC GYMNASTICS

Ivashina V.V.

Abstract: the latest edition of the FIG International rules (2017-2020) for rhythmic gymnastics assumes an even distribution of the basic groups of difficulties for all competitive compositions. Nevertheless, the problem of turning technique remains relevant today. The article is devoted to technical training in rhythmic gymnastics related to the need to determine the classification of rotational movements.

Keywords: rotational, turns, rhythmic gymnastics

Introduction. Currently, with increasing competition in the international arena in rhythmic gymnastics, the requirements for the functional fitness of athletes are significantly increasing. The Arsenal of movements that make up the motor base of exercises, and, therefore, are subject to primary development, is expanding. These include rotational elements. At the same time, rotations, traditionally referred to as "turns", include not only exercises that contain the actual rotation around the longitudinal axis ("reference turns"), but very often also components related to maintaining the balance of the body and performing jumps. In accordance with the international rules of rhythmic gymnastics competitions, elements performed with rotation or changing the position of the body have a higher estimated cost than the same exercises, but performed in static, without changing the position of the head and body [3].

Main part. Turns in rhythmic gymnastics are the rotation of a gymnast's body around a vertical axis. Turns are among the most important, difficult, and beautiful elements of rhythmic gymnastics.

You should classify turns:

- by method of execution;
- by the pose;
- in duration. [1].

Table 1. – Classification of turns.

By way of performance	On the pose	For the duration
Crossing	Simple poses: bending the leg forward to the support knee, pass, bending the leg back knee to the support knee.	90 ⁰
Crossed	Front balance poses: high, horizontal, low, active and passive	180 ⁰
The displacement of the foot	Lateral balance poses	360 ⁰
By the same rotation in the direction of the support leg	Attitude poses-active and passive	540 ⁰

By rotating in the opposite direction with different names	Ring poses-passive and active	720 ⁰
Unscrew from the fly leg		Three-turn
Flow-line		Four-turn, etc.

According to the rules of the 2017-2020 FIG rhythmic gymnastics competition [2] there are two types of rotations:

- A. Rotation on the foot: on the "releve" (turns) or on the full stop;
- B. Rotation on other parts of the body.

All rotation difficulties must have the following basic characteristics:

- minimum base rotation at 360⁰ with a fixed and well-defined shape;
- have a fixed and well-defined shape during the entire rotation until its completion.

Conclusions. Rhythmic gymnastics is a sport with a large set of movements that are not used in everyday life. One of the options for improving the technique is to choose the best movements based on the use of classical laws of mechanics. Such a complex coordination sport involves mastering a many number of motor actions that need to be combined into complex combinations. All these combinations should merge into a single program, combining with artistry, musicality and possession of the subject. Of course, this requires significant physical effort from gymnasts, as well as an appropriate level of development of the necessary motor skills.

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КЛАССИФИКАЦИЯ ВРАЩАТЕЛЬНЫХ ДВИЖЕНИЙ В ХУДОЖЕСТВЕННОЙ ГИМНАСТИКЕ

Аннотация: последнее издание Международных правил ФИЖ (2017–2020) по художественной гимнастике предполагает равномерное распределение базовых групп трудностей для всех соревновательных композиций. Тем не менее, проблема техники исполнения поворотов и на сегодняшний день остается актуальной. Статья посвящена технической подготовке в художественной гимнастике, связанной с необходимостью определения классификации вращательных движений.

Ключевые слова: поворот, вращение, художественная гимнастика

INFLUENCE OF ARBITRARY MUSCLE RELAXATION ON THE EFFECTIVENESS OF MOTOR SKILL TRAINING

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Abstract. *For many people, we will be able to confirm or refute the hypothesis that muscle relaxation will help to learn a new specific action faster and better. The object of our research is the physiological mechanisms of voluntary muscle relaxation. This paper also shows the influence of training on the psychophysiological parameters of the subjects.*

Keywords: *muscle relaxation, movement training, afferent influx, psychophysiology*

Introduction. Until recently, in the study of the mechanisms of motor control, much attention was paid to muscle contraction processes and their modes, while muscle relaxation was often not considered in detail. However, muscle relaxation may play a more significant role in motor skill formation than meets the eye. The speed of mastering new motor actions, as well as the ability to reorganize movements in unexpected situations associated with the coordination abilities of the person. Physiologically, mastering a new motor skill is provided by various mechanisms, improving in the process of systematic repetitions, however, an insufficient system of kinesthetic sensations, at the early stages of training, can create prerequisites for an irrational distribution of muscle efforts and be a rather energy-consuming mechanism.

The main body. The aim of our study was to identify the impact of voluntary muscle relaxation training on the psychophysiological parameters of the subjects and the speed of learning a new motor skill. The study will be carried out on the basis of the Scientific Center of Neurology in the Department of Neurorehabilitation and Physiotherapy.

Research methods: assessment of the functional mobility of nervous processes using psychophysiological tests and observation (consists in purposeful and organized perception and registration of the behavior of the object under study).

Mastering a new complex motor skill: during the training, the subject is in a comfortable position, sitting at the work table. On the table, accessible for the subject's outstretched arm, the "Labyrinth" simulator is installed, consisting of two elements: an extended metal wire bent in different directions in the form of a labyrinth, and a wire hook with a handle for holding in the hand.

Voluntary muscle relaxation training during training, the subject is in a comfortable position, sitting at a work table. The wrist of the target hand is placed in the construction of a special simulator, the forearm is also located on a special element of the simulator in the middle position. In the area of projection m. Biceps brahii and m. pronator teres transducers for EMG registration are superimposed. The structural elements of the simulator are fixed, excluding the movements of supination / pronation of the forearm, causing an isometric mode of muscle contraction.

In the main group, 10 healthy volunteers (5 men) completed the study, the median age was 34 [25; 38] years, the leading right hand in all participants. The study participants were comparable in gender and age (Mann-Whitney test >0.05). Each participant was given 10 of the described classes.

In the group analysis of the obtained data, the speed of passing the test movement before the start of training was 7.5 [5.25; 9.5] in three minutes, after the end of training - 11,5 [8,5; 13;75], This trend was statistically significant (p=0.02). The number of errors during the execution of a series of test movements significantly decreased from 17 [12.5; 23] to 9 [4; 13.75], (p=0.00002). When evaluating the indicators of psychophysiological testing in the static tremorometry section, the number of touches decreased from 12 [2; 34] to 5.5 [2; 9] (p=0.0527); the total time of touches (ms) decreased from 957 [118; 2356] to 380 [180; 781] (p=0.0468), with a slight increase in the average time of one touch - from 78.5 [63; 10.25] to 81.5 [57.5; 96.25] (p>0.05). Left hand: the assessment of psychophysiological testing under static of measuring of tremor, the number of touches fell from 22 [3; 42] to 11.5 [10; 25] (p=0,24); the total time of touches (MS) decreased from 2534 [141; 6816] to 976 [540; 1950] (p=0,14). The speed increase with the decrease of the number of errors when carrying out a series of test movements can be considered as a marker of training a new motor skill.

At the same time, the analysis of psychophysiological indicators shows a tendency to reduce the number of touches in the static tremorometry test with a concomitant statistically significant decrease in the total touch time, which may indicate an increase in the quality of coordination of intermuscular interaction in the conditions of performing a motor task that causes a static mode. We should also emphasize the preservation of the average time of one touch in the same test. In fact, the duration of a single touch consists of the reaction time to the touch message (visual stimulus) and the time to correct the position of the hand in space. These indicators did not change, as they were not subjected to special training within the framework of the conducted classes.

Conclusions. As we can see from the data obtained, all the subjects improved their results and learned a new motor skill. However, a set of control groups is required to confirm the working hypothesis. To increase the power of the study, you need to increase the set of samples. At this stage, EMG data is processed, which will show in more detail the work of the antagonist muscles,

their interaction and the result of training according to the developed methodology.

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ВЛИЯНИЕ ПРОИЗВОЛЬНОГО МЫШЕЧНОГО РАССЛАБЛЕНИЯ НА ЭФФЕКТИВНОСТЬ ОБУЧЕНИЯ НОВОМУ ДВИГАТЕЛЬНОМУ НАВЫКУ

Аннотация. У многих людей нет понимания и ощущения собственных мышечных усилий и благодаря нашему исследованию мы сможем подтвердить или опровергнуть гипотезу о том, что мышечное расслабление поможет быстрее и более качественно обучиться новому специфическому действию. Объектом нашего исследования являются физиологические механизмы произвольного расслабления мышц. В данной работе также показано влияние тренинга на психофизиологические показатели испытуемых.

Ключевые слова: мышечное расслабление, двигательная тренировка, афферентный приток, психофизиология

THE IMPACT OF THE MYOFASCIAL RELEASE ON THE FLEXIBILITY OF 20-35 YEAR OLD WOMEN

Ivleva E.M.

Abstract. *This article presents the results of the impact of myofascial release on the flexibility of healthy 20-35 year old women engaged in fitness. This article presents data obtained during 2 months of training. During the experiment, hamstring elasticity tests were carried out.*

Keywords: *flexibility, myofascial release, fascia, muscles, fitness*

Introduction. Currently, the myofascial release (MFR) has been widely recognized not only in sports, but also in the fitness industry. It has gained popularity due to the relaxing effect on the muscle system in a state of spasm, as well as a positive effect on the indicators of flexibility. Despite the rather long use of myofascial release in practical activities, there are still many questions. Still we do not understand what "mechanisms" of MFR affect muscles and fascia [2; 3].

Our study examined the impact of myofascial release classes on the flexibility of women engaged in fitness club activities.

The object of the study - 20-35 year old women, engaged in fitness.

The subject of the study - their flexibility.

The hypothesis of the study is that MFR classes will improve muscle elasticity.

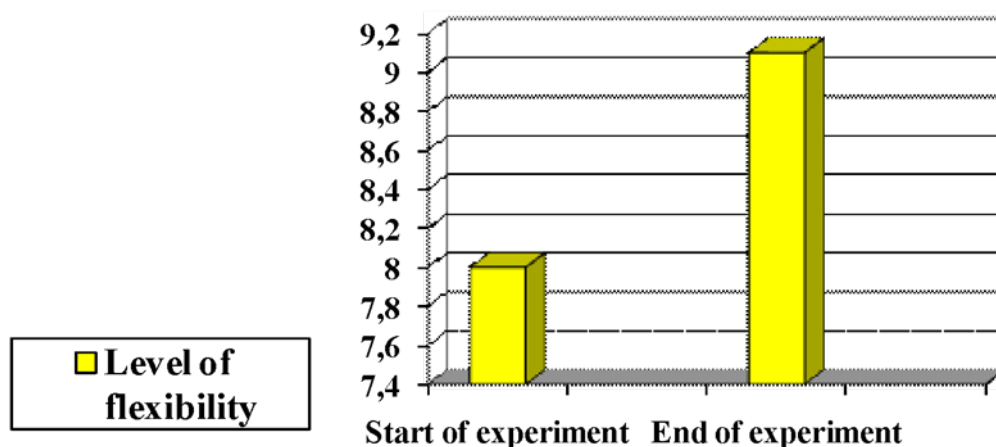
Results. The pedagogical experiment lasted for 2 months. Classes were held 2 times a week for 60 minutes. MFR was used as an independent training. The pedagogical experiment involved 10 women aged 20 to 35 years old. During training, the "rolling" of each muscle lasted from 30 seconds to 2 minutes. Next, the roll was stopped on the most sensitive region of the muscle and the pressure was held at 30-45 seconds. Then, the "rolling" was carried out for another 30-45 seconds. After that, an exercise was used to stretch the target muscle, lasting 30 seconds.

During the experiment, muscle flexibility of hamstrings was tested [1]. Measurements were taken before and after myofascial release classes during the first and last weeks of the experiment.

Hamstrings muscles were chosen to test flexibility, since in everyday life they are often in a tense state due to prolonged sitting as a result of a sedentary lifestyle, their hypertonus can cause pain in the lumbar spine and knee joints.

The assessment of the dynamics of flexibility showed positive changes as a result of the use of myofascial release. A reliable increase ($p > 0.001$) in the forward tilt amplitude on the gymnastics bench was found not only at the end of the full training cycle, but also after each training. During the experimental period,

on average, the forward tilt amplitude increased by 13% of the baseline (Picture 1).



Picture 1– Changing the level of hamstrings flexibility

An increase in the range of movements when using MFR is noted by many researchers [4; 5; 6:7].

Conclusion. Thus, testing women made it possible to establish that the myofascial release technique improves the elasticity of hamstrings muscles of 20-35 year old women.

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ВЛИЯНИЕ МИОФАСЦИАЛЬНОГО РЕЛИЗА НА ГИБКОСТЬ ЖЕНЩИН 20-35 ЛЕТ

Аннотация. В данной статье представлены результаты влияния занятий миофасциальным релизом на гибкость здоровых женщин 20-35 лет, занимающихся в фитнес-клубе. В работе представлены данные, полученные в течение 2-х месяцев тренировок. В течение эксперимента проводились тестирования эластичности мышц задней поверхности бедра.

Ключевые слова: гибкость, миофасциальный релиз, фасция, мышцы, фитнес

CHARACTERISTICS OF INTERACTIVE TEACHING METHODS IN THE PROCESS OF MODERN HIGHER EDUCATION

Yang Juan

Wang Haoshuang

Abstract. The application of interactive teaching methods in higher education can promote the development of students' comprehensive abilities. The characteristics of interactive teaching methods are studied, which helps to enhance the understanding and application of interactive teaching methods.

Keywords. Interactive teaching methods; Characteristic; higher education

Introduction: With the continuous development and progress of society, the requirements for talent more comprehensive and integrated. People are asked to solve a wide variety of tasks and problems in complex professional work. Therefore, in order to meet the needs of social development, the cultivation of talents in higher education is very important. Interactive teaching method as a teaching method to develop students' comprehensive ability, highly concerned by higher education teachers and research scholars, and related research and teaching experiments on interactive teaching methods continue to increase.

Results: On the basis of a large number of analysis of interactive teaching methods related research, it is concluded that interactive teaching methods mainly have the following characteristics:

(1) An interactive learning method is a learning method in which all learning subjects and pedagogical factors interact with each other. Unlike traditional teaching methods, interactive teaching methods do not negatively perceive knowledge, but interact between teacher and student, student and student, student and environment, learning materials, etc.

(2) In the interactive teaching method, the role of the teacher is inferior to the student who occupies the main place, and the teacher is only the organizer,

consultant, manager, accompanying the pedagogical activity. In this method of teaching, students play a major role in pedagogical tasks, conduct a process of active learning.

(3) Stimulating the interest and motivation of students to search for knowledge in problematic contradictions, attracting students to study. Interactive teaching methods allow you to identify different areas of research, asking questions that contradict each other, causing the student's desire for knowledge.

(4) Develop new knowledge, experience and skills based on the students' existing knowledge, experience and skills. The use of interactive teaching methods is based on the knowledge, experience and skills that students already have, and helps them acquire new knowledge, experience and skills. In this process, each student contributes to solving problems and completing tasks according to their cognitive abilities.

(5) Creating a comfortable teaching environment for teaching activities, allowing students to freely communicate and express their opinions. Interactive learning methods compared to traditional learning methods, it creates a more comfortable learning environment for students, more able to meet the needs of the student learning environment, promotes free expression and free exchange.

(6) Students' attention is focused on the development of innovative competencies in the process of teaching independent research. Unlike traditional teaching methods, interactive teaching methods do not just transfer knowledge to students, but develop students' creative abilities in the process of self-study of knowledge.

(7) Development of students' skills in applying theoretical knowledge and experience in real practical activities. Interactive teaching methods based on students' needs for further professional development, pay more attention to the development of students' functional practical skills, help students to feel and experience problems in their future professional activities in advance.

Conclusion. Interactive teaching methods have a variety of characteristics, can meet the needs of developing students' comprehensive ability. The application of interactive teaching methods in higher teaching can cultivate comprehensive talents that meet the needs of social development.

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ОСОБЕННОСТИ ИНТЕРАКТИВНЫХ МЕТОДОВ ОБУЧЕНИЯ В ПРОЦЕССЕ СОВРЕМЕННОГО ВЫСШЕГО ОБРАЗОВАНИЯ

Аннотация. Применение интерактивных методов обучения в высшей школе может способствовать развитию всесторонних способностей студентов. Изучаются особенности интерактивных методов обучения, что способствует углублению понимания и применения интерактивных методов обучения.

Ключевые слова: Интерактивные методы обучения; особенность; высшее образование

RESEARCH OF STUDENTS ' KNOWLEDGE OF INTERACTIVE TEACHING METHODS IN MODERN UNIVERSITIES OF PHYSICAL CULTURE

Yang Juan
Wang Haoshang

***Abstract.** This paper examines the results of a questionnaire survey among students of a modern higher educational institution of physical education about the cognition of interactive teaching methods, and also formulates conclusions about the relationship of students' answers with the course of study and the direction of training at the university.*

***Key words:** interactive teaching methods, cognition, students of the higher educational establishment of physical culture, questioning*

Introduction. With the continuous development and advancement of society, interactive teaching methods have been seen by many scholars in the preparation of all-round talents. More and more scientists began to study the function and role of interactive teaching methods in the teaching process of various disciplines, various fields, starting with theoretical and practical aspects of research. Although most of them note that interactive teaching methods are highly effective and advantageous in the formation of students' professional competencies, the practical application of these teaching methods in the professional training of students of physical education institutes is relatively small. This situation, to a certain extent, affects the positive perception of these interactive methods by students. Therefore, the study of the conditions for the use and implementation of interactive teaching methods is an urgent scientific task. In this study, based on the analysis of questionnaire data on specific interactive teaching methods, the results of students' understanding of interactive teaching methods in modern universities of physical education were obtained.

The aim of the study was to analyze the understanding of students' interactive teaching methods in modern universities of physical education.

Research methods: theoretical analysis and generalization of scientific and scientific-methodical literature; questioning; methods of mathematical statistics.

Main part. Interactive teaching methods as a new stage in the development of active teaching methods, which includes many specific teaching methods. Although interactive teaching methods can effectively develop the comprehensive abilities of students, various interactive teaching methods have their main focus. Due to the relatively small use of interactive teaching methods in real-life teaching, many students have a vague idea of what constitutes interactive teaching methods. In the ascertaining study, a survey was conducted of a total of 215 students enrolled in 2 - 4 courses of study of the РГУФКСМиТ, full-time and part-time forms of study, who study in the areas of training " Physical education " (profile "Sports training in the chosen sport") and "Pedagogical education" (profile "Physical education").

Table 1 - Students' choice of specific interactive teaching methods

What teaching methods are interactive teaching methods.		Course		Direction	
		2	3	TE	PE
	Total	178	37	104	111
1.lecture	quantity	44	8	21	31
	percent	24,72%	21,62%	20,19%	27,93%
2.role-play	quantity	84	20	53	51
	percent	47,19%	54,05%	50,96%	45,95%
3.conversation	quantity	114	15	54	75
	percent	64,04%	40,54%	51,92%	67,57%
4.discussion	quantity	114	31	80	65
	percent	64,04%	83,78%	76,92%	58,56%

As can be seen from Table 1, students of different courses and directions have different levels of knowledge about specific interactive teaching methods. In the first two of the four options, 2nd year students were more likely to view conversation (64.04%) and discussion (64.04%) as interactive teaching methods, 3rd year students were more likely to consider role-play (54.05%) and discussion (83,78) as interactive teaching methods. In addition, students in the direction of teacher education and physical education were more likely to consider conversation (51.92%, 67.57%) and discussion (76.92%, 58.56%) as interactive teaching methods, but the number of options in different directions different. All interviewed students believe that lectures are not an interactive teaching method.

In order to be able to get the results of the student's correct perception of a particular interactive teaching method, establish two correct answers related to the interactive teaching method in four variants of the questionnaire: role play and discussion. Statistics are obtained from Table 2.

Table 2 - Number of students who simultaneously choose role play and discussion as interactive teaching methods

At the same time, choose role play and discussion	Direction			Course		
	TE	PE	Всего	2	3	Всего
Всего	104	111	215	178	37	215
Количество	38	28	66	51	15	66
Процент	36,54%	25,23%	30,7	28,65%	40,54%	30.7%

As can be seen from Table 2, out of 215 respondents, a total of 66 students chose role play and discussion as an interactive teaching method at the same time. That is, 30.70% of the 215 respondents had the correct knowledge of specific interactive teaching methods. In addition, students in the field of teacher education understand interactive teaching methods better than students in the direction of physical education; 3rd year students have a better understanding of interactive teaching methods than 2nd year students.

Conclusion. Thus, the results obtained show that students enrolled in higher educational institutions of physical culture have a lower indicator of the accuracy of cognition of specific interactive teaching methods; students of the

direction of pedagogical education of the 3rd year better understand interactive teaching methods in modern universities of physical culture.

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ИССЛЕДОВАНИЕ ПОЗНАНИЯ СТУДЕНТАМИ ИНТЕРАКТИВНЫХ МЕТОДОВ ОБУЧЕНИЯ В СОВРЕМЕННЫХ ВУЗАХ ФИЗИЧЕСКОЙ КУЛЬТУРЫ

Аннотация. В данной работе рассматриваются результаты анкетирования студентов современного вуза физической культуры о познании интерактивных методов обучения, а также сформулированы выводы о взаимосвязи ответов студентов с курсом обучения и направлением подготовки в вузе.

Ключевые слова: интерактивные методы обучения, познание, студенты вуза физической культуры, анкетирование

THE SOCIO-PEDAGOGICAL CONDITIONS OF INCREASING THE LEVEL OF PHYSICAL ACTIVITY AMONG 14-18-YEAR-OLDS IN SUMMER CAMPS

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Myagkova S.N.

***Abstrac.** The article considers the factors of increasing the level of physical and physical activity of young people in the summer camp. Work on physical education in the camp should contribute to the formation of moral and volitional qualities in adolescents, the habit of daily physical education and their awareness of the need for a healthy lifestyle.*

***Keywords.** Children's camp, activity, young people, physical activity*

Nowadays in our country the level of health, physical development and body training of young people is decreasing due to the influence of many factors. Summer camps are aimed at compensating the insufficient recreational effectiveness of the school physical education system. Its main purpose is promoting active recreation through physical exercises, games and competitions.

Research object: Increasing the level of physical education and motor activity among the youth.

Research subject: Physical activity of young people.

According to the statistics, only 15% of pupils improve their physical indexes while 22% of them remain on the same level and 63% show deterioration of their physical indexes at the beginning of the academic year. During the schooldays the physical indicators decrease due to high workload and lack of desire to engage in physical activity. For that reason, children's leisure time and the development of physical activity in adolescents have become one of the most pressing issues facing society.

The experience of physical education in camps has been interesting and fascinating since the Soviet period. The aim of physical education in the camp was, both then and now, to provide children with a reasonable and interesting holiday, to help them discover the surroundings, to make them interested in sports and to prepare them to take the BGTO badge (in the Soviet Union).

Generally, sports activities in children's camps are provided by staff counsellors and sports instructors. They organize and carry out the following activities:

- Pre-workout. It takes place daily, at the earliest after 5 minutes after wake-up. It strengthens and develops the muscular system and increases vitality and ability to work. Developing the habit of starting the day with exercise is the main objective of morning exercise in the camp.

- Morning gymnastics. The exercises of morning gymnastics are simple, easy to learn and varied. Each exercise affects the major muscle groups. The morning workout consists of 6-8 exercises.

- The physical exercise classes in the squad. Regular squad activities are mandatory for all and they are an essential part of the physical education of the camp. Their objective is to promote a versatile physical development of children, to stimulate their interest in sports and to cultivate their passion for physical exercise.

- Playing games in the camp. Children develop courage, agility, learn to overcome difficulties, and develop a sense of teamwork by participating in outdoor games. A considerable number of participants, lack of physical exertion and a possibility for the initiative of the players to take part in them are the main goals of the games.

- The outdoor games. They are an important part of the work with children. They provide a number of essential skills which children need to acquire. The outdoor games contribute to this. The children are introduced to a natural environment, they learn about geographical concepts and gain practical knowledge.

- Sports classes in the camps. The camp necessarily has athletics, volleyball, basketball and football classes. Depending on the conditions there may be sections of gymnastics, acrobatics and others.

- Mass sports work in the camp. This kind of work in the camp aims at improving health and educating various sports. There are several forms of mass sports work: competitions, physical training sessions, games.

These and other forms of physical activity for youth in camps enable young people, during their time in the summer camp, to experience many different kinds of physical activity and to be able to choose and pursue the kind of activity they prefer.

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СОЦИАЛЬНО-ПЕДАГОГИЧЕСКИЕ УСЛОВИЯ ПОВЫШЕНИЯ УРОВНЯ ФИЗКУЛЬТУРНО-ДВИГАТЕЛЬНОЙ ДЕЯТЕЛЬНОСТИ МОЛОДЁЖИ 14-18 ЛЕТ В ЛЕТНЕМ ЛАГЕРЕ

Аннотация. В статье рассмотрены факторы повышения уровня физической и физической активности молодежи в летнем лагере. Работа по физическому воспитанию в лагере должна способствовать формированию у подростков нравственно-волевых качеств, привычки к ежедневным занятиям физкультурой и осознанию ими необходимости здорового образа жизни.

Ключевые слова. Детский лагерь, активность, молодежь, физическая активность

ENDURANCE TRAINING OF SWIMMERS WITH HEARING IMPAIRMENT

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***Abstract.** This article presents the results of an experimental training program implementation which designed for endurance development of deaf swimmers.*

***Keywords:** swimming, endurance, deaf swimmers*

Introduction. Training of general and special endurance is an important part of their physical fitness at any sports training stage. A high level of endurance development contributes to the achievement of the best results at long distances in Deaflympic swimming.

The main document in Russia approving the plan for the training of deaf elite swimmers is the Federal standard of sports for the deaf (swimming). After analyzing the methodology described in this document, we found a drawback in the form of a lack of correctional and developmental measures aimed at increasing the functional indicators of the cardiorespiratory system of deaf swimmers, as the main factor in the development of body endurance. Since these indicators are reduced in deaf swimmers, the education of endurance in the training process has a number of features.

Research object is the training process of endurance education of swimmers with hearing impairment.

Subject of research is the effectiveness of specially selected complexes of exercises, included in the training process of swimmers with hearing impairment, affecting the increase in the level of their endurance development.

The purpose of the research is to assess the effectiveness of the developed methodology of endurance education of swimmers with hearing impairment.

Methods of the research. In accordance with the purpose and objectives of the study, we selected the following research methods: literature review; pedagogical observation; pedagogical testing; pedagogical experiment; methods of mathematical statistics.

Organization of the research. For the study, we selected control and experimental groups, which consisted of elite swimmers with hearing impairments from 17 to 20 years old. There were 12 men with hearing impairments in each group. We trained them 5 times a week for 120 minutes during a year.

Our experimental program included general physical training, special physical training, technical and tactical training, integral training (selected competitive exercises), correctional and recreational activities.

Results.

Table 1 - Comparison of indicators of the level of physical fitness of the deaf swimmers of the experimental group before and after the pedagogical experiment.

Tests	Before			After			Mann-Whitney U-test
	Me	25%	75%	Me	25%	75%	
Swimming test 4x100 meters freestyle after 30 seconds of rest (seconds)	70,47	69,11	73,00	65,23	63,78	66,21	0
200-meter Freestyle Swimming Test (seconds)	131,79	130,4	136,77	129,59	128,3	131,1	20
Cooper's 12-minute swimming test (meters)	925	900	950	1100	1000	1250	0
400m Backstroke Swimming Test (seconds)	350,2	342,6	357,9	340,01	339,7	342,2	0
Hour-long swim (meters)	3450	3300	3500	3750	3600	3925	0

*n=12, U(0,05) = 37.

Evaluating the data of the resulting experiment, one can observe positive changes in comparison with the ascertaining experiment.

Significant differences in the above tests confirm the effectiveness of the methodology developed by us, aimed at fostering endurance in swimmers with hearing impairment.

Conclusion. Based on the results of the research, it is possible to recommend the developed by us methodology for introduction into the educational-training process of elite swimmers with hearing impairment.

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ВОСПИТАНИЕ ВЫНОСЛИВОСТИ У ПЛОВЦОВ С НАРУШЕНИЕМ СЛУХА

Аннотация. В статье представлены результаты реализации экспериментальной программы тренировок, разработанной для развития выносливости у глухих пловцов.

Ключевые слова: плавание, выносливость, глухие пловцы

FORMATION OF STUDENT VALUE ORIENTATIONS AS A FACTOR OF PERSONAL SELF-REALIZATION IN SPORT (ON THE EXAMPLE SPORT UNIVERSITY STUDENTS)

Kazancheva A.R.

Grzhebina L.M.

***Abstract.** The scientific article is devoted to the study of formation of student value orientations as a factor of personal self-realization in sport. This article systematizes the results of sociological research and reveals the features of formation of student value orientations.*

***Key words:** formation of value orientations, values, youth, personal self-realization, sport*

Each era is associated with a constant change in the society structure, as well as social processes that are associated with values of sports activities [2].

The study of the student value potential formation is a necessary process at any time, because the values in the future determine the life strategies and behavior models not only of the individual, but also a student society in general.

In sports activities, a person can show his perfection, using physical abilities to achieve certain results [5]. Fears competition requires strong motivation, long life activity, personal goals, values and stable mental state [1].

Therefore, it is very important to ensure the adequacy of the students' self-realizations about themselves, it is necessary to competently acquaint students-athletes with the meaning, purpose, professionally significant values of sports activity about self-realizations in the chosen career.

The aim of my research is to study the features of the formation value orientation of sport university students and to develop system that will contribute to the successful self-realization of an individual in sport.

To achieve the goal, the following tasks will be solved:

- 1) To study the theoretical basis of the research topic;
- 2) To determine the methods for assessing the level of value self-realization of student in sport;
- 3) To reveal the personal dynamics of the value factor structure among the student-athletes;
- 4) To analyze the role of value orientations;
- 5) To develop system that contributes to the successful self-realization of an individual in sports.

Research methods will be:

- Literature survey;
- Questionnaire (S.H. Schwartz test and M. Rokich's method of studying value orientations) [4];
- Pedagogical observation;
- Methods of mathematical statistics.

The research will be carried out based on students of the Russian State University of Physical Education, Sports, Youth and Tourism (SCOLIPE) of various sports.

After completing the first task, survey was made and it contained 3 main blocks. Socio-demographic and socio-economic blocks, and test method by Milton Rokich. According to this method, the respondents' task was to give rank to each value. There are 18 terminal and 18 instrumental values in total [3].

As a result of data analysis, we were able to identify which values-goals and values-means are important, and which are less important for students.

When choosing terminal values, the following became important for students:

- productive life;
- development;
- self-confidence;
- health.

When analyzing the results of instrumental prices, students choose values that are tested by their professional activities:

- strong will;
- efficiency in business;
- self-control.

The concepts of personal self-realization and value orientations developed in the study can be useful for improving the forms and methods of studying values in practice for student's life strategies formations.

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ФОРМИРОВАНИЕ ЦЕННОСТНЫХ ОРИЕНТАЦИЙ СТУДЕНЧЕСКОЙ МОЛОДЁЖИ КАК ФАКТОР САМОРЕАЛИЗАЦИИ ЛИЧНОСТИ В СПОРТЕ (НА ПРИМЕРЕ СТУДЕНТОВ СПОРТИВНОГО ВУЗА)

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Аннотация. Научная статья посвящена исследованию формирования ценностных ориентаций студенческой молодёжи как фактора самореализации личности в спорте. В данной статье систематизированы результаты социологического исследования и выявлены особенности формирования ценностных ориентаций.

Ключевые слова: формирование ценностных ориентаций, ценности, молодёжь, самореализация личности, спорт

IMPROVING THE TECHNIQUE OF KICKING IN SPORTS HAND-TO-HAND COMBAT WITH THE USE OF RUBBER EXPANDERS

Kazymov D.I
Konakov A.V.

Abstract. This article is devoted to the problem of improving the kicking technique in sports hand-to-hand combat. In the course of the study, a large number of competitive duels were viewed, thanks to which it was revealed that athletes inflict a large number of kicks, but they do not bring them points, because they are performed inefficiently. In this regard, there is a need to improve the kicking technique in sports hand-to-hand combat, using rubber expanders.

Keywords: hand-to-hand combat, kicks, rubber expanders

Introduction. Nowadays sports hand-to-hand combat is impossible to imagine without kicking techniques, but looking at and analyzing sports matches, the problem of the correct technique of performing these blows was revealed.

In connection with the above, there is a need to improve the kicking technique in sports hand-to-hand combat, using rubber expanders. Using this item will increase the speed of strikes and their correct execution in the training process and competitive activities.

The objective of the study is to increase the efficiency of mastering the technique of kicking in sports hand-to-hand combat by means of rubber expanders.

Results of the study. To evaluate the existing methods of training and improving kicking techniques, a literature analysis was conducted.

To identify the opinion of experts on the effectiveness of existing methods of training and improving kicks in sports hand-to-hand combat, a questionnaire survey was conducted.

Respondents were asked to answer several questions related to the research topic. In this process, specialists and athletes in various types of martial arts with sports titles were involved. A total of 30 people were interviewed.

The majority of respondents believe that in the training process it is effective to use rubber expanders to practice the technical actions of kicks: 83% - yes, 17% - no.

For pedagogical observation, a video analysis of duels from the Moscow Championship in hand-to-hand combat was used. 20 semi-final and final duels were selected, as it is in these fights that athletes best use their technical actions. Blows that bring more points to the athlete or lead to an early victory were registered.

In the course of the study, a technique was developed to improve the technique of kicking with rubber expanders. For this purpose, a pedagogical experiment was conducted.

For the experiment, there were completed 2 groups of 12 people: control and experimental. Both groups trained throughout the entire period according to their own methods. In the pedagogical experiment, it was supposed to test the degree of effectiveness of the developed exercises in the experimental group.

On completion of the experiment, the following tests were performed: for the maximum number of kicks performed in 15 seconds; control sparring.

The test consisted in the fact that the fighters had to deliver the maximum amount of side kick to the average level, which was described above in the method, in 15 seconds, while evaluating the exact hit on the marked point.

The results of the control and experimental groups before and after the experiment are presented below. (Table 1)

Table 1-Changes in growth rates before and after the experiment %

The number of blows dealt in 15 seconds			
KG		EG	
before	after	before	after
24,4	24,8	24,6	26
Changes in indicators %			
1,61%		5,38%	

Testing conducted before the start of the experiment revealed a slight difference in the number of blows inflicted over a given period of time between the control and experimental groups. However, after the experiment, it is clearly

visible that the experimental group had an increase in percentage by 5.38%, while the control group had an increase of 1.61%.

To evaluate the performance of kicking techniques, 12 control sparring sessions were conducted, during which 5 experts gave ratings on a ten-point scale.

The level of percussion technique scores between the groups before the experiment was approximately equal, however, after the experiment, it was found that the experimental group's scores improved significantly than the control group. This indicates that the technique developed by us to improve the kicking technique using rubber expanders in the experimental group after the end of the experiment increased the level of efficiency of kicking in training matches

Conclusions

1. The analysis of the scientific and methodological literature allowed us to study the methods of teaching the technique of kicking using various means, including rubber expanders.

2. During the survey, it turned out that many experts consider the use of rubber expanders in the training process to be an effective tool - 83%.

3. The developed method of teaching the technique of kicks in sports hand – to-hand combat by means of rubber shock absorbers will increase the efficiency of performing and applying kicks and the level of technical training of athletes, the increase in the control group was 1.61%, in the experimental group-5.38%.

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СОВЕРШЕНСТВОВАНИЕ ТЕХНИКИ УДАРОВ НОГАМИ В СПОРТИВНОМ РУКОПАШНОМ БОЕ С ИСПОЛЬЗОВАНИЕМ РЕЗИНОВЫХ ЭСПАНДЕРОВ

Аннотация. Данная статья посвящена проблеме совершенствования ударной техники ногами в спортивном рукопашном бое. В ходе исследования было просмотрено большое количество соревновательных поединков, благодаря которым было выявлено,

что спортсмены наносят большое количество ударов ногами, но они не приносят им баллы, поскольку выполняются неэффективно. В связи с этим возникает необходимость совершенствования ударной техники ногами в спортивном рукопашном бое, посредством резиновых эспандеров.

Ключевые слова: рукопашный бой, удары ногами, резиновые эспандеры

TEACHING ENGLISH TO HEARING IMPAIRED STUDENTS

Khodyreva I.N.

Abstract. *This research paper deals with educational needs of student-athletes with hearing impairment. It says about impact on learning, adaptive teaching methods for students with hearing impairment, challenges experienced by students with this impairment, challenges experienced by teachers in working with impaired students, learning aspects of hearing impaired students and resolution strategies.*

Keywords: *Hearing Impairments, Education, Teachers, Students, Teaching Methods, Learning*

Introduction. In sport universities there are student-athletes with different disabilities who are engaged in the process of education and doing sports. They study in mixed groups with students without disabilities. The teacher and the students in such groups experience numerous challenges and problems as a result of this. The difficulties experienced by these students call more teachers to special education to improve academic performance and give the opportunity to study a foreign language with greater ease and comfort. Learning a foreign language demands a great attention to speaking and listening. This paper deals with educational needs of teachers and student-athletes with hearing impairment.

What is hearing impairment?

Hearing impairment refers to the inability or limited ability to hear. Some hearing impaired students have mild hearing loss and may be able to use hearing aids to amplify sounds, while others have no sound perception in one or both ears. A person who has no sound perception in both ears is deaf. People may be born deaf or may develop hearing loss from disease, aging, exposure to noise, or trauma. Teachers may find it useful to know the origin or background of a student's hearing impairment.

Challenges of teaching English to the hearing impaired students.

In some universities hearing impaired students are educated in a specialized setting with other hearing impaired students or with other students who have unrelated difficulties or disabilities. In other universities hearing impaired students are integrated into classrooms with students who have normal hearing

abilities. Teachers may or may not be specially trained to teach hearing impaired learners. For deaf students communication is a daily challenge. Learning an additional language is more difficult for learners who do not have a strong base in their first language. This is often the case for hearing impaired learners who rely mainly (or entirely) on visual processing for learning. Some hearing impaired students use lip reading and/or sign language or finger spelling for communication in addition to print and visuals. Trying to learn a new language (which is sometimes compared to the challenges of having hearing loss) is exhausting for those who suffer from hearing impairment. Teaching hearing impaired students can also be stressful and tiring for teachers. Teachers need to adapt their expectations and seek assistance from both specialists and other students. Knowing what to expect can reduce some of the stress.

It can be distinguished the following factors which can be used by teachers to improve the educational performance and reduce the stress for both teachers and students and get the best result.

Learning Environment – The learning environment should be created in such a manner that students should be able to adapt easily to their learning process. The availability of learning materials should be well-organized in order to facilitate learning. When the learning environmental conditions will not be supportive to the students, then their education will be not productive. It should contain the technology and the assistive devices, which will be able to assist students in their education.

Here are some challenges which teachers should expect :

- 1.learning how to read the student's facial expressions;
- 2.dealing with a student's social delays and emotional problems (fatigue, frustration, self-consciousness, and loneliness) in addition to the learning difficulty;
- 3.remembering to face the student as often as possible (keeping objects and hands away from their faces as they teach);
- 4.thinking about other students in the class (refraining from exaggerating sounds when speaking);
5. remembering to check in regularly to make sure the hearing impaired student is still engaged and understanding the content;
- 6.searching for useful resources for the learner.

Certain activities that teachers normally use in the classroom, such as watching a video or listening to a recording will need to be modified for a student with

hearing impairment. If you can't provide the script for an audio task or the captioning for a video, skip the task until you are properly prepared. Removing the script when it is time to do an exercise or task can be similar to turning off a record.

Assistive devices for the hearing impaired

There are many tools and aids that can be beneficial to hearing impaired students. A student may have some of his/her own devices, including hearing aids, laptop, tablet, mobile phone, or other electronic devices. Here are some tools and devices that teachers may want to consider having available for hearing impaired language learners:

- personal FM system
- closed caption decoder
- videos with closed captioning
- amplifier
- mobile devices for texting
- overhead projector/whiteboard
- alert systems with lights or vibration
- real objects
- videos with subtitles

Conclusion. One of the best tips for teaching hearing impaired students is to speak to previous teachers who have worked with the student that is now in your care. Find out what worked and what didn't work. Set realistic learning goals. Allow extra time for students to complete tests and assignments. Make an outline of your class performance in advance.

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ОБУЧЕНИЕ АНГЛИЙСКОМУ ЯЗЫКУ СЛАБОСЛЫШАЮЩИХ СТУДЕНТОВ

Аннотация. В данной статье рассматриваются образовательные потребности студентов-спортсменов с нарушением слуха. В ней говорится о влиянии на обучение, адаптивных методах обучения студентов с нарушением слуха, проблемах, с которыми сталкиваются студенты с этим нарушением, проблемах, с которыми сталкиваются преподаватели при работе с учащимися с нарушениями слуха, аспектах обучения учащихся с нарушениями слуха и стратегиях разрешения проблем.

Ключевые Слова: нарушения слуха, образование, преподаватели, студенты, методика обучения, обучение

APPLICATION OF POWERFUL EXERCISES FOR FEMALE PROBLEMS AGE 13-14 OF BACNINH SPORT TRAINING CENTER - VIETNAM

Kien Dam Trung
Nguyen An Hung Think

***Abstract.** The selection and application of 14 speed strength development exercises for female weightlifting athletes aged 13-14 at the BacNinh Sports Training Center is an essential activity in training. Through the 1-year experiment divided into 10 tests have been evaluated, confirming the reliability of speed enhancement for female Weightlifting athletes*

***Keywords:** Exercises, strength, female weightlifting, training*

BacNinh has the high-performance sports field, Weightlifting has been invested in and developed and has brought remarkable results. However, in addition to the strengths that the athlete training (athletes) has achieved, in Weightlifting age 13-14, especially for women has been achieved as well, certain initial strategies.... but there are still shortcomings that need to be overcome: The professional fitness level, especially the power and speed of female athletes, is still limited. This is revealed through the training process, especially the ability of female athletes to compete through a number of ages.

On the other hand, through practical training shows that the content, testing criteria to evaluate the power of speed currently in use have not yet had scientific proof. Through research and application of the system of means and exercises to develop strength and speed suitable for female weightlifting athletes aged 13-14 in BacNinh Sports Training Center in enhancing sports performance.

Research Methods: Method of analysis and document synthesis; interview the seminar; pedagogical test; Pedagogical experiment, statistical mathematics to solve research problems.

Research results:

On the basis of selected exercises through reference to documents, pedagogical observations and face-to-face interviews, to choose the most effective and effective exercises in speed strength development for female weightlifting athletes ages 13-14, BacNinh Sports Training Center has interviewed weightlifting coaches. The topic will choose exercises to develop professional strength for Weightlifting athletes aged 13-14 in BacNinh Sports Training Center, table 1:

Table 1. Exercises to develop speed strength for Weightlifting athletes aged 13-14

No	Exercises	No	Exercises
1	Lift 85-90% of maximum weight, do 6 reps, hold the weight for 3s/ time, rest 1-2 minutes each time, rest actively	8	To high chest push 85-90% of maximum weight, 4 nests, 2 groups each, hold the weight for 3s/ time, rest between each group for 2 minutes
2	Lift 85-90% of maximum weight, do 4 reps, hold the weight for 3s/ time, rest 1-2 minutes each time, rest actively	9	Hanging on chest 85-90% of maximum weight, do 4 times, hold the weight for 3s / time, rest between each group for 2 minutes, rest actively
3	Standing 85-90% of maximum weight, do 3 groups, 3 times each, hold weights for 3 times/ time, rest 3 minutes between each group, rest actively	10	Push on rack 80-85% of maximum weight, do 6 groups, 2 times per group, rest 2 minutes in between each group, rest actively
4	Hang up 85-90% of maximum weight, do 4 groups, 2 times each, hold the weight for 3s/ time, rest 2 minutes between each group, rest actively	11	Go to high chest push ½ do 80-85% of maximum weight, do 5 reps, rest in between 2 minutes each, rest active
5	Jerking on the platform to sit 90-95% of maximum force, do 5 groups, 2 times each, keep your legs straight for 3 times/ time, rest 2 minutes between each group, rest actively	12	Pull hard to perform 5 groups, 3 times each, rest 2 minutes between each group, rest actively
6	Suspend 85-90% of maximum weight, do 6 nests, 2 times per group, keep weights in silence for 3 times/ time, rest 2 minutes between each group, rest actively	13	Sit deeply, do 5 groups, each group 3 times, rest 1 minute between each group, rest actively
7	Lift 90-95% of maximum weight, do 3 groups, 1 time per group, hold the weight for 3s/ time, rest 2 minutes between each group, rest actively	14	The rear seat sit deeply, perform 5 groups, 3 times each, rest 12 minutes between each group, rest actively

Application and effective evaluation exercises for female weightlifting

Experimental method: 14 female Weightlifting athletes at BacNinh Sports Training Center (07 in each group: A Experimental and B Control).

Experimental period: from January to December 2019.

Experimental location: BacNinh Sports Training Center - Vietnam.

Time after 12 months of experimentation (table 2):

The table 2 shows: After 12 months of experimentation, the strength and speed level of female weightlifting athletes aged 13-14 BacNinh Sports Training Center has grown (table in the probability threshold $p < 0.05$), proves that the selected exercises and the constructive process of the topic have a very good effect in developing the speed power of athletes.

Table 2. Results of testing the speed strength of female weightlifters ages 13-14 after 12 months of experimental ($n_A = n_B = 7$)

No	Parameters Test	Group A	Group B	t	p
		$\bar{X} \pm \delta$	$\bar{X} \pm \delta$		
1	Running 30m fast (s)	4.63±0.32	4.71±0.38	3.51	<0.05
2	Turn far in place (cm)	198±4.2	192±5.1	2.83	<0.05
3	Chest height (kg)	75±3.2	70±4.0	3.17	<0.05
4	High drop (kg)	65±3.0	62±3.5	2.94	<0.05
5	Jerk (kg)	60±4.5	58±3.5	2.77	<0.05
6	Clean & jerk (kg)	70±3.5	68±3.8	2.68	<0.05
7	Extend (kg)	80±4.5	75±5.0	3.62	<0.05
8	Narrow pulling (kg)	83±3.0	80±3.1	2.78	<0.05
9	Front flap (kg)	85±3.5	82±4.0	2.92	<0.05
10	Rear rim (kg)	88±3.5	85±4.0	2.99	<0.05

Conclude:

The research selected 14 speed strength development exercises for female weightlifting athletes aged 13-14 at BacNinh Sports Training Center. Application of selected exercises for 12 months with 10 test had a good effect in developing speed strength for study subjects.

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ПРИМЕНЕНИЕ МОЩНЫХ УПРАЖНЕНИЙ НА ЖЕНСКИЕ ПРОБЛЕМЫ ВОЗРАСТ 13-14, ТРЕНИРОВОЧНЫЙ ЦЕНТР BACNINH SPORT – ВЬЕТНАМ

Аннотация. Выбор и применение 14 упражнений на развитие скоростной силы для тяжелоатлеток в возрасте 13-14 лет в Центре спортивной подготовки BacNinh является важным мероприятием в тренировке. В течение 1-летнего эксперимента, разделенного на 10 тестов, была проведена оценка, подтверждающая надежность увеличения скорости для спортсменок, занимающихся тяжелой атлетикой.

Ключевые слова: упражнения, сила, женская тяжелая атлетика, тренировка

THE INFLUENCE OF PHYSICAL EXERCISE ON MENTAL PERFORMANCE UNDER CONDITIONS OF HYPOXIA

Kirillov M.O.

***Abstract.** The article analyzes the effect of hypoxia on mental performance, as well as the dependence of mental performance under conditions of hypoxia on physical exercise*

***Keywords:** hypoxia, mental performance, exercise*

Mental performance, which is the most important factor in performance in several sports disciplines and professional human activity, is subordinated to the negative influence of hypoxic influences that make up the system of environmental factors.

It has been established [5, 7] that mental performance is influenced by such factors as altitude and ambient temperature. So, an increase in altitude above sea level increases hypoxia, because of which the delivery of oxygen to the brain tissues is significantly slowed down. Lack of oxygen leads to impairment of several cognitive abilities, such as movement control, attention, information processing, and episodic memory.

Research results [2, 9] have shown cognitive deficits caused by hypoxia. Regardless of the types of cognitive tasks (for example, central executive or non-executive tasks) and hypoxic conditions (for example, hypobaric hypoxia or normobaric hypoxia), decreased mental performance correlates with low levels of partial oxygen pressure.

However, at present, there is more and more evidence that hypoxia does not have a negative effect on mental performance. For example, an experimental study by Lefferts et al [3] showed that the accuracy of the response to cognitive tasks was similar in both hypoxia and normoxia in a mixed sample of young men and women. In studies by Sun et al. [8] reported that moderate hypoxia did not affect reaction time or accuracy in young people with a sedentary lifestyle.

Several studies have shown that exercise improves mental performance and prevents neurocognitive disorders. Recent studies have shown that moderate exercise can improve mental performance when exposed to moderate or severe hypoxia, but other studies have reported that cognitive functions can be impaired by exercise in hypoxic conditions [1, 6].

A 2019 scientific literature review examined the combined effects of exercise and hypoxia on mental performance. It has been shown that the effect of hypoxia is largely determined by the interaction of such factors as the volume and

intensity of exercise, the level and duration of hypoxia, and the type of cognitive task [10].

Summing up, we can say that modern research devoted to the study of the effect of hypoxia on mental performance and the question of whether physical exercises change its effect is contradictory, which may be due to differences in methodological and experimental conditions. Given the heterogeneity of the above results, further research is needed to test the factorial influence of experimental conditions on mental performance in relation to hypoxia and exercise [4, 11].

Conclusion:

1) mental performance decreases under the influence of hypoxia at rest. It has the greatest influence on attention, memory, and executive function of the brain;

2) physical exercise performed under the influence of hypoxia plays a key role in improving mental performance. Various characteristics (such as exercise volume and intensity) can alter the relationship between exercise and mental performance under hypoxic conditions.

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ВЛИЯНИЕ ФИЗИЧЕСКИХ УПРАЖНЕНИЙ НА УМСТВЕННУЮ РАБОТОСПОСОБНОСТЬ В УСЛОВИИ ГИПОКСИИ

Аннотация. В статье проанализировано влияние гипоксии на умственную работоспособность, а также зависимость умственной работоспособности в условиях гипоксии от физических упражнений.

Ключевые слова: гипоксия, умственная работоспособность, физические упражнения

COMPARISON OF ELITE PITCHERS SPEED THROWING CHARACTERISTICS IN THE FEMALE SOFTBALL TEAM

Kokoreva S. A.
Gillard M.V.
Komova E.V.

Abstract. *The article compares ball speed characteristics of pitchers' throws of the female softball team. These indicators make it possible to get an idea of the speed-power training of female athletes, which is the basis for demonstrating effective throw technique, as well as to reveal a possible lag in this type of female athletes' fitness.*

Keywords: *softball, comparative analysis, speed characteristics of throws, pitcher, speed-power indicators*

Introduction. Team sports, which also include softball, are characterized by a large volume of motional actions and have a wide variety of ways of their implementation.

A pitcher in softball plays a very important role and in many ways ensures the success of his/her team. Therefore, the preparation of a pitcher requires special attention. It should be noted that biomechanisms of the pitcher's throwing technique in softball is characterized by the nature of the body acceleration links and their maximum speed [3].

At present, there is practically no objective scientific data about quantitative indicators of the competitive activity of female softball players. In this regard, it is advisable to analyze speed of a pitcher's ball in its maximum values.

The aim of this study is to comparatively analyze pitching speed indicators of female softball team pitchers.

The research tasks were:

- to study the maximum individual speed indicators of pitchers' throws in the female softball team;
- to reveal the existing differences in the individual dynamics of the ball speed indicators when performing a series of 10 throws;
- to substantiate the need of means of special speed-strength training of pitchers.

To solve these problems, the dynamics of ball speed was investigated when performing 10 pitches of five pitchers of the RusStar softball team (Moscow). Qualification of athletes - Master of Sports of Russia.

Research results.

On the chosen day, each of the five athletes performed 10 pitches from a distance of 13.11 meters [1]. Throwing speed was measured using Stalker Sport 2 radar. The results of measurements are presented in Table 1. As can be seen from the data in the table, not all athletes demonstrate the same stability of the throw speed - the differences between the maximum and minimum values sometimes reach 4 mph.

Table 1 - Ball speed when performing 10 throws, mph

Players	Ball speed when performing 10 throws, mph									
	1	2	3	4	5	6	7	8	9	10
1	58	59	58	59	58	56	56	58	55	58
2	61	61	61	60	61	61	63	61	62	62
3	57	57	58	57	55	57	57	57	57	57
4	61	62	62	61	63	62	61	61	61	61
5	61	61	61	62	62	62	61	60	62	62

Based on the data obtained, it is possible to conduct a comparative analysis of the throwing. So, the proposed set of indicators necessary for comparison includes the following:

- minimum value of the series;
- maximum value;
- mean;
- the coefficient of variation.

Based on the recorded indicators of the ball speed when performing 10 pitches, we have carried out a comparative analysis of the minimum and maximum values of the ball speed for each of the 5 athletes (Table 2).

As we can see from the data in Table 2, two athletes showed the highest rates - 63 m/h. Two athletes showed the lowest value of the ball speed of 55 m/h. At the same time, the athletes with the minimum indicators of the ball speed also demonstrated the smallest values of their maximum capabilities. The data obtained shows a significant difference in this indicator from the speed of the best pitchers, reaching more than 80 mph [4].

Table 2 - Comparative values of the throwing speed, mph

Players	X average.	X max.	X min	Difference X max.-X min.
Player 1	57,5	59	55	4
Player 2	61,3	63	60	3
Player 3	56,9	58	55	3
Player 4	61,5	63	61	2
Player 5	61,4	62	60	2

Analysis of the ball average speed in 10 pitches practically repeats the nature of the maximum values for 4 pitchers.

The results of calculating the coefficient of variation (Table 3) show the most differences in the demonstrated speed of the ball in 10 pitches for the pitcher number 1. This means that even when the goal is to perform the pitch with the maximum possible effort, this athlete has the most spread of indicators of ball speed in comparison with other pitchers of the team.

Table 3 - Coefficient of variation of 10 throws

Players	Mean square deviation	The coefficient of variation
Player 1	1,34	23,6
Player 2	0,82	13,4
Player 3	0,74	13,0
Player 4	0,71	11,5
Player 5	0,70	11,4

Findings.

The research results showed that 3 pitchers of this team have a fairly similar level of speed-strength training. The least stable and lowest in absolute value rate speed was a pitcher under No. 1. At the same time, the indicators differ both in maximum ball speed and in its stability. Thus, in order to improve the throwing technique and prevent injuries, it is necessary to increase the set of means of speed-strength training for preparing pitchers of this team, since the demonstrated indicators are significantly behind the indicators of the best pitchers.

Prospectives for further research are seen in the biomechanical assessment of speed characteristics of pitchers' throws in softball and the development of methods for increasing speed indicators.

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СРАВНЕНИЕ СКОРОСТНЫХ ХАРАКТЕРИСТИК БРОСКОВ ПИТЧЕРОВ ВЫСОКОЙ КВАЛИФИКАЦИИ В ЖЕНСКОЙ КОМАНДЕ ПО СОФТБОЛУ

Аннотация. В статье приведено сравнение скоростных характеристик полета мяча в бросках питчеров в женской команде по софтболу. Данные показатели позволяют составить представление о скоростно-силовой подготовленности спортсменок, являющейся основой для демонстрации эффективной техники броска, а также выявить возможное отставание в данном виде подготовленности спортсменок. Исследование проводилось при участии пяти спортсменок одинаковой квалификации.

Ключевые слова: софтбол, сравнительный анализ, скоростные характеристик бросков, питчер, скоростно-силовые показатели

GREAT VALUE OF SERVE SPEED IN TENNIS

Kolomoets M.P.

***Abstract.** Tennis game development is characterized by increasing of ball speed including serve shots. We collected and analyzed statistical data of a serve speed by elite tennis players at Grand Slam tournaments.*

***Keywords:** tennis serve, ball speed of tennis serve*

Any point in tennis starts with a serve. Statistical analysis of the serves at three different grand slam tournaments among the world's leading players and analysis of literary sources indicate a significant impact of the serve on the performance of the game.

The analysis of these statistics showed the influence of the first serve on the result of competitive activity, which gives a special advantage to the serving player.

In the literature, it is noted that the speed of the ball flight is important, however, the problem associated with the influence of the serve speed on the final result in the match is not sufficiently covered. And also the question of the difference in the speed of the ball during the first and second serves and how this affects on the further result in the rally is not sufficiently covered. This was the basis for this study.

Every year the speed of the game in tennis increases. We notice an increase of the ball speed with different tennis strokes. This is especially evident with serve. Statistical analysis indicates a significant impact of the serve on the performance of the game, especially a «first serve». 340 matches were analyzed.

Table 1 - Influence of the serve speed on possibility of winning a point

Tournament	Av. speed of 1 serve	1 serve won (%)	Av. speed of 2 serve	2 serve won (%)
Australian open	187,9	76,3	152,3	54,2
Roland Garros	186,3	73	151,5	54,4
US Open	186,7	78,7	155,9	55,9

Based on the statistics collected of the serves of the leading players from 3 Grand Slam tournaments in 2014 on different surfaces (hard surface, clay surface, grass surface), we can conclude that it is the first serve that gives the main advantage for a tennis player.

The sample includes 19 leading tennis players who are in the top twenty of the world ranking and participate in the first 3 Grand slam tournaments in one calendar year (Australian Open, Roland Garros, Wimbledon).

The first serve gives an advantage to the serving player, due to the high speed, which makes it difficult to receive it. As follows from the results of our research, the maximum speed of the first-serve ball in our sample reaches 226 km/h, and the average speed of 1 serve is in the range of 186-188 km/h, depending on the court surface. At this speed of the ball, the percentage of innings won is on average 73-78%.

We can see that the rallies that started with the first serve are won with great success. The reason is the higher speed of the ball. We can say that the higher the speed of the ball the higher the probability of winning a point.

In case of failure, when performing the first serve, the tennis player has the opportunity to try again. And in this case, athletes lower the speed of the ball to increase the reliability of the second serve.

The second serve hit percentage averages 92-93%. We found that the average speed of the ball during the second serve decreases by 17-19% from the average speed of the first serve, and averages 151-155 km / h, depending on the court surface. The percentage of rallies won starting with the second serve averages 54-56%, depending on the court coverage. The second serve becomes less effective and practically does not give an advantage in the further rally. Obviously, the relatively low speed of the ball in the second serve is not enough to put significant pressure on the receiver.

This suggestion is proved by comparative analysis of the points won on the first serve and on the second serve.

Table 2 – Contribution of points won with serve

Tournament	Points won with first serve (%)	Points won with second serve (%)
Australian open	45,2	18,9
Roland Garros	42,6	19,5
US Open	49	17,4

We were able to calculate the contribution of the serve to the total number of points per match.

It can be seen that the elite players win 42.6-49% of the points from the total number of points they won for the match starting from the first serve, 17,4-19,5% of the points from the total number of points scored for the entire match are won when the rally starts from the second serve.

As follows from the results of research, the main contribution to the number of all the rallies won per match is made by the starting from the serve, especially from the first serve.

From 62.1-66.4% of the points, depending on the court surface, scored in the match by the athlete, are won at the beginning of the rally with his serve. The surface of the court has an effect on the speed of the ball after contact. So, you can see the difference between the slowest surface – clay at Roland Garros, and the fastest surface – grass at Wimbledon.

The percentage of points scored starting with a pitch on the ground is 62.1%, while on grass, this figure is 66.4%. This fact indicates the influence of the speed of the ball on the probability of winning a further rally. On the grass surface, the ball, when it comes into contact with the court, seems to slip, losing a minimum of speed compared to the clay surface.

Analysis of the serve speed gives reason to believe that a higher speed allows you to win a greater percentage of rallies. Thus one of the reserves for improving the efficiency of competitive activities is to increase the speed of the ball on first and second serves.

We also conducted a correlation analysis between the speed of the ball in the first and second serves throughout the sample.

Table 3 - Correlation coefficients between first and second serves

Correlation coefficients (r)			
	Australian open	Roland Garros	Wimbledon
First and second serve (speed)	0,8	0,75	0,81

The correlation analysis showed that there is a relationship between the average speed of the ball at the first serve and the average speed of the ball at the second serve, which was $r = 0.8$ at the Australian Open, $r = 0.75$ at Roland Garros, and $r = 0.81$ at Wimbledon.

The results of the correlation analysis indicate that the higher the speed of the ball in the first serve, the higher the speed of the ball in the second serve, which as a result complicates the reception of such a serve and gives an advantage to the serving player. This dependence is especially evident on the grass court at the Wimbledon tournament.

From the conducted research, it can be seen that the serve makes a significant contribution to the final result of competitive activity, while the higher the speed of the ball, the greater the advantage it gives the serving player, and this increases the probability of winning a point. Undoubtedly, accuracy is also an important factor of efficiency. However, even the most accurate serve, if it does not have sufficient speed, will not be effective.

Obviously, one of the ways to improve the performance of the game is to increase the speed of the ball during the first and second serves.

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БОЛЬШОЕ ЗНАЧЕНИЕ СКОРОСТИ ПОДАЧИ В ТЕННИСЕ

Аннотация. Развитие тенниса характеризуется увеличением скорости полета мяча при выполнении ударов, особенно подачи. Нами собраны и проанализированы статистические данные подачи у ведущих теннисистов мира на турнирах Большого Шлема.

Ключевые слова: подача в теннисе, скорость мяча при выполнении подачи

DANCERS WITH DIFFERENT PSYCHO-EMOTIONAL TENSION, PSYCHOPHYSIOLOGICAL CHARACTERISTICS AND WORK- CAPACITY

Konyaev I.D.
Zakharyeva N.N.

Abstract: *the research shows the high-level qualification dancers' psychophysiological work capacity test's results. The research held the advantages of physical work capacity and the resistance to fatigue during the psychophysiological tests of the dancers with low and middle level of psycho-emotional tension.*

Keywords: *Taylor test, the time for the sound's hearing reaction, PWC₁₇₀ test, high-skilled dancers*

Coping with the stress and high psycho-emotional tension are the one of the most vital problems for the all athletes and for high-skilled dancers among them [2-4, 8].

The success performing for the dancers during the competitions is most based on the athletes's phycho-emotional resistance [6]. The dancer's movements, coordination, reflect-reactions and harmony aesthetics performance of the dancing couple and each among them are based on the emotional background positive or negative ones [1, 5-7].

96 high-skilled dancers 50 man and 46 women took part in the research. Their middle age was 20.4 ± 5.3 years. Their career in dancing sport lasted 14.1 ± 6.5 years. All the dancers took part in the research by their individual good will, and signed the agreement for their taking part in the experiment. The athletes psycho-emotional tension was found by the Taylor's test. Their work-capacity was measured by PWC₁₇₀ test. Their Psychophysiological characteristics were found by the computer's testing. The statistics was made by Microsoft Exele and RStudio programs. The dancers groups 1, 2 and 3 were distinguished by Mann–Whitney U-test.

The results. All the dancers were sent in the 3 groups by the Taylor test. The points difference for the couples has $p < 0.0001$ level. The hand-eye coordination in the groups 1 and 3 was $p < 0.001$. The lower difference was in the groups 2 and 3 $p < 0.05$. The sounds reaction difference in the 2 and 3 grouds was distinguished in $p < 0.01$ rate. The PWC₁₇₀ test shows the truth distinguished rates of the dance couples. Comparing dancing couples between the groups 2 and 3 and groups 1 and 3 is $p < 0.05$ (table 1).

Table 1 - The dancers with different psycho-emotional tension and psychophysiological work-capacity rates

Dancer's groups	Taylor test Points	Sounds reaction in meters per second	Hand-eye coordination, try 1 (meters per second)	Hand-eye coordination, try 8 (meters per second)	PWC ₁₇₀ absolute (kg in min)
g1 (n=40)	8.61 ±3.08****	354.76 ±29.76	334.78± 60.21***	260.75 ±60.95***	1184.72 ±473.47*
g2 (n=39)	19.65 ±2.74****	368.37 ±35.16**	314.4 ±54.54*	250.49 ±40.17*	1035.37 ±275.12*
g3 (n=17)	28.32 ±2.86****	343.45 ±25.24**	280.94 ±43.22	254.71 ±47.2	885.72 ±207.64

Note: * - $p < 0.05$; ** - $p < 0.01$; *** - $p < 0.001$; **** - $p < 0.0001$.

Conclusion: the dancers with psycho-emotional tension should do the tests during their preparation period should do the tests: Taylor test, hand-eye coordination, sounds reaction test by the right hand. These tests show the distinguished difference in their results. According to 2 steps PWC₁₇₀ test the dancers under sub-maximum loads they showed the different level of psycho-emotional tension by $p < 0.05$. The dancers with high level of psycho-emotional tension have the lowest physical work-capacity rates. That is why they can show the worst results during the competitions. To cope with it they must include aerobic training during their sports activities.

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ПСИХОФИЗИОЛОГИЧЕСКИЕ ХАРАКТЕРИСТИКИ И ФИЗИЧЕСКАЯ РАБОТОСПОСОБНОСТЬ ТАНЦОРОВ С РАЗЛИЧНОЙ СТЕПЕНЬЮ ПСИХОЭМОЦИОНАЛЬНОГО НАПРЯЖЕНИЯ

Аннотация. В статье представлены результаты достоверных различий показателей психофизиологического тестирования и физической работоспособности танцоров высокой квалификации с различной степенью психоэмоционального напряжения, занимающихся спортивными бальными танцами. Установленные данные показывают преимущества физической работоспособности и способности противостоять утомлению при выполнении заданий психофизиологических тестов танцоров высокой квалификации с низким и средним уровнем психоэмоционального напряжения.

Ключевые слова: тест Taylor, время реакции на звук, тест PWC₁₇₀, танцоры высокой квалификации

SIMPLIFIED GAMES AND ITS INFLUENCE ON SPEED AND ACCURACY OF SOLVING TACTICAL TASKS AMONG 8 YEAR-OLD FOOTBALL PLAYERS

Korzhukov A.V.

***Abstract.** The article is devoted to the study of the tactical training of young footballers. We touch upon the issue of insufficient knowledge of this topic and the fact that coaches pay little attention to tactics in training programs. The aim of the article is to prove positive impact of simplified games on the development of tactical skills of football players of 8 years old. It is about our new methodology and training program.*

***Keywords:** simplified games, tactical training, young footballers*

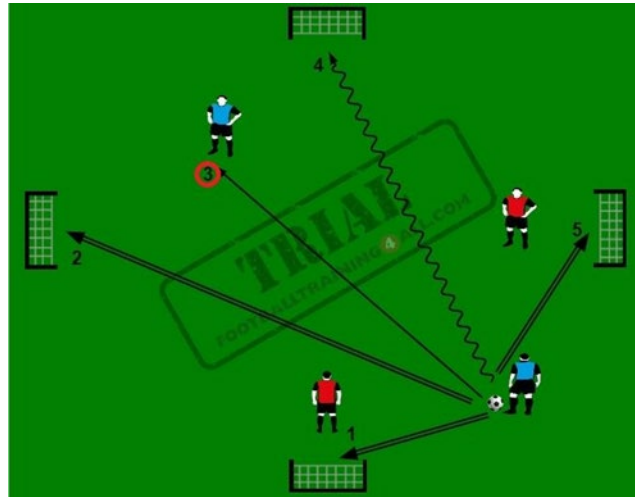
Introduction. The research work is based on the simplified games that is foundation of young footballers training process. Simplified games are a set of exercises that should be performed in a playful way. Each game is designed to achieve a specific goal. These games are called simplified because: the size of the playground is reduced, rules simplified, they repeat the professional form of the game but in a simplified form, a number of footballers is small, participants are given an easy task.

Each game takes into account a child's psychomotor development. Simplified game gives children a doable injury-free task where they do not have to imitate the actions of professional players. In fact, this will develop a favorable child's attitude towards football itself and introduce the habit of exercising correctly and regularly. [1]

We studied relevant literature of tactical training of young football players. Unfortunately, this topic has not been sufficiently researched. When a football practice is offered to a young footballer at the start of training, coaches often copy patterns intended for elite players without considering the features of young footballers. [2]

Methods. The research took place at «Meteor-2» team in Balashikha. The experiment involved 16 young football players at the age of 8 years old. Consequently, young footballers were offered a new training method, which is based on simplified games.

Firstly, the research work started with testing. We developed 15 cards with different game situations. Each footballer was given 4 or 5 answer options. He had to choose only one. An example of a tactical task is shown in picture 1 (the red circle marks the correct answer).



Picture 1 – tactical task

We were interested in the number of correct answers and the time to complete all tasks. The number of correct answers shows the accuracy of the solution and the time indicates the speed of execution. There is no doubt that it is necessary to assess the starting level of footballers.

Secondly, young athletes practiced a new method for a month. There were 3 workouts per week. The training process consisted of game exercises, which is simplified games. For instance, exercises 2 vs 1, 2 vs 2, 1 vs 1. Each training lasted 90 minutes. 15 minutes were devoted to warm-up. The main part took 70 minutes, 50 minutes of which the young players were involved in simplified games and 20 minutes were devoted to playing football. The closure part lasted 5 minutes. The team had a game day every week. This training included a tournament in one of the simplified games.

Thirdly, we tested young footballers again after a month of practice. They were asked to solve tactical tasks again. This allowed drawing a conclusion about the effectiveness of the new technique. We compared the test results before and after applying the new method. The results are shown in table 1.

Table 1 – Comparison of results

	Before (correct ans.)	After (correct ans.)	time until (min.)	time after (min)
Mean	8,6 = 57,3% ± 0,33	12,1 = 80,6% ± 0,3	1:49 ± 0:05	1:40 ± 0:02
Av. number of err.	6,7	3,1		
	t- test		t-test	
	temp= 19,4		temp= 4,3	
	tcr= 2,13 при p ≤ 0,05		tcr= 2,12 при p ≤ 0,05	
	temp > tcr		temp > tcr	

Conclusion. According to table 1, the following conclusions were made:

1. All athletes have a noticeable increase on results.
 2. The average number of correct answers picked up by 23,3%. This means that footballers began to perform tactical tasks more accurately.
 3. Average execution time decreased by 9 seconds. This means that young football players cope with tactical problems faster.
 4. T-tests confirm the hypothesis that the results before applying the method are lower than after a month of training with the new program.
- To sum up, new method has been proven as effective. This is illustrated by the improved results of team players.

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ИССЛЕДОВАНИЕ ВЛИЯНИЯ УПРОЩЁННЫХ ИГР НА БЫСТРОТУ И ТОЧНОТЬ РЕШЕНИЯ ТАКТИЧЕСКИХ ЗАДАЧ У ФУТБОЛИСТОВ 8 ЛЕТ.

Аннотация. Статья посвящена исследованию тактической подготовки футболистов. Мы затрагиваем проблему недостаточной изученности данной темы, а также, что тренеры уделяют мало внимания тактике в тренировочных программах. Цель работы – доказать положительное влияние упрощенных игр на развитие тактических навыков футболистов 8-летнего возраста. Рассказано в деталях о нашей новой методике и тренировочной программе.

Ключевые слова: упрощённые игры, тактическая подготовка, юные футболисты

DEVELOPING TACTICAL SKILLS THROUGHOUT LONG-TERM TRAINING PROCESS IN FENCING

Kravtsov A.D.

Ryzhkova L.G.

***Abstract.** The article analyses the way fencers develop tactical knowledge implemented by specialized skills, which, in their turn, are based on motor reactions and spatial-temporal anticipations. In addition to focus and memory properties, this creates a foundation to develop tactical thinking and the "sense of bout" that ensure high performance during competitions. Results of the study and interpretation of the collected data confirm the need of using proven methods and their effectiveness to improve the level of athletes' tactical knowledge and skills in the long-term training process.*

***Keywords:** tactical knowledge, tactical skills, offensive and defensive actions, time to prepare an action, time to perform an action.*

Introduction. The way a fencing bout develops, and particularly a careful choice of tactical intentions to perform actions depend on how athletes implement their mental and motor qualities. Therefore, the application of techniques aimed at building specialized tactical skills, which are based on motor reactions and spatial-temporal anticipations, properties of focus and memory, is meant to develop tactical thinking of fencers [1, 2]. Making motor reactions implementation specialized, helps fencers to develop specific skills, known as "sense of weapon", "sense of distance", and "sense of time", which all together mould the "sense of combat"[3].

Main Part. Practical training aims at developing these tactical skills so fencers are able to:

- act intentionally by using simple reactions, such as attack, counterattack, remise, defence and riposte
- act selectively, by using disjunctive reactions: define a sector to attack, read an opponent's attack direction, tell simple attacks from feint-disengage or long-distance attacks, tell a preparation from an attack
- act by switching, by using differentiation reactions: from an attack preparation to defence; from one attack to another; from attacking one sector to attacking another sector; from attack to defence; from defence to attack; from defence to another defence;
- act by anticipating the following: attacking and retreat (distance shortening) distance when counter attacking, distance during a bout; moment the

action initiates; distance and instantaneous changes in weapon movements and footwork [2]. Thus, special tactical skills are seen as a prerequisite to help fencers perform properly in unexpected bout situations. These skills are based on visual and tactile reactions, as well as spatial and temporal anticipations. At the same time, the ability to resist reflexive interference when attacking or counter attacking is particularly important to score touches in a fencing bout [3].

To conduct the study, a battery of tests was designed and included the most common bout situations seen in different types of fencing. These situations contained tactical information about opponent's actions selected to initiate bouts. The level of test participants' tactical knowledge and skills was assessed using the results of test tasks, where athletes were to evaluate information given to them by the coach and implement their own tactical knowledge to prepare and execute fencing actions in the given situations. The informative value of the proposed battery of tests is obvious, since fencers commonly deal with the same challenges during competitions.

Assessment of the tactical knowledge and skills level was performed by means of video recording with the following decoding. This allowed to determine the time it takes to prepare the task (pause between receiving information or coach's instructions and the start of phrases) as well as the time of selected actions (combinations of actions) execution.

The goal of the training was to increase tactical knowledge and skills level by using different methods of technical and tactical improvement, corresponding to the level of fencers' proficiency. Each method in the training process was applied to athletes of a certain age category.

The study was conducted over 3 years in several stages. Participants of the study were of different age groups, kinds of fencing and proficiency levels, namely:

- foil fencers aged 11-12 (32 athletes of the first-class and second-class junior categories), the "exploration-action" method (initial training stage) was used;
- épée fencers aged 13-14 (32 athletes of the first-class and the second-class adult categories), the "coach's verbal instruction" method (initial specialization stage) was used;

– sabre fencers aged 15-16 (24 athletes of the first-class adult category), the "self-selection and coach's verbal instruction" method (in-depth specialization stage) was used to execute actions;

– foil fencers aged 16-17 (20 female fencers with the category of Candidate for Master of Sport), the "simulation of probabilistic sequence of actions in a bout" method (sports mastery improvement stage) was used;

– sabre fencers aged 17-18 (20 athletes with categories of Candidate for Master of Sport and Master of Sport), the "simulation of probabilistic prediction in the selection and consistent execution of alternative actions in a bout" method (higher sports mastery stage) was used.

Preliminary and final examinations of test participants were conducted in the form of testing, in which time indicators of preparation and execution of selected (selectable) actions in situations given by the coach were assessed. Each athlete took an individual training session to ensure test results are accurate and trustworthy, since the same coach acted as an opponent for the athletes of the corresponding age group of participants in the experiment.

Conclusions. Collected data statistical processing and analysis confirmed that it is necessary and effective to use proven methods to increase the level of tactical knowledge and skills in the fencing training process. Application of these techniques has essentially supplemented the contents of theoretical and practical training of fencers of different age groups by "focusing" the contents of their training process on the tactics of combat actions preparation and execution.

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ФОРМИРОВАНИЕ ТАКТИЧЕСКИХ УМЕНИЙ НА ЭТАПАХ МНОГОЛЕТНЕЙ ПОДГОТОВКИ В ФЕХТОВАНИИ

Аннотация. В статье представлен анализ формирования у фехтовальщиков тактических знаний, реализуемых через специализированные умения, которые, в свою очередь, базируются на проявлениях двигательных реакций и пространственно-временных предвосхищениях. В совокупности со свойствами внимания и памяти это создает фундамент для формирования тактического мышления и «чувства боя», обеспечивающих эффективное противоборство в соревнованиях. Проведенное исследование и интерпретация полученных данных подтвердили необходимость и эффективность использования апробированных методик по повышению уровня тактических знаний и умений в тренировочном процессе со спортсменами на этапах многолетней подготовки.

Ключевые слова: тактические знания, тактические умения, действия нападения и обороны, время на подготовку действия, время выполнения действия.

PREDICTING THE OUTCOMES OF FOOTBALL MATCHES USING A SYSTEM BASED ON ARTIFICIAL NEURAL NETWORKS

Krutikov A.K.

***Abstract.** Sports games are popular sports in society. Part of the sports games is included in the program of the Olympic Games. Prediction in sports games plays an important role in the preparation and training process. A certain role of forecasting affects the existence of the betting business. The article describes the possibility of predicting a football match using the apparatus of artificial neural networks. The results of the experiments are presented in tabular form, and the structures of the described artificial neural networks are presented.*

***Keywords:** artificial neural network, football, sports result, prediction, result of predicting, training time, training error*

Football is one of the most popular sports destinations in the Russian Federation. The Russian national team in this sport secures its position in the world rankings, Russian clubs compete in European leagues, and thousands of viewers watch the national leagues and championships. Each region has sports

schools, federations and associations who are engaged in the preparation and organization of activities related to the development of football.

Specialists in the field of football, as in any sport, in the implementation of professional activities, use the methods of sports forecasting and planning [1]. The methods may relate to forecasting the development of this sport, club, national team, or individual players. The results of individual matches and championships are predicted.

Due to its specific nature, football is the most frequently predicted sport at the moment. In betting applications, the largest number of quotes is put up for matches in this sport [2].

Betting programs and official applications give a probabilistic forecast for a certain event during a match, or directly the outcome of the match, expressed by a certain coefficient.

Forecasting in any sport is reduced in one way or another to the analysis of a number of parameters that affect the result. Parameters can be formalized into numeric values, be directly a numeric value, or not be a numeric value and not be formalized.

In the analysis and processing of large sets of parametric data (especially numerical data) and forecasting on the basis of available indicators, artificial neural networks have proven themselves quite successfully from many methods and means of artificial intelligence [3].

In the MATLAB environment, a prototype system for predicting results in various sports has been developed. At the moment, the prototype is being tested for the correctness of forecasts and the possibility of various options and types of forecasting. The structure of the system prototype under test is modular. At the heart of each individual module is a specific model of an artificial neural network, which is trained separately for each experiment.

Experiments were performed to predict the result of the match of the fourth round of the Spanish championship of the 2018/2019 season between the football clubs "Atletico" and "Eibar", which took place on 15.09.2018. Two modules developed in the MATLAB environment containing a generalized regression neural network [4] and a vector quantization neural network [5], respectively, are used as a forecasting tool.

A training sample consisting of a set of vectors has been developed. Each vector contains a set of data about the match played by the team. The data set includes the ratings of the teams that played, the statistics of the standings at the time of the match, information about the arena (home/non-home) of the club. The resulting vector contains data about the results of the match, and each element of the resulting vector corresponds to one of the vectors of the training sample. All numbers in the training sample are real, except for the case of training a neural network of vector quantization, where the resulting vector in the training sample consists of integers.

The neural network of vector quantization solves classification problems, and the problem of predicting the outcome of a sports match, in this case, it is

necessary to define it as a classification problem. In other words, the input vector must be assigned to one of the classes defined in advance (the class of victory, the class of defeat, or the class of a "draw" result).

The results of experiments using a vector quantization neural network with a target error of 0.001 are presented in Table 1.

Table 1 - The results of the experiments

Forecast	LVQ Network structure	Training time, s
(0,0,1) Draw	1	15
(1,0,0) Victory of the first team	11	19
(1,0,0)	77	36
(1,0,0)	182	64
(1,0,0)	248	155
(1,0,0)	631	561
(1,0,0)	1821	2111

As the structure of the neural network increases, the learning time increases. Most of the experiments predicted the victory of the first team ("Atletico"), which is an incorrect forecast, but the bookmakers considered this team to be the favorite [6].

The results of experiments using a generalized regression neural network for different values of the target error are presented in Table 2.

Table 2 - The results of the experiments

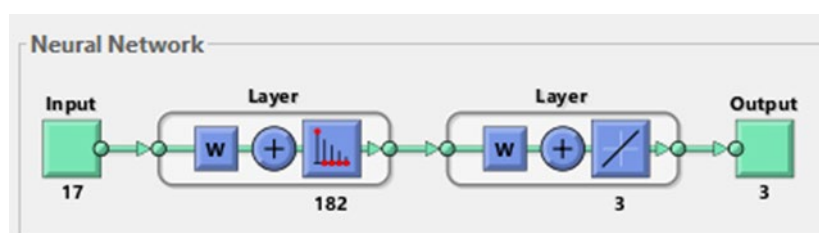
Forecast	Target error (GOAL)	training error (MSE)	Training time, s
3.000 (Ничья)	100	0.0203	3.1
3.000	10	0.0195	4.3
3.000	1	0.0185	4.7
3.000	0.1	0.0185	4.71
3.000	0.01	0.0185	4.63
3.000	0.001	0.0185	4.77
3.000	0.0001	0.0185	4.69

The prediction is correct [6] in all experiments. As the target error increases, the minimum root-mean-square error increases, but this did not affect the forecast result. When using a generalized regression neural network as a tool for predicting such outcomes, the classification problem is replaced by the regression problem. The predicted outcome is not a cluster number, but a number that will correspond to a specific result of a sporting event.

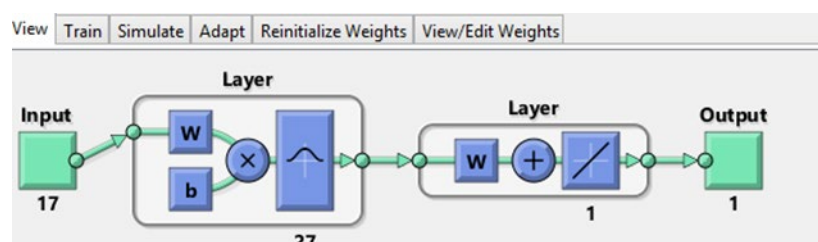
The criteria from which the training sample will be formed, when it is detailed, must be determined by specialists in this sport. The sample can be detailed by adding parameters known only to the coaching staff, weather

parameters, and even psychological parameters of the team leaders, depending on the experts' determination of the importance of entering this data into the sample.

The structures of neural networks in the MATLAB environment are shown in Figures 1-2.



Picture 1 - structure of a vector quantization neural network



Picture 2 - structure of a generalized regression neural network

The modules are integrated into the system. At the moment, each module is configured for a specific forecast, but in the future, with the software implementation of the system, it is planned to develop a mechanism for automatically configuring modules through a single user interface.

The software development of the system can be used by specialists of various sports, for the implementation of sports forecasts of different types.

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ПРОГНОЗИРОВАНИЕ ИСХОДОВ ФУТБОЛЬНЫХ ВСТРЕЧ С ПОМОЩЬЮ СИСТЕМЫ НА ОСНОВЕ ИСКУССТВЕННЫХ НЕЙРОННЫХ СЕТЕЙ

Аннотация. Спортивные игры являются популярным видом спорта в обществе. Часть спортивных игр включена в программу Олимпийских игр. Прогнозирование в спортивных играх играет важную роль в подготовке и тренировочном процессе. Определенная роль прогнозирования влияет на существование букмекерского бизнеса. В статье описана возможность прогнозирования футбольного матча с помощью аппарата искусственных нейронных сетей. Результаты экспериментов представлены в табличной форме, а также представлены структуры описанных искусственных нейронных сетей.

Ключевые слова: искусственная нейронная сеть, футбол, спортивный результат, прогнозирование, результат прогнозирования, время тренировки, ошибка тренировки

BUILDING A COMPETITION SYSTEM FOR TENNIS PLAYERS AT THE STAGE OF HIGHER SPORTS SKILLS

Kshenin A. E.

Abstract. *A theoretical analysis of literary sources showed that at the present stage of tennis development, athletes face a number of questions that are related to the rational construction of training and the system of competitions for highly qualified tennis players. This circumstance predetermined the relevance of the chosen research topic and served as the basis for our research.*

Key words: *competition system, tennis, competitive activity*

Introduction In modern tennis, there is a tendency that professional players of different levels of preparedness and rating are suitable in varying degrees of readiness for the main competitions. Some build the training and competitive process for the main competitions, while others focus on less significant tournaments. Therefore, the problematic situation of this study lies in the analysis of the competition system and its effectiveness among players of different skill levels.

Results. To test this hypothesis, a correlation analysis was carried out between the number of tournaments played annually by highly qualified tennis players and the duration of their sports career (Table 4). Table 4 - The relationship between the number of tournaments played and the duration of the sports career of highly qualified tennis players.

Table 1 – The relationship between the number of tournaments played and the duration of the sports career of highly qualified tennis players

Players	Number of tournaments played in a career	Career length	Tournaments played on average per year	Correlation coefficient
Kafelnikov	286	10	29	-0,74464
Agassi	306	19	16	
Sampras	256	13	20	
Djokovic	235	13	18	
Murray	242	13	19	
Safin	241	10	24	
Davidenko	327	12	27	
Federer	327	18	18	
Berdych	342	15	23	
Nadal	271	15	18	

Conclusions. As follows from the results of the analysis, there is an inverse relationship between the number of tournaments played annually and the duration of a sports career, which is expressed in the following: the more tournaments an athlete plays a year, the shorter the duration of his sports career, or the fewer tournaments a tennis player plays per year, the longer his career.

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ПРЕДПОСЫЛКИ К ПОСТРОЕНИЮ СИСТЕМЫ СОРЕВНОВАНИЙ ТЕННИСИСТОВ НА ЭТАПЕ ВЫСШЕГО СПОРТИВНОГО МАСТЕРСТВА

Аннотация. Теоретический анализ литературных источников показал, что на современном этапе развития тенниса, перед спортсменами стоит ряд вопросов, которые связаны с рациональным построением тренировки и системы соревнований высококвалифицированных теннисистов. Данное обстоятельство предопределило актуальность выбранной темы исследования и послужило основанием для проведения нашего исследования.

Ключевые слова: система соревнований, теннис, соревновательная деятельность

CONSTRUCTION OF THE PROTOCOL OF PHYSICAL REHABILITATION OF HYPERTENSIVE PERSONS BASED ON AN INTEGRATIVE REVIEW OF MODERN LITERATURE

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Abstract. *Regular physical activity is associated with lower blood pressure, lower cardiovascular risk and improved quality of life. The article discusses the principles of building physical rehabilitation programs for people with arterial hypertension based on the analysis of modern literature.*

Key words. *Hypertension, interval training, cluster sets, arterial hypertension*

Relevance. High blood pressure is a leading risk factor for morbidity and mortality [1]. Determining arterial hypertension and initiating blood pressure lowering strategies significantly reduces the risk of heart disease, stroke, and other adverse clinical events. Five meta-analyses from 2020 showed that aerobic exercise leads to significant reductions in both systolic and diastolic blood pressure at rest [3]. High-intensity interval training (HIIT) is often used in rehabilitation programs for people with high blood pressure [1]. Resistance work is often used in programs for people with hypertension [2, 3]. Recent meta-analyses have shown that: 1) resistance training reduces systolic and diastolic

blood pressure in persons with prehypertension and hypertension [4]. Hemodynamic responses to a series of resistance exercises also depend on the amount of muscle mass employed, the number of repetitions, the type of training, and the intersets rest, interrepetition rest and intraset rest [7].

Building cluster sets for people with arterial hypertension.

Approaches that include traditional rest periods between them and are accompanied by pre-planned Rest Interval Between Sets (RIBS) are called cluster sets (CS). Conceptually, adding short rest periods, within a set and while maintaining normal rest periods between sets, may offer a methodology to reduce the accumulated fatigue observed during exercise. Some researchers have equated the attitude of work to rest for the entire workout and included this attitude in CS [7]. With this approach, equal work-to-rest ratio is calculated by the formula: $\text{Intraset Rest} = \text{Interset rest} / (\text{number of repetitions} - 1) = (120 / (24 - 1)) = 120 / 23 = 5.2$ seconds. The total rest time will be 260 seconds, and the number of repetitions is 49 times until muscle failure. An example of a workout design for people with hypertension is the following. After articular gymnastics, HIIT is performed, the training time is 20 minutes (2 minutes - heart rate (HR) 50% of HR max; 2 min - HR 85% of HR max). HR max is calculated using the Inbar formula: $\text{HRmax (beats / min)} = 205.8 - 0.68 \times \text{age}$ [5], which has the smallest error ($S_{xy} = 6.4$ beats / min). This is followed by 5 exercises (for all muscle groups), the number of approaches is one, the rest time will be 260 seconds, the number of repetitions is 49 times, the weight of the burden is 70% of one repetitive maximum (1RM). 1RM was calculated using the Epley formula: $1\text{RM (kg)} = (0.033 * \text{number of repetitions}) * (\text{weight of resistance}) + (\text{weight of resistance})$, since this formula is better suited when loads up to 70% of 1RM are realized [6]. In the final part, passive stretching of the working muscles is used. 8 exercises will be done; each exercise will be performed for 3-4 repetitions, stretch the muscle to the maximum, hold it statically for 10-15 seconds, then relax and repeat.

Findings. Analysis and generalization of sources of modern scientific literature carried out in scientific databases (eLibrary, PubMed, Cochrane Library, CINAHL, Web of Science, MEDLINE, SPORTDiscus and Scopus) allowed us to build a protocol for physical rehabilitation of people with arterial hypertension for future research. The training protocol will consist of simultaneous work (HIIT + work with weights (cluster sets)), and in the final part, stretching of working muscles will be used. In a future randomized controlled trial, we will compare this protocol with traditional protocols for physical rehabilitation of hypertensive patients.

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ПОСТРОЕНИЕ ПРОТОКОЛА ФИЗИЧЕСКОЙ РЕАБИЛИТАЦИИ ГИПЕРТЕНЗИВНЫХ ЛЮДЕЙ НА ОСНОВАНИИ ИНТЕГРАТИВНОГО ОБЗОРА СОВРЕМЕННОЙ ЛИТЕРАТУРЫ

Аннотация. Регулярная физическая активность связана с понижением артериального давления, снижением сердечно-сосудистого риска и повышением качества жизни. В статье рассматриваются принципы построения программ физической реабилитации людей с артериальной гипертензией на основании анализа современной литературы.

Ключевые слова: гипертоническая болезнь, интервальная тренировка, кластерные сетки, артериальная гипертензия

SOME PREDICTORS OF UPPER LIMBS INJURY IN SAMBO AND JUDO: A PILOT STUDY

Lapaeva A.G.
Tabakov S.Ye.

Abstract. *The study examines some of the possible causes of upper limb injuries among sambists and judokas. An attempt is made to find the relationship between the injuries received and the lateral preference of athletes.*

Keywords: *upper limb injuries, sambo, judo, laterality*

The Medical Commission of the European Judo Union (EJU) collected injury data from 2005 to 2020 using the EJU registration form at the largest judo tournaments in Europe. Were included 128 high-level competitions with 28,297 competitors, 699 injuries were recorded: knee (17.4%), shoulder (15.7%) and elbow (14.2%) were the most frequent anatomical sites of injury [1].

A study by the French Judo Federation, based on the results of an analysis of 150,067 contractions, showed that shoulder injuries accounted for 28.7% of cases, elbow - 13.5%, knee - 12.2%, ankles and fingers much less frequently. Throwing and falling were the most common causes of shoulder pain [4, 6].

A study by Carvalho et al. [2] showed that the majority of limb injuries (85%) occurred during the training period (71%), in the throwing phase (87.6%), due to direct contact (72%) and with joint damage (62%). Sprains were the most common type (36%), and the most specific affected segment (25%) was the shoulder, which was twice as likely to occur during defensive movements ($p = 0.018$). The occurrence of injuries was associated with training load ($p = 0.001$), and the number of injuries with age ($p = 0.005$), the need to lose weight ($p = 0.007$) and training load (0.001).

Green et al. [5] reported that rapid weight loss of 5% or more of a judoka's body weight puts the athlete at a higher risk of injury ($P = 0.022$). Most of the injuries occurred in the upper limbs. Injuries most often occur as a result of a scrum, throw or attempt to throw.

Kapanji [7] describes the maximum movement of the upper limb as a cone of rotational movement. Inside this cone, there is a spherical sector of the most accessible movements, within which the hand can take an object and bring it to the mouth without changing the position of the body and makes it possible to visually control the movements of the working hands. It can be assumed that movements outside this sector are the least comfortable or require the involvement of neighboring segments in the work.

The mechanism of injury in judo is associated with the technique of throwing and wrestling. According to some studies, the injuries most often affect the upper limbs, since the fight begins with both judokas standing [1, 2, 5]. Right-sided or left-sided stance is a constant in the sports career of any wrestler, which expresses the individual characteristics of the lateral organization of the brain [3].

We see the need to examine the relationship between the lateral preference and receive athletes injuries.

Objective: to identify predictors of upper limb injuries received by athletes in sambo and judo.

Research Methods:

1. Analysis of literary sources;
2. Methods of mathematical statistics;
3. Questionnaire.

Organization of research

We conducted a survey of 32 sambists and judokas of various qualifications (1st grade - 3, candidate of master sports - 7, master of sports - 19, international master of sports class - 2, honored master of sports - 1) with upper limb injuries (shoulder joint - 50%, elbow joint - 47 %, both - 3%). We obtained data on the nature of injuries, lateral preference, the main technical actions of athletes. This study did not take into account differences in gender, age and weight category.

Research results and discussion

All athletes reported that they received surgical (34%) or conservative treatment (66%).

According to the respondents, the main causes of injuries were overtraining (31%), tiredness (28%), weakness of ligaments and / or muscles (28%), as well as rudeness on the part of the competitor (22%). To a lesser extent - poor warm-up (16%), rapid weight loss (3%) and low level logistics of training or competition (6%).

Athletes noted that most of the injuries occurred when wrestling in a standing position during their own attack (28%) or an opponent's attack (50%). During the fight on the ground, 22% of the athletes were injured.

When asked about the weight reduction for the competition, the respondents answered the following: 1-2 kg - 6%, 3-4 kg - 16%, 5-6 kg - 28%, over 6 kg - 28%, do not carry out - 22%. However, athletes apparently do not associate this factor with the injuries received. This may be due to the fact that most of the injuries occurred in training (64%) and not in competition (36%).

More than half (53%) of athletes reported the presence of pathologies or pains in the lumbar and thoracic (3%) spine, and they also indicated in their arsenal of basic technical actions throws with a turn (front step, pick-up, throw over the back, throw over thigh, throw over the back from the knees). There was no statistically significant association between the technique performed and the LBP.

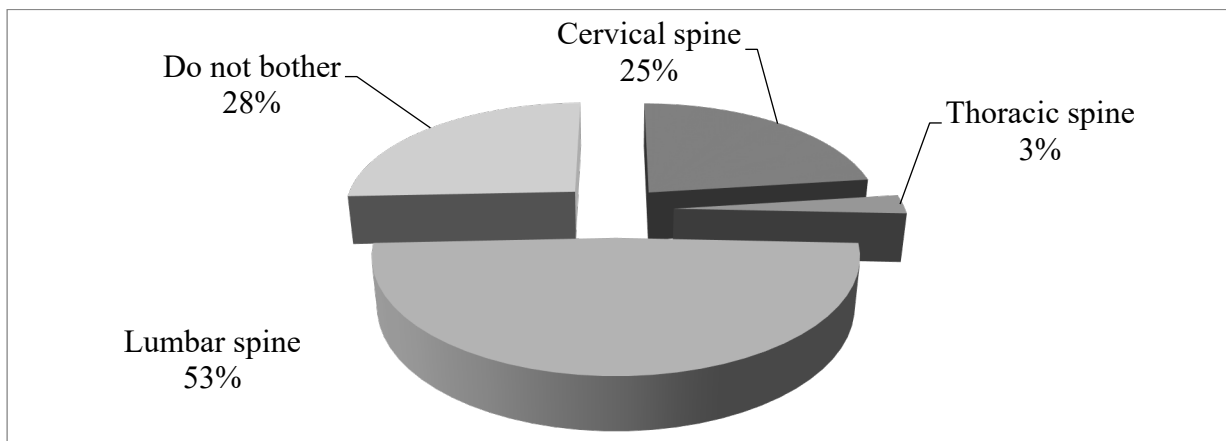


Figure 1 - Localization of pain and pathologies in the spine in respondents

To test the relationship between the injured limb and the athlete's basic stance, the Pearson Chi-Square test with Yates' correction was performed. The relationship between these variables was significant, $X^2 (1, N = 25) = 11.5, p = 0.0006$ (significant at $p < 0.05$). Consequently, athletes with a right-sided stance more often injured the right limb, and those with a left-sided one - the left. Here we eliminated injuries received on the ground, since in this case the lateral preference is less expressed.

Conclusions:

1. Was determined the possible causes of damage to the upper limbs in sambo and judo.
2. There was not statistically significant relationship between pain in the lumbar spine and the technique performed found.
3. A statistically significant relationship was determined between the lateral preference of the athlete's main stance and the injured limb.

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НЕКОТОРЫЕ ПРЕДИКТОРЫ ТРАВМ ВЕРХНИХ КОНЕЧНОСТЕЙ В САМБО И ДЗЮДО: ПИЛОТНОЕ ИССЛЕДОВАНИЕ

Аннотация. В исследовании рассматриваются некоторые возможные причины травм верхних конечностей у самбистов и дзюдоистов. Предпринята попытка найти взаимосвязь между полученными травмами и латеральным предпочтением спортсменов.

Ключевые слова: травмы верхних конечностей, самбо, дзюдо, латеральность

DEVELOPMENT OF COORDINATION ABILITIES OF YOUNG GYMNASTS 5-7 YEARS OLD AT THE STAGE OF INITIAL TRAINING

Lapitskaya T.M.

***Abstract.** This article describes the use means of basic gymnastics for the development of coordination abilities of young gymnasts 5-7 years old at the stage of initial training. It has been involved 2 groups. in pedagogical experiment. The control group was trained according to the standard method. The experimental group performed the proposed complex of coordination exercises.*

***Keywords:** Coordination abilities, young gymnasts, artistic gymnastics, set of special exercises, training process*

Introduction. Artistic gymnastics makes special demands to the development of coordination abilities already at the early specialization level. Girls begin to practice at the age of 5 and soon begin to master difficult coordination exercises on gymnastic objects. The coordination difficulty of gymnastic elements, the development of new movements in structure require constant improvement of special conditioning methods, which are able to provide

the necessary basis for the most effective teaching of exercises, and determined the **relevance** of our research.

The aim of the work is to increase the level of coordination abilities development among young gymnasts 5-7 years old at the stage of initial training using special exercises.

The working hypothesis of the research was the assumption that the fulfillment of motional tasks and gymnastic exercises will increase the level of both motional-coordinating and general physical fitness of 5-7 years old female gymnasts.

Result discussion

Before the experiment, we diagnosed the coordination abilities of young gymnasts, divided them into control (CG) and experimental (EG) groups of 10 people each. After the experiment, we re-diagnosed the development of coordination abilities. The mean before and after the experiment was found in each test for the group (Table 1).

Table 1 – Coordination abilities before and after the experiment

Tests	CG		EG	
	Before	After	Before	After
Orientation in space, sec	6,962	6,695	6,934	5,878
Dynamic balance, sec	29,85	28,96	29,79	26,19
Ability to react, sec	4,923	4,617	4,933	3,521
Sense of rhythm, points	2,9	3,1	3,0	4,4

Within 6 months, 3 times a week for 90 minutes, training sessions were conducted in groups. Gymnasts of the control group were engaged in the program of initial gymnastic training. The children of the experimental group were engaged in our experimental program (Table 2).

Table 2 – Gymnastic exercises for experimental group

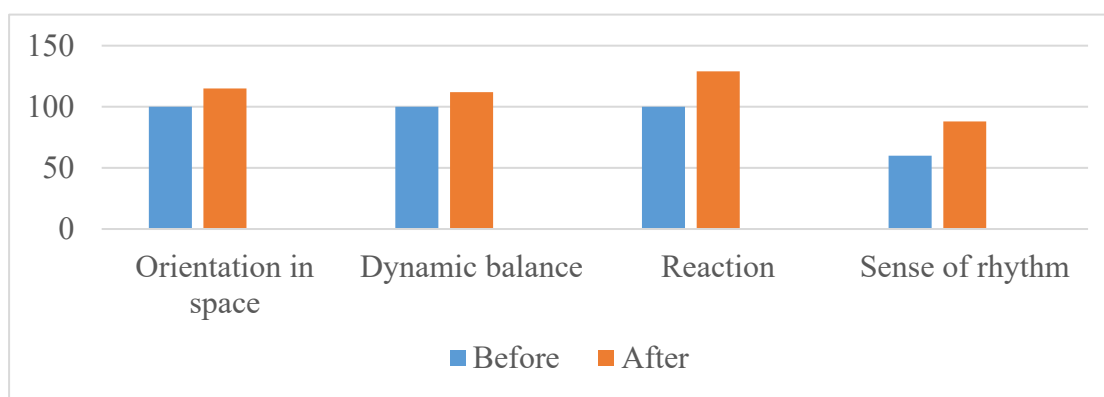
Ability	Gymnastic exercises	Month					
		s	o	n	d	j	f
Dynamic balance	Inclined gymnastic bench, beam; jumps with turns at 90, 180 and 360 degrees with landing fixation; outdoor games.	+	+	+		+	+
Sense of rhythm	Movement, exercises to music; performing team tasks to music; rhythmic improvisation; outdoor games.		+	+	+	+	+
Orientation in space	Movement with direction changes; exercises in motion, with rolls and somersaults, multidirectional movements; trampoline; outdoor games.	+		+	+	+	+
Reaction	Movement by signal; exercises and tasks on a signal; outdoor games.	+	+	+	+		+

According to the results of repeated testing of the coordination abilities of young gymnasts in the EG, the greatest increase in indices was revealed in the motor test for the ability to react (by 29%), in the task on the sense of rhythm (28%) and a slightly less increment in indicators of the test for orientation in space (15%) (at $\alpha = 0.05$, the results are reliable). An unreliable result was identified in the dynamic balance test (12%).

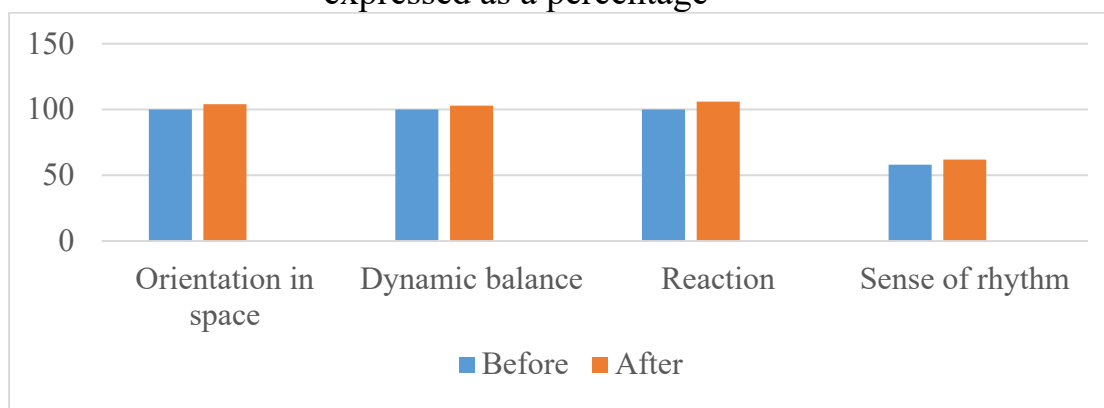
In the control group, the increase in indicators was insignificant in all tests: for orientation in space - 4%, for dynamic balance - 3%, the ability to react increased by 6%, the test for the sense of rhythm by 4%.

From the results obtained, one can see the accuracy and correctness of the selected special exercises for the coordination abilities development, as well as the methodology of their application and their place in the annual training cycle of young gymnasts.

For clarity, the averages of both groups were converted to percentages and shown in charts (Picture 1,2).



Picture 1 – The average EG before and after the pedagogical experiment, expressed as a percentage



Picture 2 – The average CG before and after the pedagogical experiment, expressed as a percentage

Results

Classes of experimental program influenced the development of coordination abilities of gymnasts of 5-7 years old. This is due to age-related changes occurring in the child's nervous system and brain [2], [3], but also by the

stimulating influence of systematic classes according to the program we have developed.

The results of repeated testing of two groups confirmed the effectiveness of the developed sets of special exercises, since the dynamics of the development of various types of coordination in the experimental group was more obvious.

The developed sets of gymnastic exercises can be useful for initial training as a certain physical base for young gymnasts.

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РАЗВИТИЕ КООРДИНАЦИОННЫХ СПОСОБНОСТЕЙ ЮНЫХ ГИМНАСТОК 5-7 ЛЕТ НА ЭТАПЕ НАЧАЛЬНОЙ ПОДГОТОВКИ

Аннотация: в данной статье рассказывается об использовании средств основной гимнастики с целью развития координационных способностей юных гимнасток 5-7 лет, занимающихся на этапе начальной подготовки. В педагогическом эксперименте участвовали 2 группы. Контрольная группа обучалась по стандартной методике. В экспериментальной группе использовался предложенный комплекс координационных упражнений.

Ключевые слова: координационные способности, юные гимнастки, спортивная гимнастика, комплексы специальных упражнений, тренировочный процесс

METHODS OF INCREASING THE SPECIAL PERFORMANCE OF BASKETBALL PLAYERS

Lapshin N. A.
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***Abstract.** Since physical activity during the training process reaches the maximum values, it is necessary to look for new ways to increase the efficiency of the training process. Therefore, the purpose of this work was to develop a methodology for improving the physical performance of basketball players, using specific physical exercises and a light simulator.*

***Keywords:** physical performance, specific exercises, light simulator, basketball players, methods*

The results that an athlete demonstrates during a basketball competition depends on a large number of factors. Currently, the dynamics of the game have changed. The level of technical and tactical readiness is growing, and the physical abilities of the basketball player are beginning to come to the fore. The training loads of basketball players reach the maximum values, their further growth is limited by the physical capabilities of the players. Currently, there are a large number of methods in the scientific literature aimed at improving physical performance in sports. Specialists believe that in order to improve sports results, it is necessary to increase the level of special capacity. Therefore, the search for new ways to improve the effectiveness of the training program, increase the performance of athletes, which will improve their results, is necessary.

In this regard, the aim of our work was to develop a method of improving the special performance of basketball players based on the use of specific physical exercises and a light simulator.

The study involved 20 basketball players aged 15 to 17 years of the sports school of the Olympic reserve, athletes was divided into two groups (experimental and control) of 10 players each group.

Before and after the experiment, special capacity was determined by specially designed tests which include use of light simulators [3].

The following methods were also used in the study: heart rate monitoring (using the system "Polar team system Pro 2 – online"), the method of determining the intensity of the accumulation of pulse debt (INPD)[1], methods of mathematical statistics.

As the result of the research, a method was developed to improve the physical performance of basketball players, which was based on the use of specific physical exercises and a light simulator.

Table 1 presents the scheme of the mesocycle construction during the study.

Table 1 shows as an example a scheme for constructing the basic mesocycle of a team of 15-17-year-olds. This stage of preparation included 4 weeks. Due to the peculiarities of the group schedule, the athletes trained according to the scheme of 3 working days and 1 day off and 2 working days and 1 day off.

Table 1 – Mesocycle of basketball players ' training aimed at improving special performance

Weeks	Week 1	Week 2	Week 3	Week 4
Microcycles (MC)	Retract 2-1 Basic 2-1	Basic 3-1 Basic 2-1	Shock 3- 1 Basic 2-1	Pre-competition 2-1 Pre-competition 3-1
Load direction	Aerobic, aerobic- anaerobic.	Aerobic, aerobic- anaerobic.	Aerobic, aerobic- anaerobic.	Aerobic, aerobic- anaerobic.

The focus of the work during the first MC 3-1 was aerobic in nature, with the introduction of aerobic-anaerobic exercise. During the basic microcycle 2-1, the proportion of aerobic-anaerobic drugs was increased with the aim of preparing for the introduction of new tools and methods to improve special performance. During the second week, there were two basic microcycles, the load during training in these microcycles, the warm-up was aerobic, and during the main part, the intensity reached medium and high values. Two weeks before the competition, a shock microcycle was turned on, aimed at increasing the intensity of exercises, the nature of the load was aerobic-anaerobic. During the pre-competition microcycles, the intensity of physical activity was reduced in order to allow the body to adapt to the increased requirements in previous cycles and reach a new functional level.

Plan of training sessions. At the beginning of the workout, a warm-up is performed in aerobic mode. Exercises are selected for working out those technical elements that are planned to be used in the main part of the training. If a 1 - on-1 game is planned in the main part of the training, then in the preparatory part, exercises on the technique of leading and beating are performed. If the work will be focused on the game 2 on 2 and 3 on 3, exercises are used with transfers in threes and in pairs.

The goal of the main part of the training is to increase the level of special physical performance through the use of specific physical exercises and light simulators that simulate game situations and the mode of competitive activity of basketball players.

Thus, as a result of the study, a method for improving the special performance of basketball players was developed, based on the use of specific physical exercises and a light simulator, a combination of interval training methods and the use of a combined method of game exercises.

The dynamics of indicators of aerobic, anaerobic and special performance before and after the pedagogical experiment was analyzed for determining the effectiveness of the developed methodology [2].

As a result of the study, a method was developed to improve the special performance of basketball players, based on the use of specific physical exercises

and a light simulator. At the same time, the selection of exercises and methods involves a combination of traditional methods of improving performance using the interval training method and the use of a combined method of game exercises.

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МЕТОДИКА ПОВЫШЕНИЯ СПЕЦИАЛЬНОЙ РАБОТОСПОСОБНОСТИ БАСКЕТБОЛИСТОВ

Аннотация. Так как физические нагрузки во время тренировочного процесса достигают предельных величин, необходимо искать новые пути повышения работоспособности эффективности тренировочного процесса. Поэтому целью данной работы явилась разработка методики повышения физической работоспособности баскетболистов, с помощью использования специфических физических упражнений и светового тренажера.

Ключевые слова: физическая работоспособность, специфические упражнения, световой тренажер, баскетболисты, методика

INNOVATIVE ACTIVITY IN THE SPHERE OF HEALTH-PROMOTING TECHNOLOGIES

Litova A.S.
Litvinov S.V.

***Abstract.** Fitness industry is notable for a high increase of investments attraction. It takes traditional athletic health-promoting technologies, modernizes them and creates new training methods. Thus it attracts the interest of broad masses of population. They have their application in the different educational programmes and types of physical education.*

***Keywords.** fitness technologies, physical education, motor activity, modern programmes*

Fitness technologies are drafted to provide the solution of fitness problems in the outcome of these activities. This is the definite whole of methods, approaches and action algorithm aimed at realization of needs and motivation to the health-promoting process that guarantees the result achievement where every person can independently choose an appropriate option of athletic health-improving activity .[2]

Innovation activity is a subject of different spheres of human activity that is justified by the search of new tools for increasing of work efficiency of these spheres of activity (science, production, finance etc.) For sport innovative activity is of a great importance that is aimed at completely different aims of its activity: scientific and methodical studies and working out of new systems of athletes preparation, qualified staff, health-promoting technologies, emotional and motivation sphere of sport etc. [4]

Statistic data of sociology research of the recent decade testify an active physical education and health-improving engagement of the Russian people. According to 2019 data one can see the growth of the number of the people regularly engaged in sport activities from 52% to 61%. It proves that overwhelming part of the Russian population chooses the active lifestyle. At the same time a great share of engaged in sport activities (86%) are young people, 71% of those are from 14 to 25 years old. Also the connection of the people engaged in sport activities with peoples incomes is found out (73% have high income). [1].

In foreign countries the trend for engaging in sport among adult population is considerably higher, especially for retired people, which is different comparing to our country. People go in for sport not less than two times a week, one half of them even more often. The preference is given to the activities that smoothly flow into the hectic schedule of the busy people.

In the world practice of European and American fitness model this field is supported by a medical factor. Fitness here acts as a subcomponent of the struggle with chronic diseases and rehabilitation after different injuries. In the modern average and big fitness clubs one can evaluate body and health state on the basis of which one can choose the definite training format. Very often many qualified coaches have the necessary knowledge that helps to cope with definite problems.

The medical approach in the sphere of industry now is one of the advanced directions of fitness clubs marketing companies and the fitness services sphere in general.

The business in the fitness sphere in Russia has some decades of its existence. The first net appeared on the territory of our country was Russian Fitness Group. Later some foreign companies tried to enter the Russian market but they couldn't get further development. For today the share of foreign fitness companies is insignificant.

By 2020 the top of the biggest fitness nets in Russia had been headed by World Class (as a part of Russian Fitness Group), followed by X-Fit, Alex Fitness, Zebra Fitness, C.C.C.P.

On the basis of the analysis of some Russian and foreign sites reviewing modern fitness services programmes and the schedules of many Russian fitness clubs we have divided fitness programmes into 5 directions: MIND BODY (Pilates, Flex, Healthy Back, Hatha Yoga etc.), Dance Directions (Strip plastic, Zumba, Mix dance, Caribbean Mix etc.), Strength Classes (Body sculpt, Lower body, F-training, ABS etc.), Aerobic Directions (Step, Cycling), Martial Arts. They can be also divided into strength direction, functional one and stretching.

Fitness programme is a form of an athletic engagement first of all of health-improving character. It is justified by the aim of maintaining of the necessary state of health. The programmes can be divided by several main principles: by activity direction that was described above, the second attribute is the equipment availability, the third one is by the character of the realized load (it can be of high intensity, functional, strength, relaxing, rehabilitating), the fourth attribute is by the age criterion (child, junior, youth, for adult people). [3]

Fitness industry is notable for a high increase of innovations attraction into its work. It takes the traditional athletic and health-improving technologies, modernizes them and creates new training methods. In doing so it attracts the interest of broad masses of population, they also find their application in the different educational programmes and types of physical activity.

With the appearance of social nets fitness activities have become even more available. Many fitness programmes started to become online applications, different bloggers started to record their training programmes on the available media platforms. This phenomenon to our opinion has both positive and negative sides.

Availability in the personal blog development has created a big wave of those who want to get easy and rapid money, starting from fraud ways to not qualified coaches.

Having analysed big fitness internet resources we have found the latest fitness industry trends of 2020 [5]:

1. Sport at any free minute (it is not necessary to give up training if there is no spare hour for a full training, modern specialists work out programmes from 5 minutes a day).

2. Fitness trackers (available and popular individual devices that allow vividly control parametric data of your exercise and health state, for example Apple Watch, Honor Band, Xiaomi Smart Band).

3. Hatha Yoga (a new direction of a high interval training in combination with stretching exercises and the harmony of a spiritual state).

4. Welness-coaching (a constant all sided support by a coach the keeping healthy lifestyle, scientifically justified approach to training).

5. Animal Flow (a direction of gymnastic fitness training with yoga elements imitating animal movements).

6. Strong by Zumba (a colourful dance fitness programme based on Latin dances, complicated by strength exercises as well as Martial Arts strokes).

Innovations in the sphere of sport services can be directed at the commercializing of this direction, increasing of higher profit, commercial market development. As an example of this process one can mention innovations in the sphere of fitness (appearance of new fitness programmes, merging of two traditional programmes, marketing and sport nutrition sales, sport equipment that is of demand by clients and fitness business). All this is supported by research studies and paid by the definite sponsors who manufacture goods and create demand and marketing strategies in this field.

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ИННОВАЦИОННАЯ ДЕЯТЕЛЬНОСТЬ В СФЕРЕ ОЗДОРОВИТЕЛЬНЫХ ФИТНЕС-ТЕХНОЛОГИЙ

Аннотация. Фитнес индустрия отличается высоким ростом привлечения инноваций. Она берет традиционные физкультурно-оздоровительные технологии, модернизирует их и создает новые методики тренинга. Этим привлекает интерес широких слоев населения. Применение они находят в различных образовательных программах и видах физической культуры.

Ключевые слова: фитнес-технологии, физическая культура, двигательная активность, современные программы

COMPARATIVE ANALYSIS OF FUNCTIONAL CONTROL SYSTEMS IN ARTISTIC SPORTS TRAINING PROGRAMS

Lopushanskaya Anna-Maria

***Abstract.** Advanced understanding of the biomechanics of a dance is essential to identify the specific musculoskeletal and cardiovascular demands placed on the body and to uncover the pathomechanics that may lead to injury. Based on comparative study of functional control systems in various sports we find the most important ones for dance sport. The findings of our study can help to improve the methodology of training the technique and protect dancers from unnecessary injuries and to reduce both injury incidence and prevalence*

***Keywords:** dance sport, functional control systems, postural control, injury prevention*

It has become routine practice to incorporate exercises on developing various functional control systems into training programs for athletes from different sports. However, the model of training that is most efficient for each sport discipline, including its characteristics and demands, remains unclear, as well as the frequency, intensity and duration of the exercise that would be most beneficial have not yet been determined [1].

Besides there have been little to no studies investigating efficiency of training programs in dance sports [5], while the most widely studied disciplines were soccer, basketball and handball and the majority of the studies revealed significant differences between the contribution of functional control systems to the training performance [1]. Moreover, the majority of studies focused on elite adolescent athletes with the results showing significant difference between the researched group and control group [3]. At the same time aesthetic sports are becoming more popular, and information regarding the functional control system during different types of dance movements may be important for coaches.

The main goal of the paper is to establish whether a gold standard of training exists on the grounds of comparative analysis of functional control systems in different sports [1-5]. The results seem obvious, e.g., performance improvement and injury prevention as efficient training not only reduces the risk of body imbalance, fall, or subsequent injuries, but also contributes to the optimization of motor performance in a number of athletic disciplines.

For the purpose of the study figure skating on ice, roller figure skating [5], gymnastics [2, 4] and general above-average levels of physical activity athletics [3] may be stated to be quite similar to dance sports in many technical and biomechanical aspects. Dance is high demanding sport and comprises of a number of fundamental human movements that require complex motor coordination of both the upper and lower body extremities requiring balance, strength, flexibility, agility, coordination, and endurance. Moreover, to make it all more interesting and complex, it is followed by an additional manipulation of the apparatus, which may involve throwing or passing using different techniques. Thus, mastering dance technique requires repetitive physical loading that may exceed the limits of the athlete's anatomical and physiological capabilities and lead to injuries.

On the basis of analyses of selected papers, we can not outline global conclusion about the effectiveness of various types of training without taking into account the input of each control system. As such, according to [1] for positive effects on balance performance of an athlete an efficient training protocol should last for 8 weeks, with a frequency of two training sessions per week, and a single training session of 45 min.

At the same time in order to minimize the number of injuries during above-average levels of physical activity the authors of [3] concerned mobility disorders in the shoulder complex and the pelvic complex and revealed significant abnormalities. They assumed that this state is a result of the sports training undertaken as well as the additional physical activities designed to build muscle mass. It is stressed that these workouts do not always involve the appropriate proportions of strengthening exercises to stretching exercises. For practical applications, these results are important in identifying which muscles are more involved in dance sports and which control systems can be improved to for planning specific training programs for these muscles, which may provide benefits to elite athletes and, most likely, to athletes of other levels who aspire to perform and succeed at international level.

In the postural control system, the central nervous system regulates sensory information from the visual, vestibular, and somatosensory systems in order to produce adequate motor output to maintain a controlled body posture. Postural control concerns the inherent interrelation between the distribution of tonic muscle activity (“posture”) and the adaptation to internal or external perturbations (“equilibrium”). Taking a proper look at gymnastics [4] may reveal that functional stability of athletes develops with age and it reaches maturity in the second decade of life. It has been also shown that practicing gymnastics in childhood and adolescence enhances the development and functioning of the postural control system. The gymnastic experience may lead to decreased dependence on visual inputs in postural control of standing on an unstable surface. It may also stimulate the development of proprioceptive reweighting processes in children.

The findings of [5] aimed at describing the neuromuscular activity of elite athletes who performed various roller figure skating jumps show that almost all of the evaluated muscles showed greater activity during the jumps with more rotations than during the jumps with fewer rotations. In addition, the muscles were frequently more active during the take-off and flight phases, especially in the jumps with more rotations. The results obtained should be considered when planning training programs with specific exercises that closely resemble the roller figure skating jumps. This may be important for the success of dancers in competitions.

To sum up, further understanding of the biomechanics of a dance is essential to identify the specific musculoskeletal and cardiovascular demands placed on the body and to uncover the pathomechanics that may lead to injury. Thus the findings of our study can help to improve the methodology of training the technique and protect dancers against unnecessary injuries and to reduce both injury incidence and prevalence

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СРАВНИТЕЛЬНЫЙ АНАЛИЗ ОСНОВНЫХ СИСТЕМ ОРГАНИЗМА В ТРЕНИРОВОЧНЫХ ПРОГРАММАХ В СЛОЖНОКООРДИНАЦИОННЫХ ЭСТЕТИЧЕСКИХ ВИДАХ СПОРТА

Аннотация. Глубокое понимание биомеханики танца является основой для определения нагрузки на опорно-двигательный аппарат и сердечно-сосудистую систему, что позволяет определить двигательные ошибки, ведущие к травмам спортсменов. На основании сравнительного анализа основных систем организма в различных видах спорта мы находим наиболее важные для танцевальных видов спорта. Результаты исследования возможно использовать для улучшения методологии подготовки спортсменов и снижения травматизма.

Ключевые слова: танцевальный спорт, функциональное состояние организма, контроль позы тела, предотвращение травм

HOW MODERN TECHNOLOGY SHAPES SPORTS TRAINING PRACTICE OF TOP LEVEL CROSS-COUNTRY SKIERS

Lunina A.V.

***Abstract.** The ability of modern sports technology to produce large volumes of data opening new insights into theory of sports and exercise makes it instrumental in sports research and practice. Drawing on examples from cross-country skiing, the paper discusses how technology can aid sports training of top-level athletes and assesses potential challenges for application of progressive technology.*

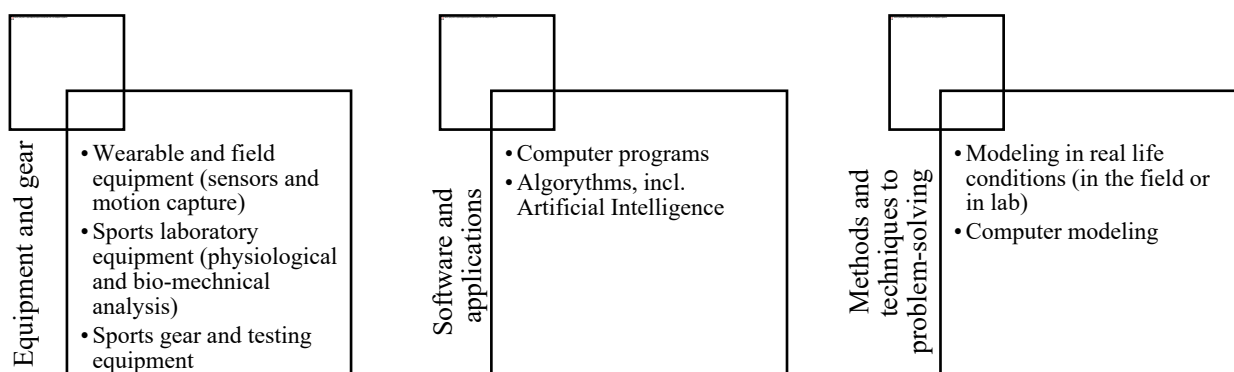
***Keywords:** top performance training, cross-country ski, sports technology*

Introduction. Globalization, as the catalyst of change in many aspects of modern life, promotes rapid development and exchange of technology across globe and industries. Sport is part of this process. The pivotal role that sports technology plays in training practice is attributed to its ability to produce new sets

of data, potentially translate it into new insights and, thus, enrich the empirical base underlying the theory of sports and exercise. The growing number of sports laboratories and research centers across the globe experiment with technology innovations recognizing its potential in driving top athletes performance improvement. The present discussion aims to capture recent trends in sports technology development and assess its influence on system of training of world-class cross-country skiers.

Methods. Analysis of scientific-methodical literature and presentations from technical exhibitions held during Sports Science events 2017-2019.

Discussion. For the purpose of present discussion, the technology ecosystem is limited to three building blocks as on Picture 1.



Picture 1 – Key areas for use of technology in training practice by top athletes

In cross-country skiing, one of the key challenges for realizing effective training process along the path to Olympic podium is the difficulty (and often inability) to obtain complete and accurate information that describes athlete’s sports and physical activity directly in the “fields”, i.e. while competing or training on snow ski-track. This problem has triggered technology interventions by sports researchers and experts, whose studies currently aim to addressing two major issues:

1. Invent technological solutions to collect qualitative data describing key internal (eg. physiology) and external (eg. terrain, kinematics, etc) parameters of “principal” competition activity of xc-skier in outdoor environment during ski race or training on the snow;
2. Translate new data into insights, convert insights into new methodologies and practical tools for use in training routines by top athletes who shall ultimately raise its sports performance.

To illustrate how technology fits into classical Sports training framework by L. P. Matveev, the summary of key trends identified in research focused on cross-country skiing is presented in Table 1.

Table 1 – The scope for technology within classical Sports training framework as applied to cross-country skiing

	System of competitions	System of sports exercise	Factors contributing to training efficiency
Key objectives for use of technology	Describe and analyze “principal competition activity”: <ul style="list-style-type: none"> Performance analysis during competition period Comprehensive description of the “principal competition activity” Modeling of individual “principal competition activities” in the long run 	Improve athlete performance: <ul style="list-style-type: none"> Training methodologies to match the “principal competition activity” Modeling competition activity indoor and outdoor 	Improve training efficiency: <ul style="list-style-type: none"> Reduce and prevent injury Optimize athlete daily routine Effective use of sports competition gear
Aspect of training	Describe technique / Sub-technique classifications	Technique and tactics / Biomechanics: 1.Body position impact on aerodynamic drag	Injury prevention during exercise
Technology used	- inertial sensors placed on ski; - wearable high-precision kinematic GNSS receivers; - differential GPS receivers	- wind tunnel; - roller-ski treadmill; - motion capture using 3D cameras; - geospatial modeling using equipment and software	- work load control and exercise monitoring and using motion capture (video and sensors)
Aspect of training	Describe pacing strategy	2. Kinematic analysis (of sub-techniques' cycle length, frequency, velocity)	Diagnostics of physiological condition and athletes recovery
Technology used	-wearable sensors and GPS/GNSS receivers -computer modeling	- video, 3D motion tracking systems and tools	- wearable and laboratory equipment sensors
Aspect of training		3.Kinetic analysis (incl. Force-Power-Velocity assessment)	Simulation of ski kicks and ski sliding frictions to improve skiing conditions during race
Technology used		- ski poles sensors used on roller-ski treadmills; - integrated sensor systems in ski poles; - portable 2D force binding systems, IMU	- ski testing systems used indoor and outdoor - modeling
Aspect of training		Physiological parameters and response (eg oxygen uptake, metabolic economy) during exercise and influence of precipitation and gravitational forces	
Technology used		- climatic wind tunnel; - roller-ski treadmills	

Aspect of training		Development of individual training programs and periodization models	
Technology used		- electronic training logs - Modeling based on accumulated data which describes various "internal" and "external" training parameters	

Conclusion. Technology demonstrates new approaches to various aspects of sports training framework. It refines and clarifies existing knowledge, leads to improved tools and methods used in sport exercise. As was demonstrated, technological innovations play vital role for problem-solving in outdoor sports disciplines with multiple varying competition parameters (like in cross-country skiing). Yet, with opportunities come challenges. Several questions arise: How to bridge “technology – research – practice”? How to translate new insights into strategy? What capabilities and prerequisites are needed for adopting changes and starting using them?

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ВЛИЯНИЕ СОВРЕМЕННЫХ ТЕХНОЛОГИЙ НА ТРЕНИРОВОЧНЫЙ ПРОЦЕСС ЛЫЖНИКОВ-ГОНЩИКОВ ВЫСОКОЙ КВАЛИФИКАЦИИ

Аннотация. В статье на примере лыжных гонок рассматриваются различные аспекты использования современных технологий в системе спортивной подготовки спортсменов высшей квалификации.

Ключевые слова: тренировка высококвалифицированных спортсменов, лыжные гонки, спортивные технологии

MODEL OF HEALTH PROTECTIVE BEHAVIOR OF PROFESSIONAL ATHLETES WITH INJURIES OF LIMBS

Malikova L.A.

***Abstract.** The article is devoted to the analysis of the factor model of health protective behavior of athletes with limb injuries. We think that the model of health protective behavior of professional athletes has specific features. In the course of the study, it was found that the model of health protective of professional athletes is determined by their attitude to health, while amateur athletes are determined by an external personal orientation and does not depend on their attitude to health.*

***Keywords:** health protective behavior, model of health protective behavior, sport injury, sports of the highest achievements*

Most authors define health protective behavior as a form of human activity reflecting the relationship between human health and its quality of life [2].

We consider that health protective behavior is a construct that includes functional and structural components (N.N. Vishnyakova, G. Huppmann, F. Wilker, N. V. Yakovleva, V. V. Nikolaeva, V. E. Kagan, E. I. Rasskazova, G. A. Arina, M. A. Iosifyan, E. I. Pervichko, I. M. Shishkova, D.F Marks, M. Murray, B. Evans). Researchers note the specificity of health protective behavior of professional athletes (L.I Wasserman, E.A Dubinina, A.B. Leonova) [2]. In addition, the health protective behavior was changed of athletes with limb injuries, therefore it is necessary to study the mechanisms of self-regulation behavior. The conducted factor analysis allows us to identify the main factors in the groups of professional and amateur athletes, reflecting these mechanisms and causal relationships of health protective behavior.

The empirical study involved male athletes with limb injuries: professional athletes (32 subjects) and amateur athletes (30 subjects), the average age were 22 years old.

We used the next methods: "Index of attitudes to health" (S. Deryabo, V. Yasvin, 1999); "Questionnaire for the study of health protective activity" (Yakovleva N.V., Yakovlev V.V., 2012); scale "Health" of the questionnaire "Research of self-esteem" (T. Dembo, S.Ya. Rubinstein, modified by A.M Prikhozhan, 1988); "The level of subjective control" (E.F. Bazhin, E.A. Golyunkina, A.M. Etkind, 1984). Mathematical and statistical processing was carried out using factor analysis (principal component analysis, varimax rotation).

We have identified 7 factors in the group of professional athletes, which in total explain 71.09% of the spread of all variables. The first factor, describing 22.61% of the variance, includes the scales of the Health Attitude Index questionnaire. The factor was named by us as "Attitude to health" and demonstrates the involvement of all three components of the structure of attitudes to health: cognitive, emotional and behavioral [1]. At the same time, the structure of the attitude system of elite athletes has a specific feature in the form of a greater significance of the behavioral component. We assume that the behavioral component becomes especially relevant precisely in the injury situation, when the athlete needs to perform specific rehabilitation exercises.

The second factor, describing 12.28% of the variance of variables, includes the scale of the questionnaire "Level of subjective control" and was called "Intrenality". Factor 3 includes the scale "Practical component of attitudes to health" of the questionnaire "Index of attitudes to health" and the scale "Standard health preservation" from the questionnaire "Research of health protective activity". The factor was named "Reference health", weight load - 2.81 (10.1% of the variance of variables). The appearance of this factor tells us about the existence of a kind of "reference" level of health, which the athlete strives to meet. Herewith, the "reference" level of health is primarily focused on the behavioral component. Professional athletes strive to correspond to a certain behavioral pattern that is included in their attitude of value about the ideal state of health [1]. A.V. Karpov and N.V. Yakovleva, in their study of health models of professional and amateur athletes, note the individual health model of athletes is narrower and more specific, due to a kind of symbolic health assessment system. This specificity of the reference criterion system for assessing health is due to the importance of health for continuing a successful professional career [2].

The model of health protective behavior of amateur athletes includes six factors that explain 73% of the variance in the variables. In contrast to the model of professional athletes, the main factors of model of amateurs is the factor "Externality" (22.6% of the variance). Factor 2, which explains 19.27% of the variation in variables, was named "Goal-setting". The developed goal-setting demonstrate the ability to set and achieve goals related to improving their health in spite of amateur athletes have the external locus of control. Furthermore, none of the variables reflecting the attitude to health indicator was identify in their

model of health protective behavior. Consequently, amateur athletes have another determinants of behavior related with promotion of health.

Conclusions:

1. Health protective behavior of professional and amateur athletes has different mechanisms of behavior regulation.

2. The factors "Attitude to health", "Internality", "Reference health" in the model of professional athletes describe 45% of the spread of all variables, which demonstrate their greatest significance in the regulation of health protective behavior. Positive attitude to health, internal locus of control and reliance on health standards determine the success of professional athlete's rehabilitation after injury.

3. Health protective behavior of amateur athletes to extent with external locus of control and goal-setting.

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МОДЕЛЬ ЗДОРОВЬЕСБЕРЕГАЮЩЕГО ПОВЕДЕНИЯ ПРОФЕССИОНАЛЬНЫХ СПОРТСМЕНОВ С ТРАВМАМИ КОНЕЧНОСТЕЙ

Аннотация. Статья посвящена анализу факторной модели здоровьесберегающего поведения спортсменов с травмами конечностей. Нами было выдвинуто предположение, что здоровьесберегающее поведение профессиональных атлетов имеет специфические особенности. В ходе исследования было получено, что модель здоровьесбережения профессиональных спортсменов в большей степени обусловлена особенностями их отношения к здоровью, а спортсменов-любителей детерминируется экстернальной личностной направленностью и не зависит от их отношения к здоровью.

Ключевые слова: здоровьесберегающее поведение, модель здоровьесберегающего поведения, спортивная травма, спорт высших достижений

SIMPLE ANALYSIS OF «CHINESE SAMBO» SAMBO'S DEVELOPMENT RESEARCH IN CHINA

Mao Wenjie
Tabakov S.E.

***Abstract.** Sambo is a traditional Russian sport, and its development worldwide is rapid and successful. As a big country with one-fifth of the world's population and great potential for development, China has a slow development of Sambo. Therefore, this article uses Sambo's development in China in terms of talent training, personnel exchanges, and competition participation. Carry out analysis and put forward reasonable suggestions.*

***Keywords:** «Chinese Sambo», development potential, promotion*

Introduction: 2018, FIAS obtained provisional recognition of the International Olympic Committee. This means that Sambo has been gradually recognized by the world in the process of development. At the same time, combined with the development of Sambo in China in recent years, it can be seen that Sambo is very popular in China. And the potential is huge.

«Chinese Sambo» personnel training development: FIAS carried out Sambo technical training and exchanges in China as early as 2012, but it didn't really start to accelerate the frequency of exchanges until 2017.

From the first training of national coaches and referees held in Beijing in May 2019, with 259 participants participating, it can be seen that the formal cooperation between China and FIAS has been successful. In January 2020, more than 130 people were trained for the second time. Therefore, Sambo is very popular in China, and these several trainings have also laid a solid foundation for the development of Sambo in China, the organization of competitions, and the establishment of organizational structures.

«Chinese Sambo» personnel exchange situation: Sambo was promoted late in China, and it was mostly carried out in an unofficial manner in the early stage. However, with the promotion of Sambo itself and China's emphasis on sports, China's exchanges with FIAS have gradually increased, and there have been great breakthroughs in official exchanges.

Chinese Sambo athletes participation: Since 2012, Chinese athletes have successively participated in some Sambo competitions and achieved some results, but none of them reached the highest level. This shows that there are problems in the Chinese Sambo high-level athlete training system. On the other hand, there are few Sambo competitions held in China, and they are mainly unofficial. Compared with a large number of Sambo competitions around the world, the number of participants in China is relatively small.

Table 1 - Sambo training staff employment distribution statistics (unit/person)

Sambo training	Judo	Chinese wrestling	Other wrestling projects	Martial Arts	Others
The first national training for coaches and referees	84	46	32	63	34
Master class for SAMBO coaches	11	5	3	5	5
National Sambo coach referee sambists training	39	23	11	37	23

We selected three representative official Sambo trainings as samples. First of all, from the above data, it can be seen that the relevant employment distribution of the trainees involved in these several trainings is mainly the wrestling project and fighting. Secondly, It is an objective fact in competitive sports to change talents from special projects into new ones, and it is also a special way of talent flow in competitive sports [1]. Therefore, the training of outstanding sambo athletes can be achieved through rapid transformation of similar events such as judo and Chinese wrestling.

China Sports Market: Profitability is an important indicator to measure the sustainable development of an industry [2]. The scale of China's sports industry has been increasing year by year, and the value added has also shown an upward trend year by year. In addition, China's sports industry, as China's sunrise industry, has been increasing year by year in China's GDP, and its share of China's GDP has also increased year by year, and has risen rapidly. This shows that the sports industry has ushered in a period of rapid growth in recent years.

Discussion: It can be seen from the growing scale of sambo's talent training, personnel exchanges and competition participation in China in recent years that sambo's development in China has gradually entered an accelerated stage.

And Chinese-style wrestling and judo, as sports similar to sports-style sambo, can improve the speed of sambo's development in China through rapid project transformation.

With the large-scale and rapid development of the Chinese sports market in recent years, Sambo can take this opportunity to accelerate its development in China. The development of a sport is inseparable from marketization. China and Russia have close exchanges. Therefore, the cooperation between FIAS and the Chinese Sports Bureau is further strengthened to establish a sound Chinese Sambo association and management system.

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НАЧАЛЬНЫЙ АНАЛИЗ «КИТАЙСКОГО САМБО» – ИССЛЕДОВАНИЕ РАЗВИТИЯ САМБО В КИТАЕ

Аннотация. Самбо - традиционно русский вид спорта, стремительно и успешно развивается во всем мире. Как большая страна с одной пятой населения мира и большим потенциалом развития, Китай медленно развивает самбо. Поэтому в этой статье рассматривается развитие самбо в Китае с точки зрения обучения талантов, обмена кадрами и участия в соревнованиях. Проведён анализ и выдвинуты некоторые предложения.

Ключевые слова: «китайское самбо», потенциал развития, продвижение

MODERN SPECIAL TESTS IN ICE HOCKEY

Medvedev V.G.

Davydov A.P.

Abstract. *This article present informative tests for evaluation special ice hockey skills such as speed skating with stick, maneuvering rapidity, controlling of puck (stickhandling), target accuracy, rapidity of acquisition the puck (taking). These tests passed metrological justification and recommended to use in practice of training in ice hockey for elite and non-elite hockey players.*

Keywords: *speed skating with stick, stickhandling, deke, shots, ice hockey skill tests*

Introduction. Our previous investigations was devoted to searching and development special tasks for test of hockey players skills and abilities [4, 6]. We performed analyze of official hockey games for set discriminative characteristics in actions which performed by hokey players who had different fitness level. Game actions was a base of informative tasks. We used standard ice surface markings (lines, zones, faceoff circles and spots) for development of standard distance in special tests. Necessary equipment included photocells and speed camera. All tests passed metrological justification and recommended to use in ice hockey training process.

Discussion. There are 4 tasks for evaluation maneuvering rapidity: speed skating with stick in straight direction, speed skating in straight direction with controlling of puck (stickhandling), and deke maneuvering in both different directions [3, 5, 7]. Tests are performed in central (neutral) zone between two blue lines. Deke test need obstacles placed as triangle with a 3 m base (on the central red line) and 2.6 m height [3, 5, 7]. The main characteristic is a duration of the test performing.

There are 2 tasks for evaluation target accuracy skills: series of 10 shots on goal (top corner) performing from “comfortable” and “uncomfortable” sides (because hockey player have only “left” or “right” grip stick). Puck must appear from under opaque screen. The main characteristics are number of goals scored, duration of the test performing, shot duration, asymmetry (“comfortable” and “uncomfortable” sides) [2].

The complex skill test for hockey players is the take a puck mastery. The puck pass between two red circles (face-off circles). Hockey player must stop the puck very quickly in this test (10 trials). The main characteristic is a duration of the test performing [1].

If it need to evaluate the technical mastery of hockey players, regression residuals method is convenient for this. The algorithm of the modiflicated integrative approach to the study of sport movement technique for pedagogical researches is good for more detail investigation of hockey player technique.

Conclusion. Rapidity and accuracy are main special abilities for hockey player. Therefore informative characteristics of special tests are duration of game

actions and number of goals scored. Special tests include game specific tasks. There are speed skating, stickhandling, deke, series of shots, taking a puck.

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СОВРЕМЕННЫЕ СПЕЦИАЛЬНЫЕ ТЕСТЫ В ХОККЕЕ

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Аннотация. В статье представлены информативные тесты для оценки специальных способностей хоккеистов, таких как: быстрота передвижения по льду с клюшкой, быстрота маневрирования, владение шайбой, меткость, быстрота овладения шайбой. Тесты прошли метрологическую проверку и рекомендованы к использованию в тренировочном процессе для хоккеистов различной квалификации.

Ключевые слова: бег на коньках с клюшкой, ведение, обводка, броски, тестирование хоккеистов

SPECIFICS OF MOBILIZATION AND FIGHTING QUALITIES, TEAM SPIRIT AND LEVEL OF SELF-CONTROL OF WATER POLO PLAYERS WITH VARIOUS SPORTS QUALIFICATIONS AND PLAY ROLES

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Abstract. *In team sports such as water polo, teamwork and game thinking are very important. But nevertheless, individual psychological readiness also affects the performance of effective technical and tactical actions by an athlete, which in turn affect the efficiency indicator of the entire team and its sports result.*

In this regard, the study of individual mental characteristics of athletes in their relationship with technical and tactical indicators may be an urgent issue. In particular how much they are the limiting factor. In this study, the goal was to identify the relationship between the indicators of mental mobilization, self-control, team spirit and the level of technical and tactical skill among the water polo players of the Super League teams of the Russian championship.

Keywords: *Water polo, self-control, team spirit, fighting qualities, technical and tactical actions*

The effectiveness of sports activity depends on a complex of psychophysiological factors. Regarding of this the study of the psychophysiological characteristics of a person capable of influencing the results of sports activity has an important theoretical and applied value and has long attracted the attention of researchers [1, 2]. Considering the psychophysiological determinants of physical activity plays an important role in the building of adequate training process that contributes to the most complete disclosure of the individual capabilities of an athlete [3]. At the same time the most important psychophysiological factors influencing the success of sports activities are individual and typological characteristics of a person.

In team sports such as water polo teamwork and game thinking are very important. Nevertheless, individual psychological readiness which enables an athlete to perform effective technical and tactical actions is also a very important parameter which in turn affects the efficiency indicator of the entire team and its result.

The study of psychophysiological characteristics and individual mental characteristics of athletes in their relationship with technical and tactical indicators may be an urgent issue. How much they are limit individual and team performance.

The goal of this study is to reveal the features of mental mobilization, self-control, team spirit and to identify the most stress-resistant playing roles among the water polo players of the Super League teams of the Russian championship.

To identify the features of mobilization qualities, the level of self-control and team spirit, we used a questionnaire survey of athletes using a sports-psychological questionnaire for playing sports according to a sports-psychological methodology (UMBK) with further interpretation of the results [4]. The study involved 23 water polo players of sports qualification from 1 adult category to MSMK of various playing roles. As a result of the survey, the following data were obtained.

The table 1 shows the data of the indicators of mental mobilization, team spirit and self-control among water polo players depending on their qualification.

Table 1 - Indicators of mental mobilization, team spirit and self-control among water polo players depending on their qualification

Qualification		Team spirit	Mental mobilization	Self-control
1st Grade	Average	22,00	20,11	20,00
	Error of Mean	2,00	1,46	2,22
	Coefficient of Variation	9%	7%	11%
	Failure probability	10%	40%	40%
Candidate Master of Sports	Average	24,50	22,50	22,17
	Error of Mean	1,33	1,17	1,50
	Coefficient of Variation	5%	5%	7%
	Failure probability	2-3%	10%	10%
Master of Sports	Average	21,75	21,25	19,25
	Error of Mean	0,75	1,25	1,75
	Coefficient of Variation	3%	6%	9%
	Failure probability	10%	10%	40%
International Master of Sports	Average	23,75	23,75	18,00
	Error of Mean	2,25	2,38	1,00
	Coefficient of Variation	9%	10%	6%
	Failure probability	2-3%	2-3%	40%

Table 2 - Indicators of mental mobilization, team spirit and self-control among highly qualified water polo players, depending on the playing role

Playing role		Team spirit	Mental mobilization	Self-control
Goalkeeper	Average	23,50	22,25	22,50
	Error of Mean	3,11	2,22	0,58
	Coefficient of Variation	13%	10%	3%
	Failure probability	2-3%	10%	10%
Winds & Drivers	Average	24,00	22,43	20,57
	Error of Mean	2,89	2,82	2,76
	Coefficient of Variation	12%	13%	13%
	Failure probability	2-3%	10%	10%
Defender	Average	22,00	21,71	19,29
	Error of Mean	2,00	1,98	1,38
	Coefficient of Variation	9%	9%	7%
	Failure probability	10%	10%	40%
Center Forward	Average	22,20	19,60	18,60
	Error of Mean	1,64	1,95	3,65
	Coefficient of Variation	7%	10%	20%
	Failure probability	10%	40%	40%

The table 2 shows the data of the indicators of mental mobilization, team spirit and self-control among water polo players of high sports qualifications, depending on their sports role.

We can make the following conclusions:

1. The most psychologically stable in terms of the indicators under consideration are water polo players with the sports category of the Candidate Master of Sports and the sports title of MSMK.

2. The most psychologically stable in terms of the indicators under consideration are water polo players with a sports role - a goalkeeper and the winds and drivers.

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ОСОБЕННОСТИ МОБИЛИЗАЦИИ И БОЕВЫХ КАЧЕСТВ, КОМАНДНОГО ДУХА И УРОВНЯ САМОКОНТРОЛЯ ИГРОКОВ В ВОДНОЕ ПОЛО С РАЗЛИЧНОЙ СПОРТИВНОЙ КВАЛИФИКАЦИЕЙ И ИГРОВЫМИ РОЛЯМИ

Аннотация. В командных видах спорта, таких как водное поло, очень важны командная работа и игровое мышление. Но тем не менее индивидуальная психологическая подготовленность влияет и на выполнение спортсменом эффективных технико-тактических действий, что в свою очередь влияет на показатель результативности всей команды и ее спортивный результат.

Ключевые слова: водное поло, самоконтроль, командный дух, бойцовские качества, технико-тактические действия

BRICS SPORTS DIPLOMACY

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Melnikov V

Prokip Y.

Abstract. *The union of Brazil, Russia, India, China and the Republic of South Africa (BRICS), formed at the beginning of the 21st century, is distinguished not only by its powerful economic potential, but also by the established structure and traditions in the field of physical culture and sports.*

Key words: *international sports relations, BRICS countries, sports diplomacy, interstate relations*

Introduction. Sport in the twenty-first century continues to play an important role in the implementation of the domestic and foreign policies of the countries of the world. There is a constant expansion of sports contacts at the international and interstate level. This trend, which can be described as a vivid manifestation of sports diplomacy, has developed in the BRICS states.

These countries have for many years implemented public and private programs in the field of physical education and sports, which, in turn, allows their representatives to successfully compete in major international sports competitions.

Main study. The purpose of the study is to analyze the participation of BRICS athletes in the Olympic Games, provide a comparative analysis of public and private programs that contribute to the development of physical culture and sports. The study emphasizes the systematic analysis of indicators (number of participants, sports, disciplines and exercises) of the participation of representatives of BRICS countries in the Olympic Games.

The theoretical analysis and synthesis of statistical data and normative documents in the field of physical education and sports in each of the BRICS countries made it possible to identify strategic directions of cooperation in this field, as well as ways to implement programs for the improvement of the population's health the nation at the national and interstate level.

Having considered and systematized the empirical research data, it should be noted that the BRICS countries have an innovative sports and, in some cases, Olympic heritage.

A number of representatives of the BRICS countries are champions and prize-winners of the Olympic Games. Their achievements have become a powerful potential for the development of international cooperation in the high-performance sports, mass sports, and sports recreation. They contribute to the development of Olympic, non-Olympic and national sports.

Conclusions.

The BRICS countries show mutual interest in joint research and systematization of knowledge in the field of physical education and sports and strive to exchange information and implement practical recommendations through state and public organizations in the field of education, the Olympic movement, physical education and sports.

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СПОРТИВНАЯ ДИПЛОМАТИЯ СТРАН БРИКС

Аннотация. Межгосударственный союз Бразилии, России, Индии, Китая и Южно-Африканской Республики, сформировавшийся в начале XXI века, отличается не только мощным экономическим потенциалом, но и сложившейся структурой и традициями в области физической культуры и спорта.

Ключевые слова: международные спортивные связи, страны БРИКС, спортивная дипломатия, межгосударственные отношения

ANALYSIS OF STYLISTIC TYPES OF AESTHETIC GYMNASTICS COMPOSITIONS

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***Abstract.** Composition is a term widely used in various arts and artistic sports, including aesthetic gymnastics. Analyzing stylistic types of compositions of outstanding choreographers, the authors give a classification of composition characteristics of modern programs of aesthetic gymnastics.*

***Keywords:** choreographic art, aesthetic gymnastics, technical composition, pantomimic composition, etude-imagery composition*

Introduction. In general terms, when speaking of aesthetic gymnastics proximity to art, especially choreography, it is important to keep in remember not only spectacle and beauty, but also genetic connection. The combination of choreography, music, acting –all this polyphony of factors of visual, auditive, spatial, temporal gives a multicolored composition. For modern conception of composition nature it is necessary to refer to the background, analyzing the views of outstanding choreographers and trends that determine the essence of underlying processes in choreographic art.

Research results. The attempt to divide dance into different kinds has been made by many dancers in the past. For example, Jean Georges Nover divided the dance into two types: ‘pure’ dance and pantomimic or acting dance. Nover suggested that dance should be acting. Nover’s traditions had a greater impact on many choreographers until the late 19th century. At the base of the play, they considered a playful, imagery dance.

However, the scenic understanding of the music did not always lead dance artists to think in choreographic ways. Only ‘pure’ music and only ‘pure’ plastic arts, not burdened with any imagery meaning content – this is the motto of the rhythmoplastic theory of J. Dalkrose. The idea of a new attitude to music is most vivid and talented in the creative practice of A. Duncan, M. Fokin, A. Gorsky and others. George Balanchine returned a ‘pure’ dance, overtaken by storyline ballets to the ballet scene in the 20th century. [3].

The traditions of music and dance are amazingly refracted by the world’s strongest gymnastics teams. The knowledge accumulated by many generations of choreographers and the principles of performances were reflected in the vision of the composition of new kind of sport. A video analysis of the performances of the world’s strongest teams led to the following classification of compositions:

technical, pantomimic and etude-imagery. As the results of the research showed, most compositions, namely 62% can be attributed to the pantomimic type, about 24 per cent to the technical and only 14 per cent to the etude-imagery [1, 2].

These data indicate that the absolute majority of teams prefer *the pantomimic type*. The pantomimic composition is a combination of elements of aesthetic gymnastics using traditional poses, turns, different positions of the arms, legs, head and movements. Such compositions should convey the human experiences contained in the musical work. Gymnastic composition has no plot and phables in subtext of action to music.

According to art theory, *the etude-imagery type* is like a small play with characters. It assumes, along with good technical preparation, the highest level of expressiveness, artistry, ability to transform within reasonable limits. Compositions in this style always attract special attention, are well memorized and often lead their followers to victory.

The technical type requires gymnasts to have excellent musical and technical abilities. The essence of the technical composition is its external side, dance forms, technical skill. It does not paint human passions, characters and has no plot.

Conclusions. Studying the general trends in the composition of musical compositions, more than half of the coaches who were surveyed (about 64%) find that the etude-imagery type is extremely complex, as it requires a perfect mastery of modern technology and a high level of creativity, both in staging and in performance of exercises. So in the short term, as we consider, the technical and pantomimic types are likely to remain dominant. The etude-imagery type will be considered by little amount of choreographers. Several teams remain committed to this type and can win with it, and thus also promote it. However, it must be added that the regularity of composition art is a conditional variant of the creative process of the composer. There are no strict rules, laws and prescriptions in the theory of composition, but there are only manifested regularities, depending on the direction and individual thinking of the choreographer.

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АНАЛИЗ СТИЛЕВЫХ ТИПОВ КОМПОЗИЦИЙ ЭСТЕТИЧЕСКОЙ ГИМНАСТИКИ

Аннотация. Композиция – термин, широко распространенный в различных сферах искусства и видах спорта с художественной направленностью, к числу которых принадлежит эстетическая гимнастика. Анализируя стилевые типы композиций выдающихся хореографов, авторы статьи приводят классификацию видов композиций, характерных для современных программ эстетической гимнастики.

Ключевые слова: хореографическое искусство, эстетическая гимнастика, техническая композиция, пантомимическая композиция, этюдно-образная композиция

ANALYSIS OF THE INFLUENCE OF PSYCHOLOGICAL AND SPECIALIZED EXERCISES ON THE RESULTS OF DANCERS IN BALLROOM DANCING AT THE AGE OF 14-16 YEARS

Murzin N.D.

***Abstract.** This article is aimed at studying the influence of an experimental technique for improving the coherence of motor actions in ballroom dancing in athletes aged 14-16 years on their results. The obtained data will improve the effectiveness of the system of training athletes in dance sports.*

***Keywords:** Ballroom dancing, coordination of motor actions*

Introduction: Ballroom dancing is a complex coordination sport, one of the main components and characteristic features of which is the duet performance of the dance by two partners. Their effective physical and emotional interaction directly determines how beautiful and interesting the dance will be for the audience and the judge[3]. In sports dancing, partners are involved, and how their sports activities are designed by the coach. It depends on their technical performance of a particular dance, but since sports activities should be reflexively constructed, this obliges the coach to pay attention to the interaction of partners, their emotional stability, and conflict resolution[2].

Method: The study involved 10 dance couples aged 14-16 years. The training method included special and psychological exercises, as well as general physical training. Dance couples trained using this technique for 4 months. The expert evaluation was carried out before and after the experiment.

Table 1 - Participants of the experiment (Age 14-16 years)

№	Dance Couple	Age	Dance class	Dance experience
1	Man Lady	16 15	D	3 4
2	Man Lady	14 14	C	3 3
3	Man Lady	15 14	E	2 2
4	Man Lady	16 14	C	4 4
5	Man Lady	15 14	D	3 3
6	Man Lady	16 15	B	5 5
7	Man Lady	14 15	C	3 4

8	Man	15	D	3
	Lady	15		3
9	Man	16	C	5
	Lady	15		4
10	Man	14	D	3
	Lady	15		4

The methodology consisted of special exercises; Performing a dance composition to slow and fast music; Changing the roles of men and lady in the dance; Improvising basic movements; Performing a dance in front of a mirror to control motor actions. In the choreography: Passive stretching in dance couple; Mirror exercise; Performing dance composition with jumps and rotation. General physical training included: squats; running; jumping; push-ups. Psychological training included: performing a dance composition with the selected emotions and other exercises. The methodology consisted of special exercises; Performing a dance composition to slow and fast music; Changing the roles of men and lady in the dance; Improvising basic movements; Performing a dance in front of a mirror to control motor actions. In the choreography: Passive stretching in dance couple; Mirror exercise; Performing dance composition with jumps and rotation. General physical training included: squats; running; jumping; push-ups. Psychological training included: performing a dance composition with the selected emotions and many other exercises.[1] The expert assessment consisted in the evaluation by the judges and specialists of the performing skills of couples according to the main criteria used according to the rules of the Russian Dance Union: Main rhythm, Working feet, Dynamics, Line hull, Musicality, Coordination of motor actions. Each criterion was evaluated by the arbitrator on a scale from 1 to 3. For each criterion, the average index was calculated, as well as the average index on the sum of the criteria. There were 5 professional judges who participated in the expert assessment. Couples performed the final 5 dances of the standard and 5 dances of the Latin American program.

Result:

Table 2 — t-test

Program	x±σ		T-test	p
	Before	After		
European program	5.56±0.89	12.55±0.98	16.59	P≤0.01
Latin American Program	6.12±0.83	13.66±0.91	18.73	P≤0.01

The results of the expert evaluation showed a significant improvement in all the criteria in the performance skills of the dancers after the experiment.

Discussion and conclusion: In this article, the effectiveness of combined training of special and psychological training of dancers in dancers aged 14-16 years was demonstrated. Based on this, it should be said that in order to improve the results of athletes, it is necessary to introduce this technique into the training process of athletes in ballroom dancing. In practical terms, the results of the study allow us to recommend this technique to coaches when working with young dancers to improve their performance and mutual coherence in a dance couple.

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АНАЛИЗ ВЛИЯНИЯ ПСИХОЛОГИЧЕСКИХ И СПЕЦИАЛИЗИРОВАННЫХ УПРАЖНЕНИЙ НА РЕЗУЛЬТАТЫ ТАНЦОРОВ В БАЛЬНЫХ ТАНЦАХ В ВОЗРАСТЕ 14-16 ЛЕТ

Аннотация. Данная статья направлена на изучение влияния экспериментальной методики повышения согласованности двигательных действий в бальных танцах у спортсменов 14-16 лет на их результаты. Полученные данные позволят повысить эффективность системы подготовки спортсменов в танцевальном спорте.

Ключевые слова: Бальные танцы, согласованность двигательных действий

HEROES OF THE FIRST RUSSIAN OLYMPICS: THE FATE OF N.P. GLADYLSHCHIKOV

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***Abstract.** The article presents the research on the biography of one of the first Russian Olympians, N.P. Gladylshchikov. Being involved in sport since childhood and having performed successfully at the Second Russian Olympiad in 1914 in Riga, he is an impressive example of athletes of Pskov region, who popularized sport not only competing professionally as wrestler, but also performing on the circus arena with a group of animals, taking part in film-making.*

***Keywords:** Olympic movement, Russian Olympians, Olympic legacy, Pskov region, wrestling*

At the 5th Olympics in 1912 which took place in Stockholm, the Russian team ranked 16th among 18 participated countries. This inglorious performance of our Russian Olympians was called «disgrace to the whole Russian nation» [2, 4]. In order to avoid such failures in future Nikolai II disposed of holding their own Olympics in Russia every year. The history of the first all-Russian Olympics is not completely explored as well as fates of its heroes whose course of life can be an example for new generations. At the second all-Russian Olympiad the wrestler from Pskov province N.P. Gladylshchikov ranked second in semi-heavy weight wrestling. To our knowledge, he is the only native of Pskov region who stood out in such noticeable results at the Russian Olympics.

The purpose of the research is to trace biography of N.P. Gladylshchikov in its connection with the Olympic movement and culture.

The objectives: a) analyze the first Russian Olympics, b) identify the main heroes of the all-Russian Olympics, c) reveal the biography of N.P. Gladylshchikov, d) show how the personality of the athlete affects society so far.

The scientific novelty - the biography of the winner of the 1914 Russian Olympiad N.P. Gladylshchikov in the context of the history of the Olympic movement and the philosophy of Olympism is considered for the first time.

The theoretical value - in the course of the research conducted, a theoretical approach to the study of biographies of the heroes of the first Russian Olympics as one of the directions of the history of physical culture, sport and the Olympic movement of Russia is proposed.

The practical significance is that the results of the study can be used:

- in training courses on the history of physical culture, sports and the Olympic movement, both at the regional and all-Russian level;
- in the fund and exhibition activities of the Sports Museum and the Olympic Movement of the Pskov Region;
- to promote the Olympic movement, ideals and values of Olympism among different social and age groups.

Results. We have observed the biography of Nikolai Pavlovich Gladilshchikov, a silver medalist on semi-heavy weight wrestling at the all-Russian Olympics in Riga. Born in 1895 in Toropets, he was infatuated with the circus since childhood. It's started when teenager saw a half-naked person on the wrestling carpet, he was throwing a bronze bar high up and rolling two-beam weights over his powerful shoulders smiling [1, 8].

Nikolai graduated from a real school in Toropets, then – from the Petersburg Polytechnic Institute. During his college years, he became seriously interested in sports. In the evenings he studied in the famous sports club of athleticism and physical development «Sanitas». As member of the club, he became a participant at the Second Russian Olympiad in 1914 in Riga [5]. According to the results of the fights in the semi-heavy weight, the winners were: 1 O. Kaplur («Sanitas», Saint-Petersburg); 2 N.P. Gladylshchikov («Sanitas», Saint-Petersburg); 3 E.Y. Wildman («Aberg», Yuryev).

During the First World War N.P. Gladylshchikov was taken to the eastern front into the cavalry, and in between the battles he continued to train, trying his forces in fist fights and free wrestling. After the war Nikolai came to his native Toropets where he became the instructor of the district military committee for sports. In 1922 he became Republic semi-heavy weight champion at the all-Russian wrestling competitions [6]. In 1924 at an agricultural exhibition in Toropets, Nikolay saw the brown bear, owned by a local miller, and prevented the animal's attacking the crowd of people [7]. After a while, Nikolay Gladylshchikov with his extraordinary assistant Mishuk (the bear) began to travel in villages and cities (such as Smolensk and Vitebsk), showing strength and agility.

N.P. Gladylshchikov adapted his works for the theatre, Mishuk and its owner became heroes of films «Bear wedding», «Dream of the telegraphist», «Golden reserve», «Silver Prince», «Northern love» and the scientific-popular film about experiments of academician Pavlov [1]. The creative quest leads the young tamer to Vladimir Durov, and Nikolai decided to unite different animals. In 1927 he entered the arena with them for the first time in Orekhovo-Zuevo. The

first mixed group of predators in the USSR: 6 lions, 4 brown bear and 1 polar bear, 1 wolf, 2 tigers, 1 donkey, several roosters, jackdaws and crows. For the first time in history domestic animals, predators and birds were united.

After the first triumph an active touring life began: Volga – Crimea – Leningrad – Donbass... Books have been written about the interesting and fascinating pathway of the first Russian tamer Gladylshchikov. His work is highly appreciated around the country. He was awarded the Order of the Red Banner of Labour and was awarded the title of Honored Artist of the RSFSR [6,8].

Commenting on his departure from the circus later, Nikolai said, «The powers are no longer the same. I'm getting older. Maybe it's not noticeably so much, but the animals may feel the weakness of a man and wait until I miss. I cannot live without animals, but I want to leave them undefeated... and so want to be still involved!» [3], Nikolai Pavlovich left the arena at age 69.

Conclusion. The first all-Russian Olympiads had a positive impact on the development of the sports and Olympic movement, even with the huge number of issues during the sport competitions in Riga. As for N.P. Gladylshchikov, it is safe to say that he is an example of a unique person not only for the Pskov region, but also for whole Russia. He is a silver medalist of the Second Olympics in Riga, a participant of the First World War, where he was wounded and returned to a peaceful life. Besides, he continued going in for sport, became a champion of the RSFSR and later became a special artist and animal trainer. N.P. Gladylshchikov is an example of a harmoniously developed person who has integrated sport and culture in his life, the values that underlie the philosophy of Olympism.

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ГЕРОИ ПЕРВЫХ РОССИЙСКИХ ОЛИМПИАД: СУДЬБА Н.П. ГЛАДИЛЬЩИКОВА

Аннотация. В статье представлено исследование биографии одного из первых российских олимпийцев, Н.П. Гладильщикова. Занимаясь спортом с детства и успешно выступив на Второй Российской Олимпиаде в 1914 году в Риге, он стал впечатляющим примером среди спортсменов Псковской области, который популяризировал спорт не только как профессиональный борец, но и как артист на цирковой арене с группой животных, а также участвовал в кинопроизводстве.

Ключевые слова: олимпийское движение, российские олимпийцы, олимпийское наследие, Псковская область, борьба

THE ROLE OF RUNNING DISCIPLINES IN THE DEVELOPMENT OF THE AFRICAN ATHLETICS

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Abstract. *This study is the analysis of the development of athletics in the African region, in particular the development of running disciplines. The formation of the regional sports movement, development of running disciplines as well as the results of African runners at major international competitions are studied.*

Keywords: *athletics, running, Africa*

Introduction. The development of sport in Africa and the integration of the region into the international sports movement have occurred with a significant lag in comparison with other regions of the world. From the beginning of the

colonization of Africa by Europeans until the second half of the 20th century, most countries in the region were not sovereign states and had no independent representation in international sports organizations. The few African athletes competing in major competitions usually represented their colonial states (France, Britain, etc.). The only African countries represented at the Olympics and recognized by the International Association of Athletics Federations (IAAF) before World War II were Egypt and South Africa.

Main study. The major influx of African states into the international sports movement came in the second half of the 20th century and is explained by the collapse of the colonial system. During this period, recognition by major sports organizations was often one of the signs of sovereignty and became a priority for African governments. Some states received recognition from the International Olympic Committee (IOC) and the IAAF before acquiring official independence (Zimbabwe, Mauritius, Uganda, etc.).

At the same time, in many African countries the collapse of the colonial system was accompanied by political and economic crises, which made the development of sports in the region difficult. Colonial racial segregation and restrictions for indigenous people to participate in sports competitions were the reasons for the low level of development of sports culture, training and performance. So the attention of local sports organizations focused on sports that were not costly in terms of infrastructure and did not have high initial training requirements. Such an approach led to the widespread use of athletics, namely running disciplines. Running allowed involving large parts of the population who previously had no access to organized training. These disciplines proved to be undemanding in terms of sports facilities and allowed running classes and competitions to be held even in poor countries and regions. The development of athletics became a priority for many countries in Africa. Most countries established national athletics federations and gained recognized by the IAAF within 3-5 years after gaining independence. Some countries (Cameroon, CAR, Ethiopia etc.) even received IAAF recognition earlier than the IOC recognition, which shows the high importance of athletics for the region.

The most objective indicator of development of running disciplines in Africa is the results of African athletes at the Olympic Games and World Athletics Championships. An analysis of the performances of African countries at the Olympic Games demonstrates the enormous role of running disciplines in shaping the sports image of the region. Of the 401 medals won by African countries

throughout their participation in the Olympic Games, 244 were won by track and field athletes, including 230 by runners. A similar pattern can be observed in the World Athletics Championships. Successful performances in running disciplines allowed African countries such as Kenya and Ethiopia to be among the top ten in the number of medals won during the World Championships. At the 2015 World Championships in Beijing, Kenya became the first African country to top the medal table (with only one medal won by Kenyan athletes outside the running program).

Not only have regional running programs and its active inclusion in national and continental competitions contributed to the considerable success of African countries in running disciplines, but also support for women's participation in running. A comparison of the results of African male and female runners shows a lack of meaningful success for women compared to men before the 1990s. But in the late 20th and early 21st centuries, the results of African women equal those of men and sometimes surpass them. An explanation for this phenomenon can be found by looking at the general trends of the international sports development. The IOC Commission for Olympic Solidarity, founded in 1981, began to redistribute part of the Olympic movement's income to support sport in developing regions. One of the main activities of the Commission was to stimulate the development of women's sport, especially in countries where, for historical and economic reasons, women's participation in sport had been limited. In 1997 a program "Women and Sports" was established, which at first involved 30 African NOCs, and by the early 2000s all African NOCs were part of the program to varying degrees. In the initiatives of the program, running had a special place for the economic and organizational reasons described above.

Conclusions. Despite the lag in the development of the sports movement Africa managed to achieve significant successes on the world sports scene in the second half of the 20th and the beginning of the 21st century. The region owes much of this success to the development of running disciplines, the creation of regional athletics structures, continental championships and games, and the support of women's sports through international initiatives. The current success of African countries in international competitions is almost entirely due to the high performance of African runners.

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РОЛЬ БЕГОВЫХ ДИСЦИПЛИН В РАЗВИТИИ ЛЕГКОЙ АТЛЕТИКИ В АФРИКЕ

Аннотация. Данное исследование посвящено анализу развития легкой атлетики в Африканском регионе, в частности развитию беговых дисциплин. Исследованы особенности формирования регионального спортивного движения, развития беговых дисциплин, а также результаты африканских бегунов на крупных международных соревнованиях.

Ключевые слова: легкая атлетика, бег, Африка

INCREASING THE INDEPENDENCE AND ACTIVITY OF 6-8-YEAR-OLD GYMNASTS BY MEANS OF THE FORMATION OF CONTROL AND ASSESSMENT SKILLS

Novikov A.V.

***Abstract.** The article is devoted to the basis of the formation methodology of control and assessment skills, the purpose of which is to improve the training process of gymnasts aged 6-8 years old on the basis of the development of their independence and activity.*

***Keywords:** control and assessment skills, independence and activity, gymnasts*

Introduction. At present, modern technologies make children more and more constrained, passive, less sociable, and unable to engage in independent activities.

In the available literature, it was not possible to find works aimed at increasing the independence and activity of children aged 6-8 years old during training sessions. In this regard, it was important to develop and test the methodology of forming control and evaluation skills aimed at increasing independence and activity of gymnasts aged 6-8 years old.

The aim of the work is to improve the training process of gymnasts aged 6-8 years old on the basis of the development of their independence and activity.

Methods. Control and assessment skills are types of skills that give a person the opportunity to timely detect and evaluate the positive and negative results of their activities with the prospect of further improvement [1].

Independence is a multidimensional, personal-activity education that manifests itself in the needs, skills, and abilities to independently, proactively put forward goals, formulate problems that are significant for oneself, choose means, show perseverance and bring the solution of these problems to positive results, and evaluate one's activities [2].

Characteristic indicators of the development of independence, according to Ya. L. Kolominsky, E. A. Panko, N. A. Tsyrukun, are:

- a) the ability to do work on their own, to notice the need to do something (if the ground is dry, water the flowers, if toys are scattered, then remove them);
- b) the ability to independently perform actions without the help of an adult and strict control;
- c) the ability to consciously perform actions in a situation of specified requirements and conditions of activity;

d) the ability to consciously act in new conditions (set a goal, take into account the conditions, carry out elementary planning, get results);

e) the ability to give a decent assessment of their work, to conduct elementary self-control [2].

The proposed method is aimed at increasing the independence and activity of gymnasts aged 6-8 years old. The method of forming control and assessment skills in gymnastics classes was tested. The main task of the coach is to teach control and evaluation skills during the training process. Gymnasts tasks:

1) mastering the skills of self-control, adequate self-esteem;

2) mastering the basic theoretical knowledge of the technique of performing gymnastic exercises;

3) determining together with the coach the goals and objectives of the lesson, drawing up a plan for their solution, performing exercises in the types of all-around, monitoring the stages of implementation;

4) independently solve the difficulties encountered in the training process (prepare the projectile, think through the order of performing exercises on it), bring solutions to positive results;

5) monitoring and evaluating the performance of exercises by other students based on a comparison with the standard.

The goal of methods of test and evaluation skills were provided by the solution of these problems and purposeful interaction of the trainer with the students and their parents.

Much attention was paid to independent work. Students had to complicate the performance of physical exercises (add some movement, perform with closed eyes, etc.), change the mobile game (add a new rule), come up with a relay race, perform different exercises from one starting position, come up with and perform several exercises in a row, etc. Practical skills of gymnasts became more flexible, mobile, creative activity was manifested.

Each motor task was completed with a self-assessment, a groupmate's assessment, and a coach's assessment. After that, a joint discussion was held, the similarities and differences between the assessments were revealed (how many and what errors were in the performance, why exactly this assessment, and not another one).

In order to determine the effectiveness of the experimental methodology for the formation of control and assessment skills on the basis of the MBU "World of Sports "Steel", a study was conducted on the level of independence and activity

of gymnasts aged 6-8 years old in motor activity, which was determined by diagnostic signs. To conduct the experiment, two groups of 40 children were formed from among the children involved, of which 20 people were part of the experimental group and were engaged in the proposed method, and 20 people were part of the control group and were engaged in the initial training program of the MBU "World of Sports "Steel".

During the experiment, the emphasis was placed on such diagnostic features as: independent work (conducting warm-ups, performing physical exercises without help, composing sets of exercises in all-around sports, etc.); the ability of a gymnast to control the performance of motor actions, analyze them, evaluate them; self-control and self-esteem; showing initiative during the workout.

Conclusions. 1. The method of forming control and assessment skills in the training process had an effective impact on increasing the independence and activity of gymnasts aged 6-8 years old. In the experimental group, the number of gymnasts with a high level of independence and activity increased from 10% to 45%, while the number of gymnasts with a low level of independence and activity significantly decreased (45% – before the experiment, 10% – after the experiment). The opposite trend was observed in gymnasts of the control group. The number of sportsmans with a high level of independence and activity increased by only 5% per KG.

2. Gymnasts need to develop control and assessment skills so that they have an adequate self-assessment, analysis and self-control abilities.

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ПОВЫШЕНИЕ САМОСТОЯТЕЛЬНОСТИ И АКТИВНОСТИ ГИМНАСТОВ 6-8 ЛЕТ ПОСРЕДСТВОМ ФОРМИРОВАНИЯ КОНТРОЛЬНО-ОЦЕНОЧНЫХ УМЕНИЙ

Аннотация. Статья посвящена основе методики формирования контрольно-оценочных умений, целью которой является совершенствование тренировочного процесса гимнастов 6-8 лет на основе развития их самостоятельности и активности.

Ключевые слова: контрольно-оценочные умения, самостоятельность и активность, гимнасты

THE DYNAMICS OF FUNCTIONAL STATE AS AN INDICATOR OF PROGRESS WITH DIFFERENT TRAINING VOLUMES

Osipova D.A.
Gridasova E.Y.

Abstract. *Effective management of the training process of athletes requires constant monitoring of the functional capabilities of the body. When planning the load It is very important for a professional coach to maintain the necessary balance – trainings load should be sufficient enough to increase the muscular endurance and strenght, but should not be stressful for the athlete's body.*

Keywords: *training volumes, funcitonal state indicators, yearly volumes, adaptation, training methods*

Introduction. The issues of training the track and field's athletes of our country are of particular importance, considering the well-known problems that have occured in recent years in this sport. In order not to repeat the mistakes of previous years, it is necessary to have a distinct system of training, which should be based on scientific recommendations [1].

The beginning of such researches was conducted in the period from 2017 to 2020 at the Russian State University of Physical Culture, Sports, Youth and Tourism by a scientific group led by the head of the Department of Theory and Methodology of Athletics named after N. G. Ozolin Zelichenko V. B. and Professor of the Department Cherkashin V. P., as a result of which pedagogical methods were proposed to improve the process of long-term training athletes in track and field [2].

Discussion. The assessment of the functional state allows to determine not only the level of athlete's progress, but also to reveal the peculiarities of body systems, as well as to assess the health state.

Purpose of the study: to analyze the ranges of annual training's loads based on changes in the indicators of the functional state of young athletes involved in the training stage (up to 2 years).

To assess the functional state of athletes, the following indicators were registered and calculated:

- Romberg test;
- Shtange's test with a calculated Skibinsky index;
- calculation of the functional state index;
- variational heart rate monitoring.

15 athletes aged 12-14 years, specializing in short distances took part in the experimental study.

The assessment of the yearly volumes of training exercises performed by our subjects was carried out according to the average yearly volumes recommended for athletes of a given age and appropriate for subject's level of athleticism and skills[2].

Table 1 - Proper annual volumes of training equipment and annual volumes performed by a group of subjects

Table 1. Group of training means	Proper annual volume ranges MIN - MAX	Volume performed by the participants
1. Running on distances up to 80 meters with an intensity of 96-100 % (km)	14,0 - 17,1	17
2. Running of training over 80 meters with an intensity of 91-100 % (km)	31,8 - 38,8	39
3. Stars and starting exercises up to 40 meters (sets)	552 - 674	650
4. Running on distances over 80 meters with an intensity below 90 % (km)	73,1 - 89,3	89
5. Jumping exercises (reps)	5416 - 6620	5720
6. Special strength exercises (t)	29 -35	33
7. General physical preparatory exercises (h)	182 - 222	200

We can see that the actual results performed by subjects and the proper training volumes are mostly corresponds with training volumes recommended by specialists (Table 1). And the special exercises of a running-sprint orientation 1, 2, 3 and 4 approaching the maximum recommended volumes. And the training volumes in exercises of the last three groups, which are more related to general physical training, are at the level of the average ranges. This may indicate a certain tendency of the coach for early specialization in the training of young athletes.

Table 2 - Indicators of the functional state of athletes

Table 2. Indicators	The assessment of the functional state					
	Beginning of the study			End of the study		
	Fine	Good	Satisfying	Fine	Good	Satisfying
The Romberg Test	53,3%	26,6%	20%	66,6%	33,3%	0%
Skibinsky Index	60%	33,3%	6,6%	73,3%	26,3%	0%
Index of functional state	66,6%	33,3%	0%	80%	20%	0%
PARS	60%	33,3%	6,6%	80%	20%	0%

Assessing the functional state of young athletes before the experiment and after the year cycle of training, we can spot a distinct growth of all indicators. As can be seen from Table 2, the coordination functions, the functional capabilities of the respiratory system and the activity indicators of the regulatory systems in the participants after a year of training increased and became to grade either fine or good. All this indicates that the coach follows the correct paths of selection and planning the annual volume of training loads.

Conclusions. The assesment of the annual training volumes performed is showing it's compliance with the proper recommended volumes of training methods for sprinters 12-13 years old, involved in the training cycle (up to 2 years).

The analysis of the functional state is showing good adaptation for the perfomed volumes of the training methods.

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ДИНАМИКА ФУНКЦИОНАЛЬНОГО СОСТОЯНИЯ КАК ПОКАЗАТЕЛЬ СООТВЕТСТВИЯ ОСВАИВАЕМЫХ ТРЕНИРОВОЧНЫХ НАГРУЗОК

Аннотация. Эффективное управление тренировочным процессом спортсменов требует постоянного контроля функциональных возможностей организма. Для тренера в его профессиональной деятельности очень важно соблюсти необходимое равновесие при планировании нагрузки – объем ее должен быть достаточным для повышения уровня тренированности, но не должен быть стрессовым для организма спортсмена.

Ключевые слова: тренировочные нагрузки, показатели функционального состояния, годовые объемы, адаптация, тренировочные средства

PR-TECHNOLOGIES OF RUSSIAN PROFESSIONAL FOOTBALL CLUBS IN ORGANIZATION OF WORK WITH FANS DURING THE PERIOD OF RESTRICTIONS RELATED TO THE SANITARY AND EPIDEMIOLOGICAL SITUATION IN 2020

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***Abstract.** The article discusses PR-technologies for working with fans and highlights the methods that are used by Russian professional clubs. In the course of the study, the attitude of football fans to the technologies used to work with them in the conditions of the sanitary and epidemiological situation in Russia was clarified.*

Keywords: PR-technologies, professional football clubs, football, fans, sanitary and epidemiological situation

Today, the return of viewers can be a disaster. Emergency Director of the World Health Organization (WHO) Michael Ryan made this conclusion in early August, when the epidemiological situation in the world was better than it is now. So, the rule for holding football matches and attending public events depends on the measures taken by the state.

In Russia, unlike many European leagues, after the resumption of the 2019/2020 season, the Russian Premier League did not prohibit the admission of spectators to the stadiums. Following the relaxation of quarantine measures, 10% of the total capacity of the stadium was allowed to attend, followed by 30% when the Union of European Football Associations (UEFA) issued guidelines for fan attendance. By the 10th round of the Premier League, it had grown to 50 percent of the spectators of the arena's capacity, including 5 percent - guest fans, subject to individual safety rules (wearing masks and gloves in public places) and social distance.

Nevertheless, in order to develop relationships with fans in such conditions and attract new sponsors, football clubs need to plan even more carefully work with football fans, constantly collect the most complete information about them, conduct various polls, organize live broadcasts in Match-Day and Non- Match-Day, inform fans and the media about significant events in the work of clubs. That is, to plan your work on social networks more carefully.

One of the tasks of PR technologies in sports is to create, establish, maintain or strengthen trust, understanding and sympathy, and on the other, relationships with groups, usually called audiences, which, being inside or outside a given organization, determine its existence and development.

Consumers are the leading link in ensuring the competitiveness of any sports organization. For sports clubs, these are fans and football fans. Therefore, football clubs are now trying to organize their work with fans in such a way that they always maintain interest, even without attending matches.

Thus, the study and analysis of PR technologies for organizing work with football fans during the period of a sanitary and epidemiological situation is an urgent issue, since its application allows to provide support, popularity and prestige of the club.

One of the main tasks of PR-technologies of football clubs in organizing work with fans is the formation and subsequent improvement of the image of a sports organization.

In view of the variety and diversity of PR technologies that are used by Russian football clubs in a sanitary and epidemiological situation, let us dwell in more detail on one football club - FC Lokomotiv Moscow.

1) Media and Internet methods (methods of working with the media).

PR specialists pay special attention to cooperation and communication with the media during a pandemic. The football club interacts with all the media that read (watch, listen to) its target audiences. It should be noted that cooperation between specialized media and sports organizations is usually mutually beneficial. For example, without the media, especially without information about a sports organization of interest to the general public, circulation / views of the publication may fall.

In order to convey the most objective and relevant (from the point of view of the club) information, the creation of their own projects in the media is widely used - Club TV.

«Loko-TV» TV channel is a club media project. Registered as an electronic media outlet, Loko-TV shows its releases on social networks and video hosting (YouTube). Loko-TV also organizes online viewing of the club's matches on the Internet and broadcasts live from training sessions, creating online meetings of fans, football players and coaches. Now, in the context of the sanitary and epidemiological situation, club television plays an essential role in maintaining the relationship between the club and the fans.

2) Financially stimulating methods.

At the moment, during a pandemic, PR services are aimed at maintaining the image of the club. The image of the club will stimulate sales of merchandise and club attributes. This work will help attract new brands that will sponsor the clubs.

So, now social contests are often held among fans, where items of the club's attribute are played out. Somewhere you just need to write a comment (allows you to write to the popular page), somewhere to repost the record (attracts more views of the record) or tell your fan story on the page, marking the club and sponsors' page. This makes it possible to popularize the club, as well as advertise sponsors, both at normal times and during the period of the sanitary and epidemiological situation.

3) Educational / recreational methods.

Promotion of a football brand is always accompanied by education of the main target groups - fans, business audience, sponsors, etc. Education is aimed at

both actively drawing the attention of the general public to the football club, and at strengthening interaction with already formed target groups.

At the moment, in the context of the sanitary and epidemiological situation, PR services place less emphasis on the entertainment part: they do not arrange wide events, concerts, etc. Often, Russian football clubs held meetings of fans with players, coaches and management on a regular basis so that fans could ask all their questions. There were also autograph sessions for players and coaches. In connection with the situation with COVID-19, PR services are now also holding similar meetings, but only online.

The educational function is expressed in the form of a number of events held by clubs, among which one can highlight the holding of commemorative tournaments named after great athletes, emphasizing the positioning of clubs as honoring their history and traditions and respecting the memory of the great players of their club.

We conducted a study on the topic: "The attitude of football fans to the technology of working with them in the conditions of the sanitary and epidemiological situation in 2020". A total of 202 people were interviewed (142 men and 60 women). The respondents were the fans of FC Lokomotiv Moscow, members of the Interregional Public Organization «Fans Club of the Sports Society «Lokomotiv»».

Of 202 people, 167 people (83%) believe that it is useful to hold online meetings between fans and football players of FC Lokomotiv Moscow. 35 respondents (17%) think that such meetings are not needed to work with them.

The fans were asked to evaluate the quality of the work of FC Lokomotiv Moscow with their fans during the pandemic, where 1 is very bad, and 10 is very good. In general, the majority of respondents rated the work with fans as above average. 2 people (1%) gave the lowest rating - 4. 32 respondents (16%) gave the highest rating - 10. 62 fans (31%) rated more respondents by 8 points.

Thus, the study of modern PR technologies for organizing work with football fans during a sanitary and epidemiological situation will help develop work in a new way and focus not on visiting stadiums, but on social networks that will attract fans' interest in a football club.

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PR-ТЕХНОЛОГИИ РОССИЙСКИХ ПРОФЕССИОНАЛЬНЫХ ФУТБОЛЬНЫХ КЛУБОВ ПРИ ОРГАНИЗАЦИИ РАБОТЫ С БОЛЕЛЬЩИКАМИ В ПЕРИОД ОГРАНИЧЕНИЙ, СВЯЗАННЫХ С САНИТАРНО-ЭПИДЕМИОЛОГИЧЕСКОЙ СИТУАЦИЕЙ

Аннотация: в статье рассмотрены PR-технологии работы с болельщиками и выделены методы, которые применяются российскими профессиональными клубами. В ходе исследования было выяснено отношение футбольных болельщиков к применяемым технологиям для работы с ними в условиях санитарно-эпидемиологической ситуации в России.

Ключевые слова: PR-технологии, профессиональные футбольные клубы, фанаты, санитарно-эпидемиологическая ситуация

THE FORMATION SYSTEM OF PHYSICAL CULTURE AND SPORTS, PHYSICAL EDUCATION IN CHINA

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***Abstract.** The article discusses the stages of development and formation system of physical education and sports in China. The development of sports, sports education, health promotion are becoming the most important areas of government activity, and active work begins to create appropriate organizations.*

***Key words:** development, physical education and sports, system of physical education and sports, health*

After the founding of New China, China's sports have been rapidly developed and widely popularized with the continuous development of the country. The party and the government attach importance to sports work, and regard strengthening the people's physical fitness and improving the health of the whole nation as the primary task of socialist sports. In 1949, just after New China was born, the All-China Sports Federation was established, and the National Sports Committee was established in 1952. Since then, sports commissions at all levels have also been established. The education department, the Communist Youth League, the trade union and the military have all established sports organizations [1].

By the 1980s, the China Middle School Sports Association, the China University Sports Association, the Chinese Disabled Sports Association, the China Senior Sports Association, the China Roller Skating Association, and China Fishing Association, Chinese Dragon Boat Association, Chinese Martial Arts Association, and restored and built 15 national industry sports associations including Locomotive, Qianwei, Yinying, Coal Mine, Forestry, Petroleum, Farmers, Water Conservancy, Construction Engineering, and Electric Power Company. Leader of sports work in all walks of life. In recent years, due to the widespread popularity of sports and the development of the world's sports environment, China has also seen a sports boom, and various mass sports organizations have emerged one after another. Recently, Beijing has established the Olympic Star Promotion Association [2]. In 1949, the "Common Program" adopted by the Chinese People's Consultative Conference included the content of "promoting national sports" and pointed out the importance of sports work from a legal perspective. In 1951, the Central People's Government Administration issued the "Decision on Improving the Health Status of Students in Schools at All

Levels". In November of the same year, the All-China Sports Federation announced the implementation of the first set of broadcast gymnastics [3]. Broadcast gymnastics is simple and easy to implement and suitable for the general public. In the activities that the masses participate in, radio gymnastics has been continuously improved and developed for more than 60 years, and become more scientific and versatile. Nine sets of radio gymnastics have been announced. The country and the government also attach great importance to the daily sports training of teenagers and children. As of 1985, ten sets of radio gymnastics for children have been announced. The National Sports Commission has also compiled exercises for textile workers, coal miners and steel workers [4]. Implemented throughout the country, some countries and regions have also compiled a variety of production exercises according to the characteristics of different types of work, and compiled health exercises according to different conditions. Especially for the health of the majority of primary and middle school students, eye exercises are also compiled. In 1955, in the "First Five-Year Plan for the Development of the National Economy of the People's Republic of China" adopted by the Second Session of the First National People's Congress, it was proposed that "among the people of the whole country, first in factories, mines, schools, military units and institutions. Among young people, extensive sports are carried out to enhance the people's physical fitness." In 1959, Premier Zhou Enlai pointed out in the "Government Work Report" made at the first meeting of the Second National People's Congress: "In sports work, the policy of combining popularization and improvement should be implemented, and mass sports should be widely carried out. Exercise, and gradually improve the level of sports in our country."

In 1960, the Party Central Committee pointed out in the "Instructions on Hygiene Work": "Anything that can be done must promote gymnastics, playing ball, running, climbing, swimming, Tai Chi and various sports." Due to the consistent emphasis, advocacy, and encouragement of sports work by the party and government, mass sports have been carried out more steadily [5]. Based on the fact that China has a large area and a large population of people and different local conditions, it has concluded in practice that it is amateur, voluntary, and voluntary. The principles of locality, time and individual conditions.

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ФОРМИРОВАНИЕ СИСТЕМЫ ФИЗИЧЕСКОЙ КУЛЬТУРЫ И СПОРТА, ФИЗИЧЕСКОГО ВОСПИТАНИЯ В КИТАЕ.

Аннотация. В статье рассматриваются этапы развития и становления системы физического воспитания и спорта в Китае. Развитие спорта, спортивное воспитание, укрепление здоровья становятся важнейшими направлениями деятельности государства, и начинается активная работа по созданию соответствующих организаций.

Ключевые слова: развитие, физическое воспитание и спорт, система физического воспитания и спорта, здоровье

COMPARATIVE ANALYSIS OF FINGER DERMATOGLYPHICS OF GIRLS IN RHYTHMIC GYMNASTICS

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Abstract. *The article presents the results of dermatoglyphic studies of young athletes involved in rhythmic gymnastics. A comparative assessment of the main indicators and the frequency of occurrence of finger dermatoglyphics phenotypes in comparison with adult highly qualified gymnasts are given. The compliance of young athletes with the reference values in terms of dermatoglyphics was revealed by 31.2%.*

Key words: female athletes, rhythmic gymnastics, finger dermatoglyphics, phenotype

Introduction. Dermatoglyphics studies the variability of patterns on the fingers, palms and feet those carries genetic information about a person and are unchanged throughout life [1, 2]. Indicators of dermatoglyphics are used in medicine as an express diagnosis of hereditary diseases, in sports when choosing sports specialization and predicting sports success [1, 3]. The paper by Oleynik E. A. presents the diagnostic value of finger dermatoglyphic patterns of highly qualified athletes engaged in rhythmic gymnastics, aged 18-23 years, with which we compare the data obtained from our own research. It is shown that finger patterns can be used as morphogenetic markers of predisposition to certain types of sports activity [4]. **Research objective.** Comparative assessment of the values of the dermatoglyphic patterns of the fingers of young and adult female athletes in rhythmic gymnastics. **Materials and methods.** All research materials were collected in compliance with the rules of bioethics and with the signing of informed consent protocols. In accordance with the law on personal data, the information was depersonalized. The study was approved by the Ethics Committee of the Federal State Budgetary Institution "FITZ Nutrition and Biotechnology". We examined 16 female gymnasts, average age 9.6 ± 2.2 years, qualification from the 3rd to the 1st adult category. Fingerprints of the fingertips were obtained by DS-22 scanner, using software "Malachite". The type of patterns (A-arc, L-loop, and W-curl) and the frequency of their occurrence were determined. The delta index (D10), the crest score on individual fingers (GS), and the total crest score on 10 fingers (CGS) were calculated and the phenotypes of finger dermatoglyphics were determined. The program "Statistics-10" was used for data processing.

Discussion. Table 1 shows the results of measurements of the main indicators and the frequency of occurrence of finger dermatoglyphics phenotypes in young and adult female athletes engaged in rhythmic gymnastics.

Table 1 – Main indicators and frequency of occurrence of finger dermatoglyphics phenotypes in women engaged in rhythmic gymnastics

Index	Female athletes. Rhythmic gymnastic	
	youth n=16	adults [4] n=44
D10	10,4±2,9	12,7±0,5
TCS	97,2±31,9	125,8±5,9
pattern-A%	13,8	5,9
pattern-L%	68,1	63,2
pattern-W%	18,1	30,9
phenotype-AL%	–	13,6
phenotype-LW%	19	27,3
phenotype-WL%	6	27,3
phenotype-ALW%	44	15,9
phenotype-10W%	–	2,3
phenotype-10L%	6	13,6

Note: M±σ mean and standard deviation

When comparing the average values of the main indicators of finger dermatoglyphics, the D10 index in young athletes is 22% less, and the TCS indicator is 29% less. Young athletes have a greater number of patterns of "arcs A%" and "loops L%" and a lower value of "curls W%". The analysis of the frequency of occurrence of finger dermatoglyphics phenotypes showed that the phenotypes AL and 10W were not determined in young athletes, for the other phenotypes LW, WL and 10L the value is less than the reference ones, and for the phenotype ALW the frequency of occurrence is higher. Thus, the main indicators and frequency of occurrence of finger dermatoglyphics phenotypes in young athletes do not correspond to the dermatoglyphic profile of highly qualified gymnasts. Comparison of individual dermatoglyphic indicators of young athletes with the presented reference values showed that 5 girls-gymnasts out of 16 correspond to the presented values of the dermatoglyphic profile, which is 31.2% of the group of young gymnasts.

Conclusion. It is shown that the average group values of the main indicators and the frequency of occurrence of finger dermatoglyphics phenotypes in young gymnasts do not correspond to the reference values obtained on adult athletes of high qualification. The analysis also shows that in the group of young gymnasts, only 5 people correspond to the dermatoglyphic profile of rhythmic gymnastics and this is 31.2% of the group of young athletes.

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СРАВНИТЕЛЬНЫЙ АНАЛИЗ ПАЛЬЦЕВОЙ ДЕРМАТОГЛИФИКИ У ДЕВОЧЕК, ЗАНИМАЮЩИХСЯ ХУДОЖЕСТВЕННОЙ ГИМНАСТИКОЙ

Аннотация. В статье представлены результаты дерматоглифических исследований юных спортсменок занимающихся художественной гимнастикой. Дана сравнительная оценка основных показателей и частоты встречаемости фенотипов пальцевой дерматоглифики по сравнению с взрослыми высококвалифицированными гимнастками. Выявлено соответствие юных спортсменок на 31,2% по показателям дерматоглифики эталонных значений.

Ключевые слова: спортсменки, художественная гимнастика, пальцевая дерматоглифика, фенотип

WAYS TO ATTRACT YOUTH TO ACROBATIC ROCK-N-ROLL (ON THE EXAMPLE OF STUDENTS OF RSUPE)

Shabanova V.B.

Titova G.S.

Abstract. *This article examines the ways of informing students about acrobatic rock-n-roll and their effectiveness in attracting young people to participate in this sport. The article analyzes the results of a questionnaire survey among students of RSUPE on the topic "Awareness of students about acrobatic rock and roll."*

Key words: *sports, acrobatic rock and roll, student youth, development*

The relevance of the topic lies in the fact that despite the growth popularity of acrobatic rock-n-roll, there remains a large part of young people who do not

even have a basic understanding of this sport. But student is the target audience with which you can achieve high results in the development of acrobatic rock and roll.

Despite the state's attention to the promotion and popularization of acrobatic rock-n-roll, the program "Development of acrobatic rock-n-roll in the Russian Federation until 2020" contains a number of problems that remain unresolved in our time:

- Insufficient awareness of target audiences about the sport;
- Lack of an effective system of children and youth sports;
- Insufficient development and implementation of innovative sports technologies;
- Insufficient number of acrobatic rock-n-roll departments in state and municipal physical culture and sports organizations;
- Insufficient number of people engaged in acrobatic rock-n-roll.

All of the above determines the need to pose a number of important questions: Do students know about acrobatic rock and roll? What media are actively promoting acrobatic rock and roll? Etc.

The aim of the research is to study the effectiveness of ways of informing and attracting students to acrobatic rock and roll classes (on the example of students of RSUPE).

Research objectives:

1. To reveal the degree of awareness of students about acrobatic rock and roll;
2. To study the influence of the media on the popularization of acrobatic rock and roll;
3. To identify the most effective ways of informing student youth.

Research results and their discussion.

To determine the young people's perception of acrobatic rock and roll, the subjects had to answer the question: "Do you know about such a sport as acrobatic rock-n-roll?" Most of the respondents (70.6%) know about this sport, and only a small part of students (29.4%) do not know about this sport.

An additional question was: "How did you hear about this sport?" Most of the students (44.6%) learned from their friends / acquaintances, at the university 20.3% of the respondents learned about this sport. The third position is occupied by the option "Internet", it was chosen by 18.7% of students, also the option "television" was chosen by only 9.4% of the respondents, 5% of students learned about acrobatic rock-n-roll from their parents. The most unpopular answer was "school", 2% voted for it.

To determine the level of effectiveness of popularization of acrobatic rock-n-roll through television, the question was asked: "Have you seen the reports on television about acrobatic rock-n-roll?" more than half of respondents (67%) have never seen acrobatic rock and roll reports on television. And only a small part of students (33%) have seen reports about this sport.

An additional question was also asked: "If you saw on which TV channel?". The majority of students (64.8%) chose the «Match TV» option, the "First" option was in second place (17.2%), and the third (11 , 6%) the option "Russia 2" and the least (6.4%) scored the option "Others", which included the same TV channels as: "TNT", "STS", "Moscow 24", etc.

To identify the effectiveness of the promotion of acrobatic rock and roll via the Internet, the respondents had to answer the question: "Have you seen information about acrobatic rock and roll on the Internet? Where?". In first place (31.4%) is the social network Instagram, in second place (26.5%) is YouTube, in third place (15.7%) is the option "news portals" and in fourth place (13 , 7%) - social network Vkontakte. At the same time, about half of the respondents (45.1%) did not see any information about acrobatic rock and roll on the Internet at all.

To determine the level of effectiveness of popularization of acrobatic rock and roll through other forms of media, the question was asked: "Have you paid attention to banners with upcoming competitions and events in acrobatic rock and roll." The majority of students (69.4%) did not pay attention to banners with advertisements about acrobatic rock and roll, and only 33% saw such advertisements.

More than half of the students (67.6%) said that they would like to know more about acrobatic rock and roll, they are interested in this sport. And only 32.4% of respondents are not interested in acrobatic rock and roll.

Also, the students were asked a detailed question in which they had to offer their own answer options. "What, in your opinion, needs to be done to increase the popularity of the sport?" The main answers were:

- Give more information to the media, broadcast the competition on TV
- Open new branches in sports schools
- Advertise more on TV and on the internet
- Add a sport to the Olympic program, then more people will want to practice this sport, etc.

From this study, we can conclude that the popularization of acrobatic rock and roll through the media is not so effective: 54.9% of respondents saw information about this sport only on the Internet, 33% of respondents on television, and 30.6% on banners. This suggests that it is worth looking for other ways to inform and attract young people. It is worth paying more attention to developing information and advertising offered in the media so that it attracts more young people.

Also, during the study, it was revealed that students want to know more about acrobatic rock and roll, they want a section to open on the basis of the RSUFKSMiT, but at the same time they themselves do not show a desire to engage in this sport.

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ПУТИ ПРИВЛЕЧЕНИЯ МОЛОДЕЖИ К ЗАНЯТИЮ АКРОБАТИЧЕСКИМ РОК-Н-РОЛЛОМ (НА ПРИМЕРЕ СТУДЕНТОВ РГУФКСМИТ)

Аннотация. В данной статье рассматриваются пути информирования студенческой молодежи об акробатическом рок-н-ролле и их эффективность для привлечения молодежи к занятию данным видом спорта. В статье анализируются результаты анкетирования студентов РГУФКСМиТ на тему «Информированность студенческой молодежи об акробатическом рок-н-ролле».

Ключевые слова: спорт, акробатический рок-н-ролл, студенческая молодежь, развитие

INDICATORS OF THE CARDIO-RESPIRATORY SYSTEM OF CHILDREN 10-13 YEARS OLD EXERCISING

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Abstract. *The study of functional features that contribute to the harmonious development of the child's body and the positive reaction of organs and organ systems to specific sports activities will allow in the future to predetermine the child's achievement of high sports results in combat sports, such as taekwondo and judo. A child's body differs from an adult's rapid growth and development, an active process of the formation of organs and systems. Regular training in childhood increases the functional and adaptive reserves of the body, helps to strengthen health, increase physical and mental performance [1]. Changes in the structure and physiological state of the body of young athletes are caused not only by the initial impact of systematic physical exercises, but also by age characteristics [3].*

Key words: *Total body measurements, body mass index, adaptive capacity, Kerdo index*

Objective – to consider and analyze the indicators of the cardio-respiratory system of the body of children, 10-13 years old, who are engaged in martial arts.

Organization and research methods: Morphofunctional studies were carried out in children of 10-13 years old, who go in for martial arts on the basis of the Regional Sports Public Organization "Sports Club Taekwon-Do" (RSOO SKT) "North-West". The entire sample was divided into two groups: the first group consists of children who do not go in for sports, number of 25 people, the average age is 11.6 years. the second group - children involved in various types of martial arts, in the amount of 27 people, the average age is 12.06 years.

The examinations included anthropometric measurements of total body dimensions: length, body weight and chest circumference, and the calculation method for determining the body mass index. Anthropometric measurements were carried out in accordance with the classical methodology adopted at the Research Institute of Anthropology, Moscow State University. M.V. Lomonosov [5].

Functional studies included measuring blood pressure, determining heart rate, calculating the adaptive potential of the cardiovascular system, and the autonomic Kerdo index, as well as measuring the vital capacity of the lungs (spirometry) and muscle strength of the hand (dynamometry). On the basis of the primary data, the adaptive potential (AP) (according to R.M. Baevsky) and the vegetative Kerdo index were determined by the calculation method [5].

The material was collected by the "cross-section" method in compliance with the rules of bioethics and the signing of informed consent protocols for each subject (for all children, the protocols were signed by the parents or their guardians). The material was processed by the method of mathematical statistics using the SPSS software (Statistical Package for the Social Sciences). It was calculated: the arithmetic mean, the error of the mean and the statistical reliability of the mean values according to the Student's t-test [5].

Research results: Analyzing the total body size (Table 1), we found that in terms of length, body weight, chest circumference and body mass index (BMI), children involved in various types of martial arts are superior to children who are not involved in sports. We did not reveal any statistical reliability, but there is a tendency to higher rates among the children who go in for martial arts than in comparison with children who do not go in for sports.

Considering in more detail the indicator of body mass index, we found that insufficient body weight was found among all the studied groups: not going in for

sports 25% and going in for sports 33%. 19% of children who do not go in for sports and 4% of children who go in for sports had a pronounced underweight. Preobesity (overweight) was found in 12% of children not involved in sports and 7% of children in sports. The normal ratio of body mass index was found in 44% of children not involved in sports and 56% of children involved in sports.

Thus, considering the total body size of children 10-13 years old, we found out that in all respects, children involved in various types of martial arts are superior to children who are not involved in sports. The ratio of body weight to body length in the studied groups of children reflects the normal ratio of body mass index [5].

Table 1 - The total body size of the body of children 10-13 years old, engaged in various types of martial arts

Groups	Children not doing spotting (n=16)	Children engaged in martial arts (n=27)
Height, cm	148,7±1,8	154,1±2,1
Body weight, kg	42,3±2,1	48,5±2,7
Chest circumference, cm	71,2±1,6	72,5±1,8
BMI, kg/m ²	19±0,7	20±0,7

The analysis of the indicators of the cardio-respiratory system showed that in terms of heart rate parameters, children engaged in martial arts are superior to children who are not involved in sports. The heart rate in the group of children of athletes is slightly higher (by 2 beats / min) in comparison with the group of children who do not go in for sports, and in terms of blood pressure and VC among the children who do not go in for sports, they are higher than in comparison with children who go in for martial arts. According to the diastolic pressure, statistical significance was revealed ($p \leq 0.05$) between the considered groups of children [4]. Thus, the considered indicators most likely characterize the possible predominance of the sympathetic nervous system, and show pronounced sympathicotonia, especially in the group of children involved in sports, which is confirmed by the Kerdo index (Table 2).

The best indicators of the adaptive potential were revealed among the children involved in martial arts, which reflected satisfactory adaptation of the cardiovascular system, and among the children not involved in sports, the adaptive potential reflects unsatisfactory adaptation. All this, possibly, indicates that the cardiovascular system of children who do not go in for sports is in a state of

unsatisfactory adaptation. In children involved in sports, it is probably evidence of a more developed cardio-respiratory system of the body [2].

According to dynamometry indicators, it was revealed that children involved in martial arts surpass children who are not involved in sports. According to the strength of the muscles of the right hand, we noted statistical reliability ($p \leq 0.05$). These indicators testify not only to the physical fitness of athletes, but also to the peculiarities of sports, since in single combats the strength of the grip of the opponent's clothes with a brush is of great importance for performing a technique.

Table 2 - Functional indicators of the cardio-respiratory system and the autonomic nervous system of the body of children 10-13 years old, who go in for martial arts ($p \leq 0,05$) *

Groups	Children not doing spotting (n=9)	Children engaged in martial arts (n=27)
Heart rate, (beats / min)	86±5,2	88±2,5
ASP, (millimeters of mercury)	118±2,6	111±2,5
ADP (millimeters of mercury)	69±3*	55±1,8*
VC, liters	3,3±0,24	3,1±0,1
Adaptive capacity, conventional units	2,1±0,07	1,9±0,03
Dyn. (right), kg	16,3±1*	21,5±1,3*
Dyn. (left), kg	15,6±2,1	19,9±1,2
Kerdo index, conventional units	17,5±6,2*	35,1±3,07*

Conclusion: Thus, according to the analysis of the indicators of the cardio-respiratory system of the body of children 10-13 years old, who are engaged in martial arts, we can state that the functional system of children involved in single combats is more developed and prepared for physical activity.

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ПОКАЗАТЕЛИ КАРДИО-РЕСПИРАТОНОЙ СИСТЕМЫ ДЕТЕЙ 10-13 ЛЕТ, ЗАНИМАЮЩИХСЯ ЕДИНОБОРСВАМИ

Аннотация. Изучение функциональных особенностей, способствующих гармоничному развитию организма ребенка и положительной реакцией органов и систем органов на специфическую спортивную деятельность, позволит в будущем предопределить достижение ребенком высоких спортивных результатов в спортивных единоборствах, которыми являются тхеквондо и дзюдо. Детский организм отличается от взрослого бурным ростом и развитием, активным процессом формирования органов и систем. Регулярные тренировки в детском возрасте повышают функциональные и адаптационные резервы организма, способствуют укреплению здоровья, повышению физической и умственной работоспособности [1]. Изменения, происходящие в строении и физиологическом состоянии организма юных спортсменов, обусловлены не только начальным воздействием систематических занятий физическими упражнениями, но и возрастными особенностями [3].

Ключевые слова: тотальные размеры тела, индекс массы тела, адаптационный потенциал, индекс Кердо

REMOTE REHABILITATION

Shlychkov D.V.

***Abstract.** The article deals with the problems of distant rehabilitation. One of the modern trends is a distantly controlled rehabilitation. The article provides an overview of methods according to literature studies. The research shows that the problem of remote rehabilitation is relevant in our time and requires clinical research and technological development.*

***Keywords:** research, remote rehabilitation, telemedicine system, distantly controlled rehabilitation, review, health*

Introduction. The importance of this research. Rehabilitation is now a priority of the World and Russian healthcare. Rehabilitation centers are usually located in big cities and are not available for most patients. Therefore, one of the modern trends in the development of rehabilitation is a distantly controlled rehabilitation. [2, p. 141]

Aim of the. Aim of this research is overview of methods according to Russian literature studies.

The object of the research - programs of remote rehabilitation.

Research methods: theoretical analysis of modern scientific and methodical literature.

Results of the research:

Remote rehabilitation is a telemedicine option, using technology to obtain information about health and provide rehabilitation services [1].

Snopkov P.S., Lyadov K.V., Shapovalenko T.V., Sidiyakina I.V. have developed a program of remote rehabilitation in Russia, based on own achievements and experience of foreign colleagues [2].

Stages and methods of rehabilitation: first, patients are selected in a medical institution for remote rehabilitation. When the turn comes to a specific patient, a medical specialist, together with medical technicians, visit the patient's home to install the necessary medical equipment, as well as video communication. The patient and his relatives are then instructed on how to use the equipment and to optimally organize the remote interaction process with the instructor. A rehabilitation program is then developed, usually comprising three weeks of primary rehabilitation and the time it takes to go on the air for live communication. Regular communication with the patient is maintained by a neurologist, psychologist, physiotherapist and speech therapist. At the end of the rehabilitation

period, all specialists gather to assess the result according to the international classification.

The advantage of remote rehabilitation is comfortable in physical and emotional terms for the patient to conduct the course of necessary treatment. The patient receives a qualified rehabilitation program under the supervision of a doctor, without spending time and effort to visit a medical facility. There is no need to regularly go to the clinic, for a long time to wait for rehabilitation in the hospital. In order for the doctor to be near at the right moment, you need only special equipment, which for the period of rehabilitation is installed at the patient's home: set of simulators, a computer with internet access and a good camera, a video communication program.

The benefits of distance training under the supervision of a specialist are noted by all - it is an opportunity to constantly expand and improve the rehabilitation program, where the risk of injury is minimized, compliance with the methodical standards of training by specialists, the ability to solve emerging problems and issues as they arise directly during the rehabilitation process, jointly setting goals of rehabilitation, during the training process and as the current goals are achieved. Remote rehabilitation has another undeniable plus. After all, despite all the actions to increase the accessibility of the environment for disabled people, the vast majority of the time they still spend in the walls of their home. Thanks to the program, the patient is not left alone with his problem. A psychologist works with him, as well as his relatives, to help overcome psycho-emotional stress. The earliest and most productive forms of physical remote rehabilitation are physical therapy classes.

The positive aspects of this work during the period of the pandemic and forced isolation was its structuring and systematization. So, at present, patients in need of rehabilitation have the opportunity to become participants in online courses, forms of online sessions, individual tutoring are being tested, since such patients need recommendations for the current situation. During the quarantine period, specialists used both individual and group sessions. Psychologists from rehabilitation centers were also actively involved in this work.

Conclusions: The survey shows that the problem of distant rehabilitation is relevant in our time and requires additional clinical research and technological development.

Thus, the peculiarities of modern reality have led to the fact that the direction of remote rehabilitation has become very relevant all over the world. In

the short term, the most popular areas are being actualized: therapeutic gymnastics, speech therapy, psychological correction, psychological counseling, mechanotherapy, and in the future, the use of virtual reality technologies. However, it should be noted that remotely controlled rehabilitation cannot replace inpatient rehabilitation, but it complements it and is a great solution for patients who need long and repeated courses of rehabilitation in modern conditions.

In the future, the author plans to work in the rehabilitation system.

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ДИСТАНЦИОННАЯ РЕАБИЛИТАЦИЯ

Аннотация. В статье рассматриваются проблемы дистанционной реабилитации. Одним из современных направлений является дистанционно контролируемая реабилитация. В статье приведён обзор методик и исследований по данным литературы. Исследование показывает, что проблема дистанционной реабилитации является актуальной и требует дополнительных исследований и технологических разработок.

Ключевые слова: исследование, дистанционная реабилитация, телемедицина, дистанционно контролируемая реабилитация, обзор, здоровье

DEVELOPMENT OF COORDINATION SKILLS AT YOUNG SKI-RACERS OF INITIAL TRAINING GROUP WITH THE USE OF TRAINING DEVICES

Sidorova M.I.
Burdina M.E.

Abstract. *The article is devoted to the improvement of young ski-racers training process. The effectiveness of suggested systems of coordination skills development is identified and a positive criterion, characterizing the level of coordination skills and competitive activity of young ski-racers is stated.*

Keywords: *young ski-racers, coordination skills, training devices, competitive effectiveness*

Introduction. The specifics of modern competitive activity of a ski-racer allow us to classify cross-country skiing as a sport with complex technical and tactical activities that require a high level of coordination skills development. Despite this, insufficient attention is paid to the development of coordination skills in training activities. However, in modern sports practice, a variety of technical training aids and simulators are being increasingly used [1, 2, 3].

The main objective of the study is to identify the effectiveness of the methodology aimed at developing the coordination skills of young 10-12 year-old ski-racers, using the «coordination ladder» and the BOSU disc.

The study was conducted for 6 months in the period from October 2018 to April 2019 on the basis of the sports school No. 93 «In Mozhaika» of the Moscow City Sports Complex. The experiment involved the 10-12 year old ski-racers of the initial training group of the 3rd year of training in number of 10 people with sports qualifications of the 2nd and 3rd categories.

Discussion. During the pedagogical experiment, the training process included a set of exercises aimed at developing ski-racers leading forms of coordination skills (the skill to balance, rhythm, differentiation of spatial, temporal and power parameters of movements, the skill to switch, vestibular stability), with the use of a «coordination ladder» and a BOSU disc. The complex consisted of 49 exercises, including 39 on the «coordination ladder» and 10 on the BOSU disc.

The methodology of applying the exercises from the developed complex is shown in Fig. 1.

To solve the problem of research and determine the group for homogeneity, the subjects were offered two test blocks.

The first block consisted of standards of general and special physical training (Federal standard of 04.06.2019). The second block of tests was aimed at determining the absolute and relative indicators characterizing the level of coordination skills development (V.N. Lyakh, 2006). The coefficient of variation in the exercises of the two test blocks did not exceed 10% of the value at the

beginning of the experiment and thus allowed us to consider this group of examinees as homogeneous and therefore suitable for the experiment.

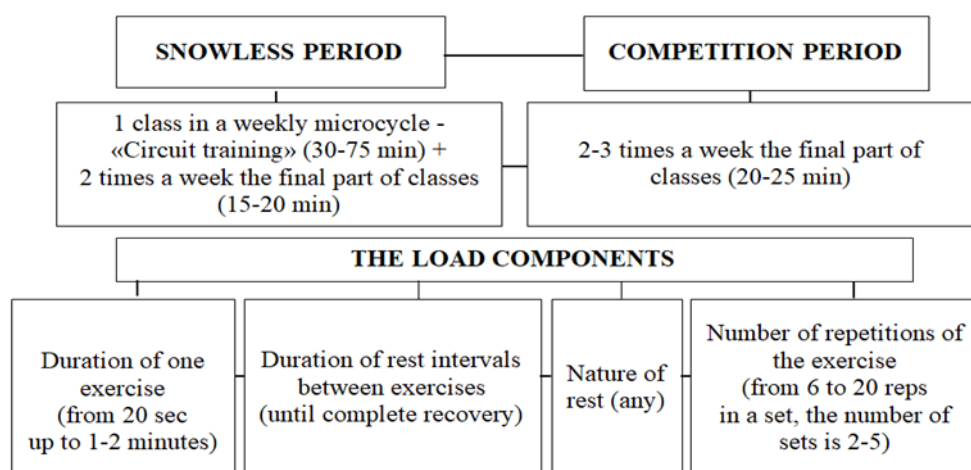


Figure 1 – Methodology for using the developed set of exercises

Secondary examination of the two test blocks revealed the following statistically significant differences: time improvement of 4.4% in the 30 m run, 9.4% in the shuttle run, and a 20% decrease in the difference between the time in the 30 m run and the shuttle run.

The Spearman correlation coefficient revealed a positive statistical relationship between the absolute and relative indicators characterizing the level of coordination skills development and the competitive activity of the subjects. The highest correlation coefficient (**0,9**) was revealed between the time shown by the subjects in shuttle run and the time shown by the subjects in the 3 km classic style cross-country skiing competition (Fig. 2).

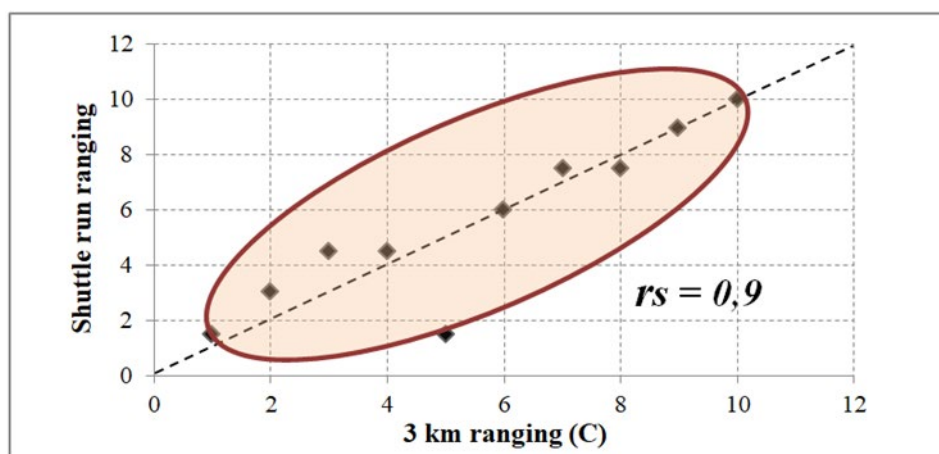


Figure 2 – Correlation between the time shown by the subjects in the shuttle race and the time shown by the subjects in the 3 km competition (C)

Conclusions. Absolute and relative indicators that characterize the level of the coordination skills development of the subjects at the end of the experiment

statistically significantly improved. In addition, when identifying the effectiveness of the applied complex, a positive statistical relationship ($R > 0,7$) between the indicators characterizing the level of development of coordination skills and the competitive activity of the subjects was established. Thus, the developed set of exercises and the methodology of its application had a positive impact on the coordination skills development of young ski-racers in the annual training cycle.

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ФОРМИРОВАНИЕ КООРДИНАЦИОННЫХ СПОСОБНОСТЕЙ У ЮНЫХ ЛЫЖНИКОВ-ГОНЩИКОВ ГРУППЫ НАЧАЛЬНОЙ ПОДГОТОВКИ С ПРИМЕНЕНИЕМ ТЕХНИЧЕСКИХ СРЕДСТВ

Аннотация. Статья посвящена совершенствованию тренировочного процесса юных лыжников-гонщиков. Выявлена эффективность предложенной методики развития координационных способностей, установлена положительная статистическая связь между абсолютным и относительным показателями, характеризующими уровень координационных способностей и соревновательной деятельностью юных лыжников-гонщиков.

Ключевые слова: юные лыжники-гонщики, координационные способности, технические средства подготовки, соревновательная результативность

PHYSICAL EDUCATION AS THE MAIN COMPONENT OF HEALTHY LIFESTYLE IN THE IMAGINATION OF STUDENT YOUTH

Sitnikova A.R.

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***Abstract.** Practice of physical education is the most important component of healthy lifestyle the formation of which passes on every stage of a human life. For youth including students everyday physical activity is indispensable. Sociology research concretize the information about student youth attitude to practicing physical education.*

***Key words:** healthy lifestyle, physical education, motor activity, student youth*

The conception of healthy lifestyle includes a complex of components. It is not just a diet or practicing sport. Healthy life style is a mode of life directed at improvement of the whole body, denial from bad habits, the creation of a day schedule where there is a room for valuable rest, productive work and physical activity. The main components of healthy lifestyle are:

- labour and rest rational regime;
- restless sleep;
- healthy nutrition;
- physical education practicing;
- observance of a personal hygiene, tempering;
- preventing of bad habits;
- interpersonal communication culture;
- psychophysical regulation of the body;
- culture of sexual behaviour [1].

Let us address to one of the component – physical education practice and a motor activity during the day. A motor activity is a combination of different motor actions performed in everyday life, in organized and independent exercises of physical education and sport [2, P. 149].

Many people involved into the sphere of intellectual labour have their physical activity limited. The circumstance that a dynamic component of students' activity during educational classes and beyond curriculum time is almost the same points at a low motor activity level of the overwhelming students number.

A rational motor regime for students is the one at which men pay attention to exercises 8-12 hours per week, women – 6-10 hours respectively. A main factor of optimization of motor activity is the independent students physical exercises (morning exercises, everyday walks). Necessary conditions for independent

exercises are a free choice of means and methods of their use, high motivation and positive emotional and functional effect from physical, will, emotional efforts spent.

During research work a number of questions were put: if young people practice sport and if they do, how much time do they spend for it; what kind of physical activity do they prefer. Students of SCOLIPE took part in the research. The questions were arranged into three blocks. The first block of questions made it clear if a student practices sport or not. 83,9% of respondents answered they do and 16,1% answered they don't.

With the purpose of revealing of frequency of purposeful motor activity exercises (physical education or sport) the respondents were asked the question "If you practice, how often?" A bit more than a half (52,8%) answered they do 2-3 times a week. The option "4-5 times a week" chose 26,4% of respondents. 17% of interviewed practice physical education or sport every day. 1,9% don't practice sport at all. 1,9% practice it once a week. The following question assumed to find out which type of physical activity the youth prefers. 39,5% prefer running, 20,2% choose walking for physical activity. 16,3% chose yoga or stretching option. 9,9% do morning exercises. Only 3,7% for keeping the optimal shape go swimming in the pool.

Based on all above we note that physical education is important for maintaining good health, exercises on open air as well as morning exercises, yoga practice help to control body mass and prevent and decrease development of various cardiovascular and brain diseases, diabetes. Having conducted the analysis of a sociology research one can conclude that young people (university students) pay considerable attention to such a component of healthy lifestyle as motor activity. In their mode of life physical education in different display is present.

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ФИЗИЧЕСКАЯ КУЛЬТУРА КАК ОСНОВНОЙ КОМПОНЕНТ ЗДОРОВОГО ОБРАЗА ЖИЗНИ В ПРЕДСТАВЛЕНИИ МОЛОДЕЖИ

Аннотация. В статье описывается такой компонент здорового образа жизни как занятия физической культурой. Приводятся важность и норма двигательной активности, а также социологическое исследования по отношению молодежи к занятию физической культурой.

Ключевые слова: здоровый образ жизни, физическая культура, двигательная активность

US WRESTLING SYSTEM: EXAMINING MICRO-LEVEL PRACTICES AGAINST A GLOBAL MODEL FOR INTEGRATED DEVELOPMENT OF MASS AND ELITE SPORT

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***Abstract.** This study assessed the micro-level elements of wrestling development in the US against a model for developing high-performance sports integrated with mass participation. Survey questions based on more than 200 published sources were validated by six experts including academicians, executives from sport governing bodies, coaches and administrators. To determine the areas for improvement, the questionnaires were completed by 104 coaches. Possible advancements were further identified through semi-structured discussions with 10 wrestling administrators and experts. Results suggest possible enhancements at micro-level, particularly lifelong guidelines for health and excellence of everyone.*

***Keywords:** USA, wrestling, sport development, high performance, mass participation*

This study was designed to help and improve international wrestling performance as well as increase domestic sport participation in the United States. Over 200 sources of literature on sport delivery systems from 28 Australasian, North and South American, Western and Eastern European countries were analyzed to construct a globally applicable model of high performance wrestling integrated with mass participation, comprised of the following seven elements across three levels:

Micro-level (operations, processes, and methodologies for development of individual athletes):

1. Talent search and development,
2. Advanced athlete support.

Meso-level (infrastructures, personnel, and services enabling sport programs):

3. Training centers,
4. Competition systems,
5. Intellectual services.

Macro-level (socio-economic, cultural, legislative, and organizational):

6. Partnerships with supporting agencies,
7. Balanced and integrated funding and structures of mass and elite sport.

The above model was used to design a questionnaire of 54 statements reflecting desired practices. The 54 statements were validated by 12 international experts, including executives from sport governing bodies and academics who published on high performance and sport development. The survey samples of 2,000 wrestling professionals' email addresses were collected from various sources, including web pages of national and regional wrestling associations, college and university athletics as well as school and community club teams. Completed online questionnaires were returned by 104 coaches from all key

regions of the country for a response rate of 5%. Additionally, 10 regional administrators were interviewed to suggest possible sport system improvements.

This paper focuses on the micro-level of US wrestling delivery, particularly talent development and athlete support. Despite US wrestling achievements at international level, respondents were not satisfied with many current practices. Based on responses of administrators and coaches in US and the analyzed literature, the following improvements are recommended at the micro-levels of US wrestling. While indicating some of world's best athlete development, especially medical practices, particularly at top universities and Olympic training centers, survey results suggested that US wrestling governing bodies could share such progressive practices as provision of wrestling programs in all clubs and schools. Some of the best schools cooperate well with community wrestling clubs and provide long term athlete development conditions for all ages and levels of participation: this common European practice could benefit all communities in the US.

US wrestling administrators and coaches could help clubs provide better coaching and athlete services affordable for all, where success in mass and elite sport is guided by science focused on athletes' needs. Athletes could benefit from best practices, such as lifelong guidelines for health and excellence of everyone and integration of fitness tests for each age into athlete development and ranking, as done, for example, in best taekwondo clubs across North America and as done by wrestling programs in Russia and other countries following the USSR system of athlete development.

Elite Soviet and Russian wrestlers have been leading training squads of mass participants in other sports while wearing face masks and taping their chests with elastic bands all in order to reduce the oxygen athletes breathe in so that when more of it becomes available, the athlete receives a competitive advantage (Tumanian, 2006). Training devices used in isolation from other necessary programs and expert coaching might not achieve expected results. One such sports training device used by athletes despite the lack of its empirical evidence and instructions for its effective use is the Elevation Training Mask 2.0 (Amazon.com, 2016).

The recent global comparative analyses and practical adaptations of advanced fitness and sport methodologies (e.g., Keating et al., 2018; Smolianov & Smith, 2019) indicated that US wrestlers could be supported by the GTO fitness tests (<http://gto.ru/>) and then could progress through three junior, three senior, and four master ranks offered in current Russia. Taekwondo clubs in the West show best practices to all spots, particularly wrestling, in integrating fitness, coordination and knowledge tests into graduate stressless multi-belt athlete progression from first steps to the highest desired level of performance.

Eastern breathing and voice exercises detailed by Kelder (1999) and Tumanian (2006) are also becoming popular in the West as important activators of the body's reserves, particularly useful in combat sports.

Wrestlers have also been leading the world in a search for optimal food combinations. Kelder (1999) stressed that to improve digestion and therefore, gain energy, we could eat different foods in the ascending order of the time it takes to digest them.

As wrestlers' training is focused on minimizing their frequent joint and back injuries (Tumanian, 2006), it is important to prevent chronic spine conditions by more instant, more innovative, more varied and more individualized post-training and post-competition restoration methods.

Most professional wrestlers who perform for entertainment receive more cash than high-quality education and care, which has caused bankruptcy and illness to occur quickly after their careers are over. Professional wrestling governing bodies could provide better medical insurance, pensions and grants for educational and vocational training of wrestlers. According to respondents of this study, better education of wrestling coaches, particularly in advanced methods of attraction and long term age specific development of participants is a critical factor for further advancement of the US wrestling system.

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**ИЗУЧЕНИЕ ПРОГРАММ СПОРТИВНОЙ ПОДГОТОВКИ НА МИКРО-УРОВНЕ
ОРГАНИЗАЦИИ В РАМКАХ КОМПЛЕКСНОЙ ГЛОБАЛЬНОЙ МОДЕЛИ
ИНТЕГРАЦИИ СПОРТА ВЫСШИХ ДОСТИЖЕНИЙ И МАССОВОГО СПОРТА НА
ПРИМЕРЕ АМЕРИКАНСКОЙ БОРЬБЫ**

Аннотация. В данной статье представлены результаты анализа развития спортивной борьбы в США, исследованные на микроуровне, в сравнении с единой моделью интеграционного развития массового спорта и спорта высших достижений. Вопросы, содержащиеся в опроснике, были основаны на более чем 200 опубликованных источниках и прошли экспертную оценку у шести ведущих специалистов, руководителей и тренеров по спортивной борьбе в США. В опросе приняли участие 104 тренеров по борьбе со всей страны. Возможные пути совершенствования в части развития спортивной борьбы в США были представлены десяти экспертам и руководителям федерации по спортивной борьбе для их дальнейшего обсуждения и имплементации. В качестве основного результата исследования были выявлены основные возможные перспективы развития спортивной борьбы в США на микроуровне, а также ключевые рекомендации для повышения уровня физической подготовки и здоровья в целом для каждого занимающегося.

Ключевые слова: США, борьба, спортивная подготовка, спорт высших достижений, массовый спорт

**CHALLENGES FOR PHYSICAL EDUCATION IN THE CONTEXT OF
CORONAVIRUS**

Solodova E.A.

Abstract. *The article deals with the relevant problems of teaching physical culture in the current conditions of the COVID-19 pandemic. The paper discloses problems emerged due to the misinterpretation of the physical education and its major goals.*

Keywords: *physical culture, physical education, pandemic, distance learning, online lessons*

Currently governments around the world have decided to close educational institutions to hold down the global COVID-19 pandemic. To minimize the negative impact of school closures and create conditions for sustainable learning in the context of the pandemic, especially for the most vulnerable segments of the population, many countries have introduced distance learning systems at schools and universities. According to UNESCO, 53 states have already deployed national educational platforms for distance learning.

The transition to distance learning is challenging. Although it is important to ensure the infrastructure potential, the support of teachers is on the current agenda as well as providing with a high quality and relevant digital learning materials; developing students' digital skills for efficient usage of technology for online learning; implementing of auxiliary data and information management

systems. For instance, a unified university platform iUniversity, which allows distance learning during the quarantine, has been launched in Armenia.

Since practice is crucially important in the field of physical education, the challenge was in the problem of incomplete transmission of information. Though the educational platforms of universities and schools can convey the lecture well, it is questionable whether they are able to conduct practical classes. Moreover, the question what impact remote sports have is under the discussion. Hence, approach which implies only theoretical aspects is not appropriate for this subject.

The paper is structured as follows: firstly, the problems that teachers and students are facing while teaching physical education in the context of the pandemic are under the discussion; the second part is devoted to the examination of possible ways out for above-mentioned problems and, the last part of the article presents some concluding notes.

The major problems that emerged because of the implementation of anti-coronavirus measures are:

1. Verbal tools and training videos are not sufficient to teach students some technical aspects and nuances. Although knowledge of the theory is important while examining motor actions, still, in practice, the student cannot put things into perspective and improve, even if the student controls them using a mirror. Distance learning does not provide an opportunity to fully understand and feel the current situation, environment, especially through the screen.

2. Factors such as atmosphere, communication, passion for the game, excitement for the competition, desire to become the first, or to improve the performance, which cannot be imitated through the online platforms, are a driving force of growth and motivation for development in physical education. The emerging competition makes us adapt faster, concentrate, get rid of tension and make up a daily routine.

3. The teacher cannot fully track the performance of the exercises and correct the technique of exercises during classes. Firstly, screen shows only front view of students. Secondly, whereas in the classroom teachers can quickly go around from all sides to see and immediately identify mistakes, remotely they have to constantly ask students to change their body position. Therefore, teachers have no choice, but to focus on the theory.

4. Some students do not have an appropriate place for doing PE classes. Usually there is a free space in the kitchen, in the hallway, or in other not very attractive place in an apartment that can be dangerous.

5. Originally, as students are stressed out studying other disciplines, physical education could serve as an emotional release. Currently, students have to immerse in theory during physical education classes as well, in which the theoretical aspects are not crucially important. Then they begin to focus on the accuracy of motor actions performance. To conclude the students during a usual physical education lesson, which should give a psychological rest, get even more stress.

The paper argues that even during a pandemic, it was not worth it to completely close the access of people to physical activity. In addition to the coronavirus, many other diseases are aggravated without physical activity.

In contrast to the Russian case, countries such as Sweden, the Netherlands, Belarus, advocate to pay attention to the physical condition and begin to strengthen the immune system. Procedures such as hardening, going to the bathhouse, walking in the fresh air help to strengthen the body, which also refers to physical education. All this can be done individually, keeping a distance.

To solve the problem, several methods can be applied. Those who have left for their cities and independently attend distance classes could practice health-improving gymnastics, where complex elements are not required. Do dumbbell exercises or something similar. For example, use polythene water bottles or rubber bands. For those who stayed in the city sections with a small occupancy of the sports hall could be conducted.

For group physical education classes or playing sports, set a limit for those who are participating, limit the number of spectators. Avoid contact actions such as shaking hands, hugging. You can make a schedule of classes. Divide the students, make two shifts if there are many students. It is better to practice less often than to completely stop. Introduce such sports as table tennis, boccia, darts, goalball, instead of playing sports, introduce lead games, for example, the game "thirty-three", "twenty-one" is suitable for basketball. After all, each sport has some kind of lead game, which can be played with a smaller team and vary the load and the contact of the players.

This essay examined the urgent problem of physical education in the coronavirus pandemic and proposed solutions to these problems. Currently, the approach to distance learning in physical education has not been improved. Many factors play an important role for the further improvement and change of the process of physical education lesson during a pandemic.

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*ПРОБЛЕМЫ ФИЗИЧЕСКОГО ОБРАЗОВАНИЯ В УСЛОВИЯХ
КОРОНАВИРУСА*

Аннотация. В статье рассматриваются актуальные проблемы обучения физической культуре в современных условиях пандемии COVID-19. В статье раскрываются и проблемы, возникшие из-за неправильного толкования физического воспитания, и его основные цели.

Ключевые слова: физическая культура, физическое воспитание, пандемия, дистанционное обучение, онлайн-уроки

**IMPROVING ELITE PAIR FIGURE SKATERS TECHNIQUE
EFFECTIVENESS USING TRAINING DEVICES**

Sozonenko L.Yu.

Martyненко I.V.

***Abstract:** the article deals with the issue of improving elite pair figure skaters technique effectiveness using training devices. Exercises for special conditioning in gym and exercises for special technique training on ice were developed. It described the technique of their implementation, quantity and methodology. Due to the implementation of a set of exercises, the effectiveness of training devices usage in the training process of elite pair skaters was proved.*

***Keywords:** technique effectiveness, training devices, special conditioning in gym, special technique training on ice*

Introduction: Nowadays Russian figure skaters show the best world results at the Junior level, winning the entire podium, however in the World Championships among adult pair skaters there is fierce competition against pair skaters from other countries. We think it shows certain inaccuracies in technique training of our athletes.

Objective: To develop and experimentally prove the effectiveness of using training devices in the training process of elite skaters.

Methods:

1. Literature survey
2. Pedagogical observation
3. Testing
4. Pedagogical experiment
6. Methods of math's' statistics.

Pedagogical observation was carried out during the training process on the ice rink and in the gym of the "Secondary School No. 2" of the Moskomspor SK Medvedkovo, from August to October 2019.

Pedagogical testing was carried out at the beginning and at the end of the study. Pair skaters were divided into 2 groups: control and experimental.

20 pairs of junior-skaters aged from 16 to 21 years, who had the category Candidate Master of Sport in pair figure skating took part in our pedagogical experiment.

For testing special technique training on ice, the next pair elements were selected: lift, twist, death spiral and throw jump, which are performed by athletes in their competitive programs and have a great value for the technical component. For pedagogical testing of special conditioning in gym, we selected the control standards for groups at the stage of improving sport skills, presented in the Federal standard, which reflect the level of special physical fitness of elites skaters such as jumping rope (right leg, left leg, both legs) for 60 seconds, jumping up on the spot (cm), and throw a stuffed ball (2 kg) with both hands from behind the head (cm).

We have developed 12 exercises for special conditioning in gym and 8 exercises for special technique training on ice using training devices. We described the technique of their implementation, quantity and methodology.

We used training devices such as:

1. Lounge
2. Balance
3. Rotary disk
4. Spinner

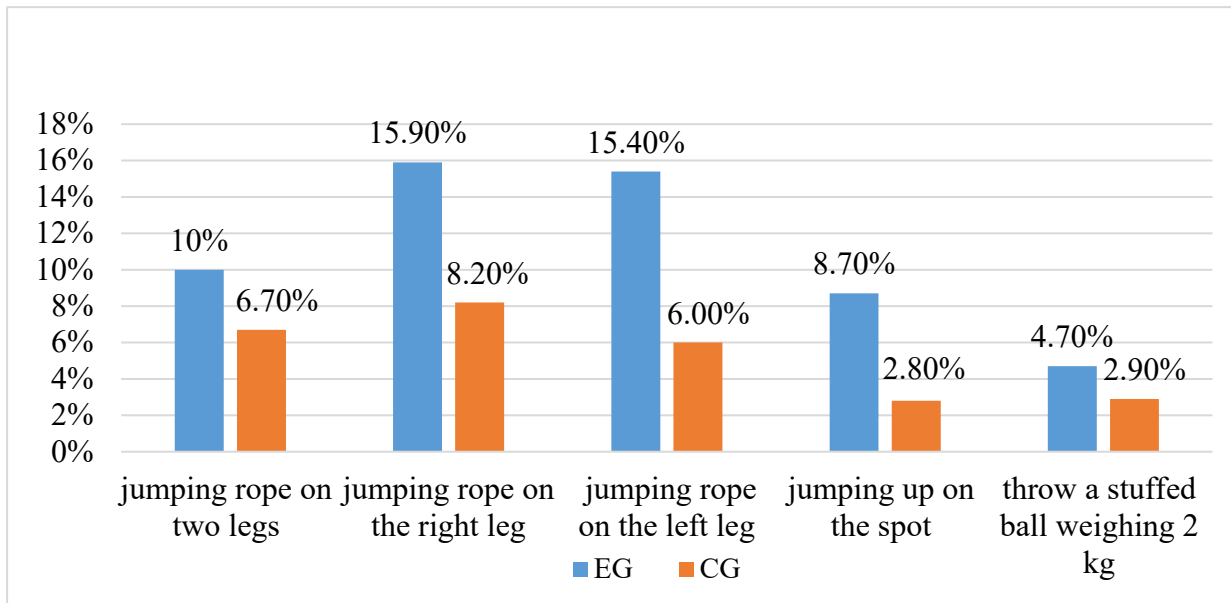
The training sessions with our sets of exercises using training devices were held in the experimental group 3 times a week.

Before the experiment, the control and experimental groups were equal in their indices. At the end of the experiment, repeated pedagogical testing was conducted.

The data were presented in a table, and growth diagrams were done for special conditioning in the gym and special technique training on ice.

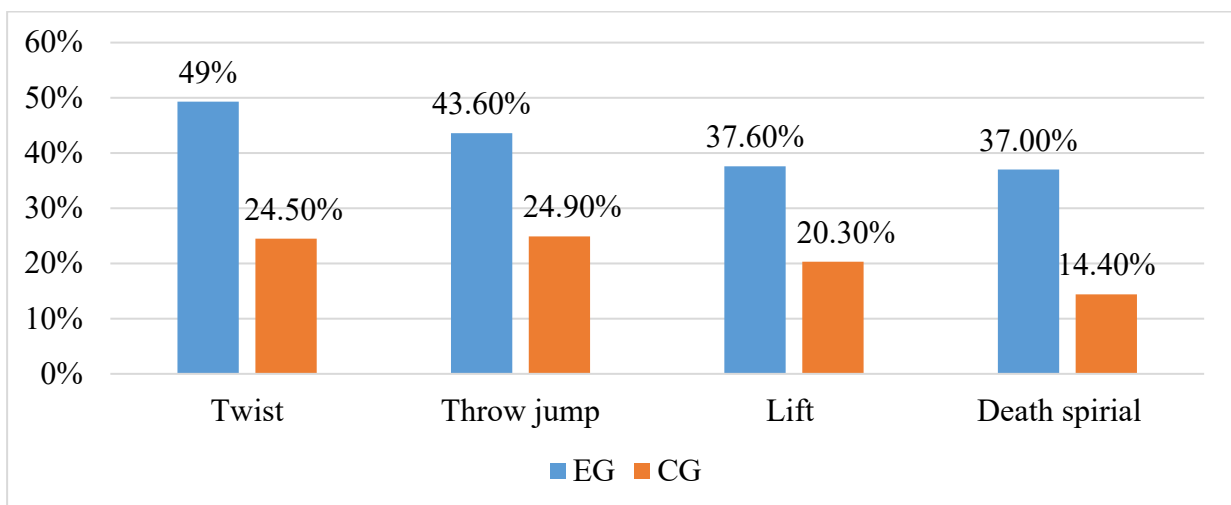
In the next diagram we can see the difference of increasing indices in special conditioning in the gym physical fitness of figure skaters after the

experiment.



Picture 1 - Diagram of the increasing indices of special conditioning in gym

In the next diagram we can see the difference of increasing indices in pair elements of skaters after the experiment.



Picture 2 - Diagram of the increasing indices of special technique training on ice

Thus from these diagrams of the increasing indicators we can see the difference in all exercises in gym and on ice in both groups. The biggest one was in the experimental group.

Conclusion:

1. Due to the implementation of a set of exercises for special condition and special technique training, the effectiveness of the usage of training devices in the training process of elite pair skaters was proved.

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ПОВЫШЕНИЕ ЭФФЕКТИВНОСТИ ТЕХНИЧЕСКОЙ ПОДГОТОВКИ КВАЛИФИЦИРОВАННЫХ ФИГУРИСТОВ ПАРНОГО КАТАНИЯ С ИСПОЛЬЗОВАНИЕМ ТРЕНАЖЕРНЫХ УСТРОЙСТВ

Аннотация. В статье рассматривается вопрос повышения эффективности технической подготовки квалифицированных фигуристов парного катания с использованием тренажерных устройств. Были разработаны упражнения для специальной физической подготовки в зале и упражнения для специальной технической подготовки на льду. Описана техника их выполнения, количество и методика. Благодаря внедрению комплекса упражнений доказана эффективность использования тренажеров в тренировочном процессе квалифицированных фигуристов парного катания.

Ключевые слова: эффективность технической подготовки, специальная физическая подготовка в зале, специальная техническая подготовка на льду, тренажерные устройства

WAYS OF INVOLVING YOUTH STUDENTS IN PHYSICAL AND HEALTHCARE ACTIVITIES

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Titova G.S.

Abstract: *in the work, a study is analyzed that reveals the main barriers to engaging in physical culture and health-improving activities. Also, the main ways are highlighted that affect the increase in the number of students who are engaged in physical culture and sports based on the analysis of theoretical and methodological sources.*

Keywords: *youth, physical education, physical activities, sports, healthcare*

Youth problematic is one of the most strategically important issues for the successful development of modern society. A healthy lifestyle for the next generation is one of the most pressing problems of today. Therefore, we can say that the main attention should be directed to children, adolescents, youth, that is, to that age when a person begins to make a choice, which is the most interesting and important for him. Thus, physical education and sports should become accessible and interesting to everyone. And health should be included in the group of the most important values, not only declaratively, but also in reality.

Many scientists dealt with the problems of involving young people in physical culture and health-improving activities. It is worth noting the work of D.A. Abdrakhmanov, who considered the psychological and pedagogical aspects of physical education and sports training [3]. Also V.I. Stolyarov [7] and A.O. Stepenov [6]. G.Yu. Kozina considered physical culture and health-improving activities in the lifestyle of youth [5].

In order to identify and study ways to involve young people in physical culture and health-improving activities, we took as a basis the 2017 research of the Higher School of Economics by the Analytical Center of Yuri Levada. It analyzed the trends and characteristics of youth physical activity in the modern world. The study sample included young people aged 16 to 24 years (161 boys and 199 girls).

After analyzing the data obtained, we see that most often boys (27%) and girls (16%) go in for physical culture and sports for health purposes at least three times a week.

Thus, in the study, respondents indicated barriers to physical activity. The first place among the reasons why it is difficult for the respondents to engage in physical culture and recreation activities and sports was the lack of free time (19% of boys and 26% of girls who are already engaged in physical culture and sports).

Also, the reasons were named: laziness; lack (absence) of funds to pay for classes, purchase sports equipment; poor health, fatigue; lack of desire, interest; lack of a sports base; the presence of bad habits and age.

Thus, we can conclude that in order to increase the number of young people who are engaged in physical culture and health activities, it is necessary to undertake programs to stimulate a healthy lifestyle.

In the modern world, the social role of the development of physical culture and sports for young people is increasing. After analyzing the literary and electronic sources, in particular V.A. Burtsev, we were able to identify six main ways that affect the involvement of senior schoolchildren in physical education and health activities [4]:

1) Development of sports infrastructure and ensuring the availability of mass sports. This technology includes an increase in the number of sports grounds, sports facilities, health and fitness clubs and sections. And also the development of the existing system of benefits for attending sports activities.

2) Improvement of the system of training and advanced training of specialists of various profiles on the formation of a healthy lifestyle and issues of physical culture.

3) Intensification of educational work. This is a huge set of measures for the development of physical culture and health-improving activities, which includes: promotion of the values of physical culture, sports and health; shaping the needs of young people to comply with the principles of a healthy lifestyle; striving for positive change and a conscious rejection of self-destructive and asocial behavior; introducing young people to regular physical education and sports.

4) Popularization of a healthy lifestyle and physical culture and sports, including the promotion of health values through the Internet media and social networks, since at the moment the Internet is the main leisure and place for spending free time among young people.

5) The use of mass and large international sports events to form convictions in the prestige of sports activities and healthy behavior.

6) All-Russian public physical culture and sports programs. In 2013, by the decree of the President of the Russian Federation, the All-Russian physical culture and sports complex «Ready for Labor and Defense» was revived in 2013.

In this way, we can say that the creation, development, improvement and use of these technologies make it possible to increase the social significance of

physical culture and sports, the importance of physical activity among young people, as well as to form a view of physical culture and sports as factors of a healthy lifestyle.

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ПУТИ ВОВЛЕЧЕНИЯ УЧАЩЕЙСЯ МОЛОДЕЖИ В ФИЗКУЛЬТУРНО-ОЗДОРОВИТЕЛЬНУЮ ДЕЯТЕЛЬНОСТЬ

Аннотация: в работе проанализировано исследование, которое раскрывает основные барьеры занятием физкультурно-оздоровительной деятельностью. Также выделены основные пути, которые влияют на увеличение количества учащейся молодежи, которые занимаются физической культурой и спортом на основе анализа теоретических и методологических источников.

Ключевые слова: учащаяся молодежь, физическое воспитание, физкультурная деятельность, спорт, оздоровительная деятельность

TRENDS IN THE DEVELOPMENT OF WORLD RACE-WALKING

Stepanova A.M.

Abstract. *The article lists the main stages in the formation and development of the world race-walking, as well as the contribution of the national school to the development of this type of athletics. The dynamics of world records among men and women is presented. The dynamics of the growth of training loads and the content of the training process are reflected. The main problems of modern race-walking and the ways of its further improvement are indicated.*

Keywords. *Race-walking, dynamics, world records, judging*

The history of race-walking originates in England. Here, in the middle of the XIX century, the first competitions were held, which were called "English walking". The analysis of the evolution of race-walking as an Olympic type of track and field athletics allows us to determine 7 stages in its formation and further development (Table.1)

Table 1-Stages of formation and development of race-walking as a sport

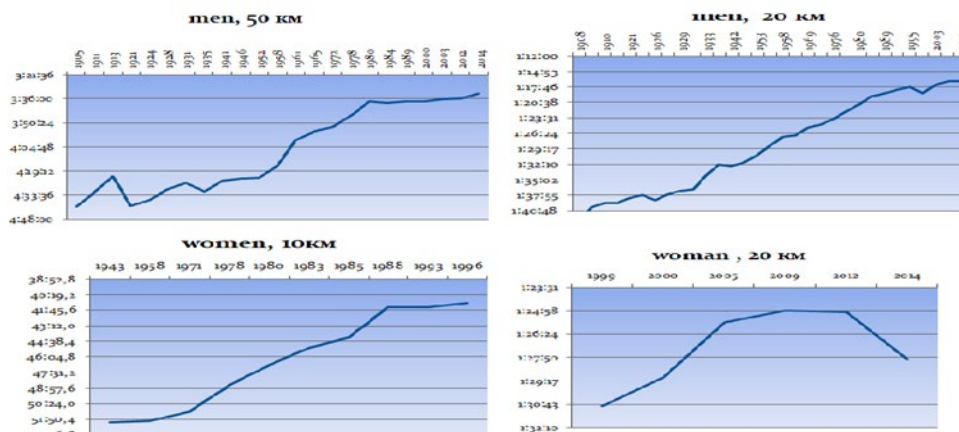
<i>Stage</i>	<i>Distances</i>	<i>Popular sportsmen</i>	<i>Preparation method</i>
Stage 1: The middle of the XIX century – 1908. The birth of the sport as a kind of track and field. Distribution in Western Europe and North America. The origin of sports walking in Russia.	From competitions at distances up to 9-10 miles, in 3-4 hour walking, 100 km, to the inclusion of sports walking in the program of the Olympic Games of 1908 in London	D. Weston J. Larner (GBR) - the first Olympic champion in 1908 A. Dokuchaev A. Derevitsky	From 2-4 weeks of training for competitions with the passage of the competition distance 2-3 times a week to 5-6 months of training with the use of longer and shorter training distances, different speeds of their passage.
Stage 2: 1908-1932. Becoming an Olympic type of track and field athletics. Distribution in Europe and South Africa. The beginning of the registration of world records and records of the USSR.	Appearance of the men's 50 km distance at the 1932 Los Angeles Games	Thomas Green (GBR – - 50 km – 4: 50: 10.0 Hugo Frigerio – ITA) - 3-time Olympic champion	The duration of preparation for competitions increases to 8-10 months, and auxiliary sports forks are used: running, skiing, and games.
Stage 3: 1932-1952 Growth in the overall level of results. Creation of scientific and methodological foundations	Inclusion of the 10 km distance in the Olympic Games program in 1948	B. Yunnikov A. Liepaskalns, I. Shkodin, P. Zeltyns	Training becomes year-round. Interval and repeated method, means of general physical training are used.
Stage 4: 1952-1964 The entry of Soviet athletes on the world	In 1956, in the Olympic Games program, the distance of 10 km is	V. Golubnichy, L. Spirin, S. Lobastov, V.	Interval and repeated method in combination with long walking. Development of a system

stage and the conquest of their leading positions	replaced by a distance of 20 km.	Ukhov, N. Smaga, B. Yunk	for selecting promising athletes among young people.
Stage 5: 1964-1976 Distribution in Latin America, Asia, and Africa. Significant increase in results.	20 и 50 km	V. Soldatenko, A. Vedyakov, A. Yegorov	Fast, long walking. The provisions of the system of recovery after loads are being developed. The questions of training in the conditions of the middle mountains are investigated.
Stage 6: 1976-1992. International class walkers appear on all continents.		O. Krysh-top, I. Strakhova, M. Diaz, Ch. Yuelin, P. Pochenchuk	Increases the intensity of training. A methodology for training women is being developed. Women are entering the world stage.
Stage 7: 1992-present. A significant jump in records, especially among women.	In 1992, 10 km for women; in 1996, it was replaced by 20 km for women. Since 2017, 50 km for women From 2022, 10, 20, 30 and 35 km	J. Tallent, Y. Suzuki, J. Perez, A. Voevodin, R. Rasskazov, O. Ivanova, E. Nikolaeva	There is a debate about changing the Olympic distances in race walking for men and women. Planning to introduce electronic insoles to fix the flight phase and improve judging.

The next step was to analyze the results of the world's strongest race-walkers among men and women since 1905, the results of which are shown in Figure 1.

The dynamics of changes in the parameters of training loads in the annual cycle of highly qualified athletes is presented in Table.2.

Exploring the current trends in the development of race-walking, it should be noted that race-walking is a subjective type of athletics, in which there is judging by the technique and it is possible to disqualify an athlete on this basis.



Picture 1 - Dynamics of world records among women and men in race-walking

Table 2 - Dynamics of training loads in the annual cycle

<i>Stages</i>	<i>Distance</i>	<i>Annual volume, km</i>
Stage 3: 1932-1952	10 km	700-1600
	50 km	1300-3500
Stage 4: 1952-1964	20 km	1500-3500
	50 km	2500-6500
Stage 5: 1964-1976	20 km	3500-5500
	50 km	4000-7000
Stage 6: 1976-1992	20 km	5000-6000
	50 km	7000-8000 и до 12 000
	10 km women	4000-5000
Stage 7: 1992 – present	20 km women	5500-6500
	20 и 50 km men	7500-8500 и до 12 000

All of the above features and the growth of results creates certain difficulties in judging and conducting competitions and sets the following tasks for this type of athletics:

1. Judging competitions using portable transmitting devices. A pit lane zone has been introduced, which reduces the number of disqualifications. It is planned from 2022 to use electronic chips in the insoles of athletes with a fixed value of the flight phase.

2. Acceptance of the fact that with the growth of results, the two-pronged position visible to the human eye has become impossible. Judging of the race-walking technique will be carried out according to two criteria: the leg straightened in the knee joint at the time of passing the vertical, and the maximum permissible value of the flight phase.

3. Study of the effectiveness of the use of distances in race-walking. So, in 2017, the 50 km distance among women was introduced. At the moment, the IAAF Council has decided that in order to increase entertainment, it is planned to replace the 20 and 50 km distances with 10 and 30 km, respectively, from 2022.

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ТЕНДЕНЦИИ РАЗВИТИЯ МИРОВОЙ СПОРТИВНОЙ ХОДЬБЫ

Аннотация. В статье перечисляются основные этапы становления и развития мировой спортивной ходьбы, а также вклад национальной школы в развитие этого вида легкой атлетики. Представлена динамика мировых рекордов среди мужчин и женщин. Отражена динамика роста тренировочных нагрузок и содержания тренировочного процесса. Обозначены основные проблемы современной спортивной ходьбы и пути ее дальнейшего совершенствования.

Ключевые слова. Спортивная ходьба, динамика, мировые рекорды, судейство

USSR AND RUSSIA AT THE PARALYMPIC GAMES

Stepanova E.G.
Leontieva N.S.

Abstract. *The article provides a comparative analysis of the performance of the national teams of the USSR and the Russian Federation at the Summer and Winter Paralympic Games. The indicators were studied in their dynamics from 1988 (the debut of the Soviet Paralympic team) to the present day.*

Keywords: *Paralympic Games, Soviet Paralympic team, Russian Paralympic team*

Introduction. The USSR team made its debut at the VIII Summer Paralympic Games held in Seoul in 1988. Despite the fact that it was the first time Soviet athletes took part in these competitions, they managed to win 21 gold, 20 silver and 15 bronze medals. This allowed them to take 12th place in the final medal table.

Main study. As a result of the analysis of sources reflecting quantitative changes in indicators in different sports from 1988 to 2012 at the Paralympic Games, the following conclusions were drawn:

- At the Summer Paralympic Games USSR and Russian athletes won the greatest number of medals in the following competitions: athletics (163 medals, or 43.6% of the total number of awards), swimming (137 medals, or 36.6%) and judo (25 medals, or 6.7%);

- At the Winter Paralympic Games: cross-country skiing (196 medals, or 64.9%), biathlon (78 medals, or 25.8%) and alpine skiing (26 medals, or 8.6%);

An analysis of the performance of Russian Paralympians at the Summer Paralympic Games from 1988 to 2012, and at the Winter Paralympic Games from 1988 to 2018 revealed the following:

- At the Summer Paralympics the largest number of medals was obtained: by men in swimming - 93 medals or 40.4% of the total number of medals among men in the studied period, by women in athletics - 73 medals or 50.7%;

- At the Winter Paralympics the largest number of medals was obtained by men and women in cross-country skiing (for men - 102 medals or 64.2% of the total number of medals among men during the study period; for women - 72 medals or 60%);

- The total number of medals won by men at the Summer Paralympics - 230 or 61.5% of the total number of medals at the Summer Paralympic Games during the study period, by women - 144 or 38.5%;

- The total number of medals won by men at the Paralympic Winter Games - 159 or 57% of the total number of medals at the Paralympic Winter Games during the study period, women - 120 or 43.01%;

- The decline in results at the Summer Paralympic Games for men occurs in 1992 to 2000, for women - 1996;

Conclusions. From 1992 to 1996 there was a decrease in the number of medals won by Russian athletes at the Summer Paralympic Games. From 2008 to 2012, the number of medals won by Russian athletes at the Summer Paralympic Games increased.

In 2018, the number of medals for Russian athletes is decreasing again (24 medals). This is largely due to the suspension of the Russian Paralympic Committee from participating in the XII Winter Paralympic Games in Pyeongchang (Republic Korea), due to which only 30 athletes were able to compete under a neutral flag.

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СССР И РОССИЯ НА ПАРАЛИМПИЙСКИХ ИГРАХ

Аннотация. В статье приведен сравнительный анализ показателей выступлений сборных команд СССР и РФ на Паралимпийских играх (летних и зимних). Данные показатели изучены с учетом их динамики в период с 1988 года, когда состоялся дебют советских паралимпийцев, по настоящее время.

Ключевые слова: Паралимпийские игры, паралимпийская команда СССР, паралимпийская команда РФ

DYNAMICS OF SOMATIC AND PHYSIOMETRIC INDICATORS AS A CHARACTERISTIC GROWTH AND DEVELOPMENT OF THE BODY OF YOUNG SWIMMERS

Tabakova E.An.

***Abstract.** The study attempts to analyze the dynamics of indicators of physical development, to identify the features of their changes. The reasons for the development of recommendations on the orientation of training exercises for swimmers aged 13-16 years are proposed.*

Keywords: age-related development, young swimmers, growth process, somatic and physiometric indicators, dynamics of indicators

Introduction

The practical activity of the coach is connected with the planning and construction of the training process. The process will be carried out more effectively if the coach relies on objective indicators that characterize the age-related changes in the body of young swimmers.

The training for several years of young swimmers coincides with several periods of their age development. The stage of basic training coincides with the period of age-related development, which is called adolescence. This age period is distinguished by the following features: active growth and development and uneven growth and development.

In different phases of this age period, individual motor abilities, indicators of somatic and functional development increase unevenly and independently of each other [1; 2].

Tasks:

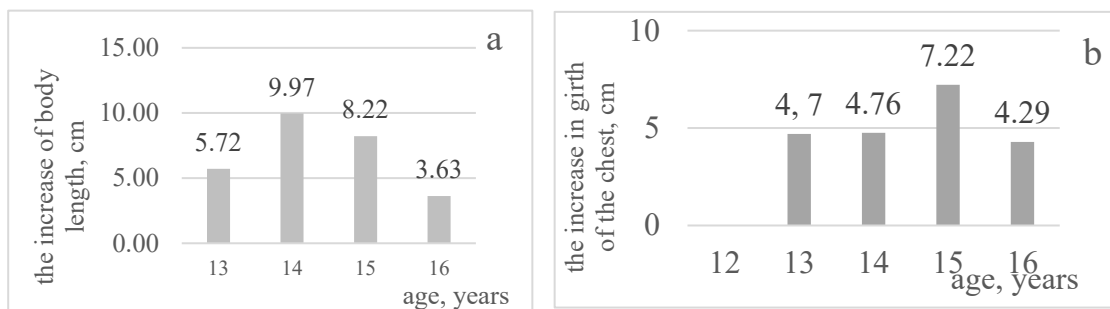
1. To establish differences in the dynamics of indicators of age development of young swimmers
2. Determine the age periods of selective use of training exercises

The main part

The dynamics of growth of certain indicators to judge the age periods of the greatest rate changes, and accordingly training exercises special orientation to use when the periods most favorable for the development of necessary qualities.

An illustration of the processes that characterize the uneven growth and development processes is shown in picture 1 (a and b). The age periods when the indicators have different values of increments are indicated.

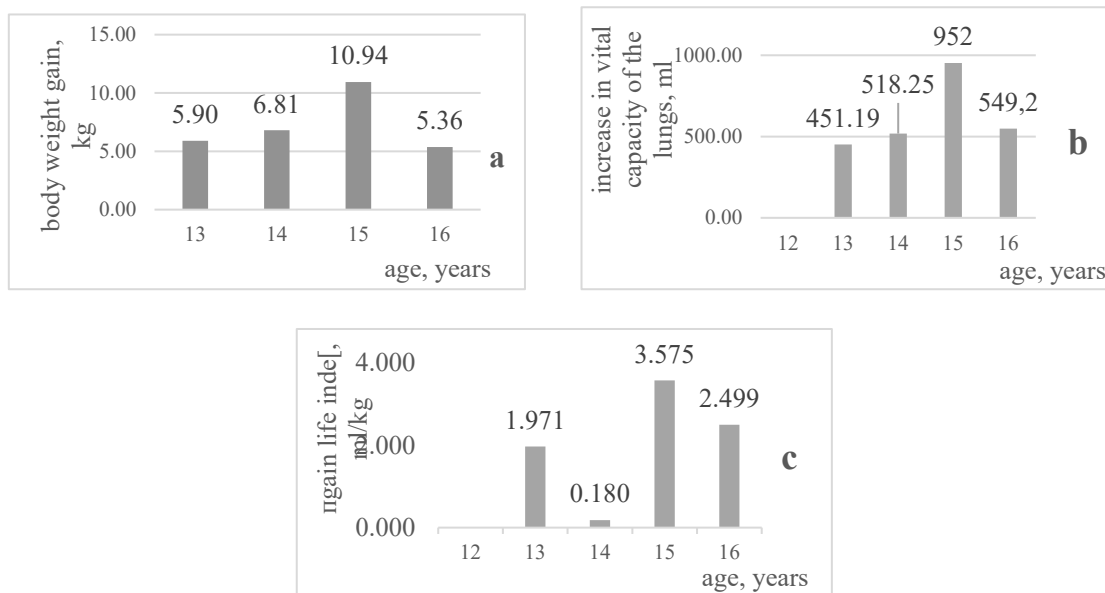
So, for example, the period of active growth in length comes earlier, as can be judged by the maximum growth rate of this indicator in 14 years in boys and in the subsequent age period, the growth rate decreases.



Picture 1- Dynamics of increments of a) body length and b) chest circumference of swimmers aged 12-16 years

An active increase in the circumference of the chest is observed in the period from 12 to 14 years. Based on the data obtained, it can be assumed that training exercises during this period should be mainly aerobic.

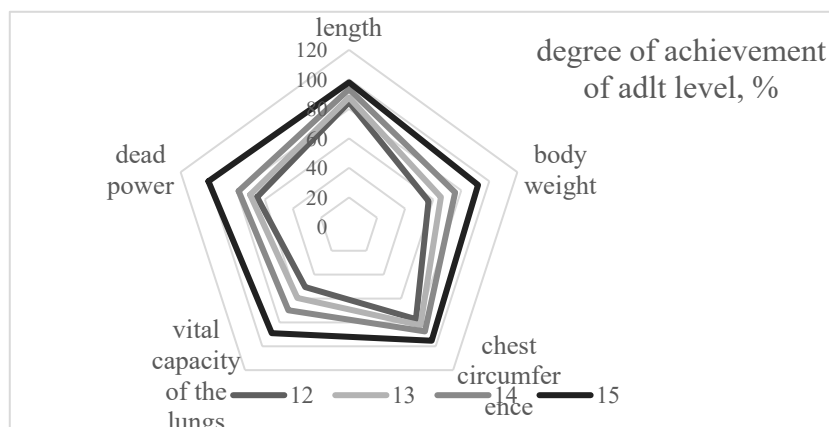
In the next age period, there are active changes in indicators associated with the increase in the capabilities of the muscular system. An active increase in body weight, vital capacity of the lungs, and vital index is observed in 14-16 years with peaks of gains in 15 years, the values reach the highest values by the age of 15 and remain at 16 years (Picture 2: a, b, c).



Picture 2 - Dynamics of increments of a) body weight; b) vital capacity of the lungs; c) vital index (IV) of swimmers aged 12-16 years

The analysis of the obtained results makes it possible to suggest that in this age period it is possible to include training exercises for the development of anaerobic abilities and strength in young swimmers.

In addition to information about the growth of age-related development indicators, you can also use one of the informative indicators of the growth rate of traits. This is an indicator that characterizes the degree of maturity of each indicator in the young relative to the adult age (juvenile and definitive level).



Picture 3 - The degree of maturity of individual indicators of the age development of swimmers aged 12 -16 years

Picture 3 schematically shows a system that includes five indicators of the age development of young swimmers. For the 100% level is taken as the indicator reached 16 years of age and assessed the level achieved in each age period of 12-16 years. The most mature at the age of 13-14 years are the indicators of long-legged size and chest girth, and the indicators of body weight, vital capacity of the lungs and stan strength reach a similar level of maturity by the age of 14-15-16 years.

Conclusions:

1. Differences in the dynamics of indicators of age development of young swimmers are established. Active growth in length and increase in the circumference of the chest is observed in the period from 12 to 14 years. The increase in body weight, vital capacity of the lungs, and vital index is observed in 14-16 years, with peaks of gains in 15 years

2. Age periods of selective use of training exercises are determined

Conclusion

The data obtained confirm that different organs and systems do not develop at the same time during this period. In turn, the obtained data provide a basis to confirm the installation for the use of training loads of different orientation in different age periods of growth and development of young swimmers.

The intensive increase in aerobic capacity occurs in the prepubertal and early pubertal phases of individual development, and the maximum strength, speed-strength abilities and anaerobic performance-in the second half of the actual pubertal phase.

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ДИНАМИКА СОМАТИЧЕСКИХ И ФИЗИОМЕТРИЧЕСКИХ ПОКАЗАТЕЛЕЙ КАК ХАРАКТЕРИСТИКА РОСТА И РАЗВИТИЯ ОРГАНИЗМА ЮНЫХ ПЛОВЦОВ

Аннотация. В исследовании предпринята попытка проанализировать динамику показателей физического развития, выявить особенности их изменений. Предложены обоснования для выработки рекомендации о направленности тренировочных упражнений для юных пловцов (м) в возрасте 13-16 лет.

Ключевые слова: развитие возрастное, юные пловцы, процесс роста, показатели морфологические и физиометрические, динамика показателей

TERMINOLOGY OF SAMBO

Tabakova V.S.

Komova E.V.

***Abstract.** Sambo comes on the international level and it has its own terminology. The key users are athletes, coaches, judges. Sambo terminology is used today in online sambo much more, than before because of the world situation. Sambo terminology has to be translated perfectly, because false translation can cause misunderstanding and distortion of facts or information about sambo.*

***Keywords:** terminology, translation, specialist, sambo, sport*

In connection with the emergence of sambo on the international level, it became necessary to adequately transfer the terminology of sambo, created in Russian, into the languages used in the international sports arena.

The experiment involved the respondents of the control group: participants of the World SAMBO Championships: Sofia, Bulgaria, 2016; Sochi, Russia, 2017 and participants of online sambo in 2020. The survey allows to determine the professional composition of the respondents being surveyed, the language composition, the degree of sambo terminology proficiency, the level of sambo knowledge.

We conducted a survey and interviewed experts, namely coaches, athletes, judges. In total, 917 specialists were interviewed, of which 18% were coaches, 10% were judges, 72% were athletes in 2016, and in 2017 the percentage was 19% - coaches, 6% - judges, 75% athletes. The interviewed specialists were representatives of 145 countries. The mother tongue was: 50% - Russian, 15% - French, 15% - English, 15% - German and 5% - other languages.

Regardless of the venue of the competition, the majority of the interviewed communicants use SAMBO terminology, but in Sochi the percentage of use is higher. On the territory of Russia, the terminology of judo is used by a smaller part of the recipients, since the recipients were more familiar with the Sambo terminology by this time and were actively implementing the developed glossary in a pilot version. The smallest percentage of communicants uses a different or their own terminology of combat. The need to use and know SAMBO terminology when participating in online SAMBO has increased as it influenced the outcome of the game. Mostly athletes and judges took part in online sambo, which made it possible to confirm the need for competent translation of sambo terminology into international languages.

We were able to record data on the quantitative ratio of the use of SAMBO terminology in figures 1 and 2.

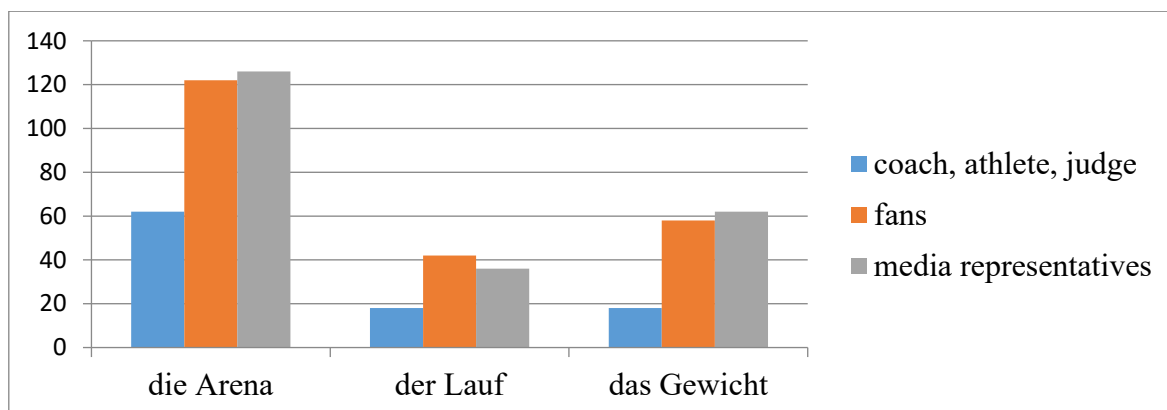


Figure 1 - The ratio of the use of general sports vocabulary (number)

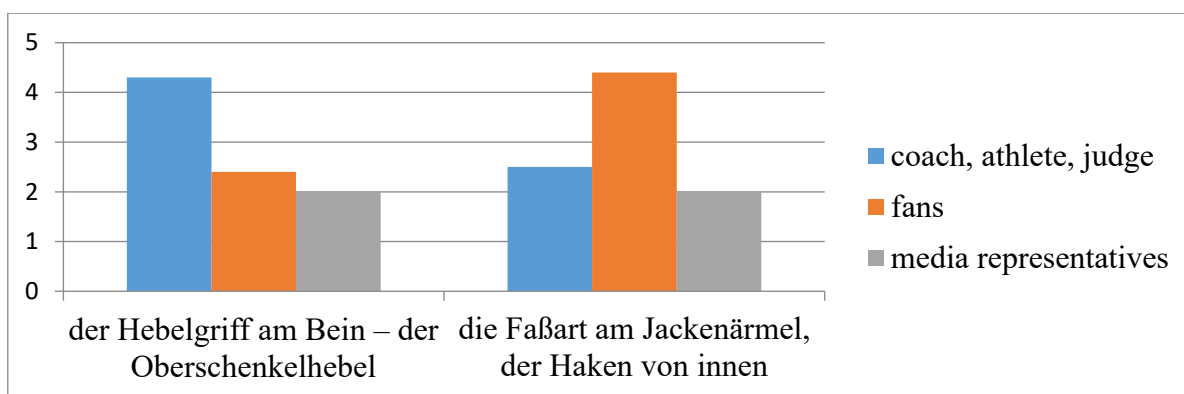


Figure 2 - The ratio of the use of sambo techniques (number)

The data obtained on the percentage of the use of general vocabulary and sambo techniques allow us to provide recommendations on changing the systematization of lexical units in the sambo glossary. As a result of observations in the course of the survey, we received data that allow us to divide the dictionary not only into 5 languages, but also into 2 main blocks: general vocabulary and vocabulary describing sambo techniques.

Table 1 - Section of the new glossary type dictionary: block "general vocabulary"

РУССКИЙ	ENGLISH	FRANÇAIS	ESPAÑOLAS	DEUTSCH
Арена	Arena	Arène	Arena	die Arena
Бег	Running	Course	Carrera	der Lauf
Вес	Weight	Poids	Peso	das Gewicht

Table 2 - Section of the new glossary type dictionary: block "Sambo techniques"

РУССКИЙ	ENGLISH	FRANÇAIS	ESPAÑOLAS	DEUTSCH
Болевой прием на ногу – рычаг бедра	Painful leg lock - thigh lever	Acte douloureux sur la jambe – levier de la cuisse	Técnica dolorosa a la pierna - palanca a la cadera	der Hebelgriff am Bein – der Oberschenkelhebel
Захват за рукав куртки зацеп изнутри	Jacket sleeve grip, grip hook from the inside	Prise contre la manche de la veste, prise de dedans	Agarre de la chaqueta por dentro de la manga	die Faßart am Jackenärmel, der Haken von innen

The survey was carried out in full-time and remote format. The survey made it possible to determine the linguistic composition of the participants in communication, the level of proficiency in Sambo terminology and its application, to confirm the need for thorough analysis and preparation for the translation of Sambo terminology into international languages.

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ТЕРМИНОЛОГИЯ САМБО

Аннотация. Самбо выходит на международный уровень и имеет свою терминологию. Ключевые пользователи - спортсмены, тренеры, судьи. Терминология самбо сегодня используется в онлайн-самбо гораздо больше, чем раньше, из-за ситуации в мире. Терминологию самбо нужно переводить безупречно, потому что неверный перевод может вызвать непонимание и искажение фактов или информации о самбо.

Ключевые слова: терминология, перевод, специалист, самбо, спорт

THE LAST THREE RUNNING STRIDES OF THE LAST SUPPORT PHASE OF THE LONG JUMP WORLD TOP JUMPERS

Tatarinov I.D.
Mironenko I.N.

Abstract. *The trend of the technique changes in the support phase and the support phase in the long jump were identified on based data of kinematics parameters of the last running strides of jumpers-finalists of the World Championships in 1997, 2009 and 2017. The result of researching will be simulated in the future researches of the men`s long jump.*

Key words: *long jump, kinematics parameters of the support phase, length of the last running strides of run-up, simulation*

Introduction.

The main aim for long jumpers is developing and maintaining the last running strides maximum speed, which need for more effective take off with achieved speed. Finally, most of the scientific and methodological works are focused on the kinematic structure of the support phase and take off phase of the long jump [1,2].

There is no data in the scientific researches on modeling the long jump technique based on the kinematic parameters of the male finalists in the long jump of the last three decades. Results of work will be used for next simulation of the men`s long jump technique, for results prevention and improving technical prepare.

The aim of the study is to simulation of kinematics structure of the approach`s last running strides of the support phase of the long jump. Describing and analyzing tables and figures were done for this research.

Technology of the study`s included description the data with help of mathematical statistic about 32 long jumpers on the basis of computer class in the laboratory of the department of track and field of SCOLIPE.

Results

The data of the length of the last running strides of World Championships 1997, 2009, 2017 jumpers (1-4 place) are shown in the table 1.

Table 1.

World Championship	3 rd stride, m	2 nd stride, m	1 st stride, m
	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$
1997	2,28 ±	2,50 ±	2,25 ±
2009	2,32 ±	2,48 ±	2,22 ±
2017	2,30 ±	2,45 ±	2,19 ±
Average	2,30 ±	2,48 ±	2,22 ±

The average values show increasing the length of the 2nd running stride (from 2,30 m to 2,48 m), then visible shortening the length of the 1st stride before takeoff (from 2,48 m to 2,22 m). The 1st stride is shorter, than the 3rd stride (2,22 m and 2,48 m, accordingly).

We can see the next trend from WC 1997 to WC 2017: all jumpers (1-4 place) show shortening the 2nd running stride (from 2,50 m to 2,45 m) and shortening the last running stride (from 2,25 m to 2,19 m).

The data of the length of the last running strides of World Championships 1997, 2009, 2017 jumpers (5-8 place) are shown in the table 2.

Table 2 – Average data of the last strides of the approach

World Championship	3 rd stride, m	2 nd stride, m	1 st stride, m
	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$	$\bar{X} \pm \sigma$
1997	2,38 ±	2,27 ±	2,27 ±
2009	2,29 ±	2,41 ±	2,19 ±
2017	2,22 ±	2,42 ±	2,16 ±
Average	2,30 ± ±	2,37 ±	2,21 ±

The average length of the 3rd stride is 2,30 m., the average length of the 2nd stride is 2,37 m. There is shortening the length of the last running stride in average 0,16 m against the 2nd running stride. This strategy is typical for performing a more effective take off.

There are exactly differences between the three last running strides. This is due to the fact that jumpers have more high level of physical and technical preparations.

Also there is shortening the 3rd running stride. The WC 1997 jumpers (5-8 place) have shown the length of the 3rd running stride, which is 2,38 m. This stride is the longest stride of the three strides. The length of this stride deviates from the existing regularity for effective take off and increasing result [3].

Values of the length of the 2nd running stride (2,27 m) and the last running stride (2,27 m) equal to each other (5-8 place, WC 1997). It says about some jumper`s technical problems. WC 2009 and WC 2017`s jumpers (5-8 place) have shown equal increasing the 2nd running stride (2,42 m) and shortening the last running stride (2,19 m and 2,16 m, accordingly), but the values are less, than first four places.

Summary

1. The average values of the length of the three last running strides of run-up were simulated. 1-4 place: the 3rd stride – 2,30 m., the 2nd stride – 2,48 m., the

1st stride – 2,22 m. 5-8 place: : the 3rd stride – 2,30 m., the 2nd stride – 2,37 m., the 1st stride – 2,21 m.

2. There is a trend towards shortening the 2nd and the 1st running strides of run-up in support phase. Also we can see shortening the length of the 2nd running stride from WC 1997 to WC 2017 (from 2,50 m to 2,45 m). More elite athletes (1-4 place) show the length of the 2nd stride by 0.11 m longer, than the jumpers, who took 5th to 8th place. Their values of the length of the running strides are stable compared to the existing regularity of the length of the strides in the support phase. Long jumpers (WC 1997, 5-8 place) have the irrational length of the last running strides, the technique of which is stabilized by the 2009 and 2017 World Championships, which corresponds to the regularities for more effective takeoff. There is a trend towards increasing the 2nd running stride (from 2,27 m to 2,42 m) and shortening the last running stride (from 2,27 m to 2,16 m).

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ПОСЛЕДНИЕ ШАГИ РАЗБЕГА ФАЗЫ ПОДГОТОВКИ К ОТТАЛКИВАНИЮ ВЕДУЩИХ ПРЫГУНОВ МИРА

Аннотация. На основе статистических данных кинематических характеристик длины последних беговых шагов разбега в фазе подготовки к отталкиванию прыгунов-финалистов Чемпионатов Мира 1997, 2009 и 2017 гг. была выявлена тенденция к изменению техники подготовки к отталкиванию и смоделирована фаза подготовки к отталкиванию в прыжке в длину. В дальнейшем полученные данные позволяют смоделировать технику прыжка в длину с разбега у мужчин.

Ключевые слова: прыжок в длину, кинематические характеристики, подготовка к отталкиванию, длина последних беговых шагов разбега, моделирование

INFLUENCE OF SPORT AEROBICS SPECIAL EXERCISES ON THE COORDINATION ABILITIES OF 5-6 YEAR-OLD CHILDREN.

Timofeeva I.A.

***Abstract.** The article discusses the option of using special exercises in sport aerobics for the development of coordination abilities of preschoolers of 5-6 years old. In the course of the experiment, the effectiveness of the developed technique was proved, which is represented by a significant improvement in coordination abilities among representatives of the experimental group.*

***Keywords:** sport aerobics, aerobic gymnastics, basic steps, coordination abilities, preschoolers*

Introduction. Sport aerobics (or aerobic gymnastics) is a sport characterized by the ability of athletes to perform continuous complex combinations of high-intensity aerobic movements to music [9]. Sport aerobics makes high demands on the level of development of basic physical skills, one of which is coordination. Sport aerobics classes contribute to the effective development of motor skills and abilities in a preschooler. The process of mastering vital motor skills occurs especially intensively at preschool age. One of the most sensitive periods of the development of coordination abilities falls on a period of 4-7 years old. A number of authors argues that at this age, a child is actively developing mechanisms for controlling movements [3-5]. Therefore, an important task of a coach is to promote the maximum development of coordination abilities at this age [1, 7].

In the process of sport aerobics lessons, a preschooler's motor skills are formed, which will be actively used in the future as a universal basis for improving his/her motor potential [2, 6]. The need for a constant search for means that allow to effectively influence the development of a child's motor-coordinating abilities from an early age determines the relevance of the study.

The aim is to develop a methodology for the development of coordination abilities of 5-6 years old children using special exercises of sport aerobics.

To achieve the goal of the study, the following tasks were set:

- to analyze the issue of coordination abilities development of senior preschoolers in literature;
- to develop a set of special exercises in sport aerobics for the development of coordination abilities of children 5-6 years old;
- to Identify the initial level of development of their coordination abilities;
- to assess the effectiveness of the developed set.

The working hypothesis of the study was based on the assumption that the fulfillment of special exercises of sport aerobics in the training process of 5-6 year old children will increase the level of their coordination abilities.

Main part. To test the hypothesis, a pedagogical experiment was conducted, in which 20 preschoolers aged 5-6 years old took part - athletes of the

1st year of study, engaged in a sport aerobics club, arbitrarily divided into two groups - control (n = 10) and experimental (n = 10). Moreover, the gender composition of the groups was approximately the same.

Before the experiment began, pedagogical testing was carried out. To assess the level of development of coordination abilities, 5 special coordination tests were used: shuttle run 3x10 meters [1], Romberg's pose, three forward rolls, movement straight after 10 turns around its axis, reproduction of aerobic ligament.

The analysis of the results of preliminary testing did not reveal significant differences in the level of physical fitness of the studied groups ($p \geq 0.05$), which gave grounds to test the methodology.

The main and final parts of the lessons for the control and experimental groups did not differ in their content. In the preparatory part of the training session for the experimental group, instead of the standard warm-up, a set of special exercises of sport aerobics was introduced, combining the performance of the basic steps "jack", "no up", "skip" and "lunch", as well as the volume of running exercises was reduced.

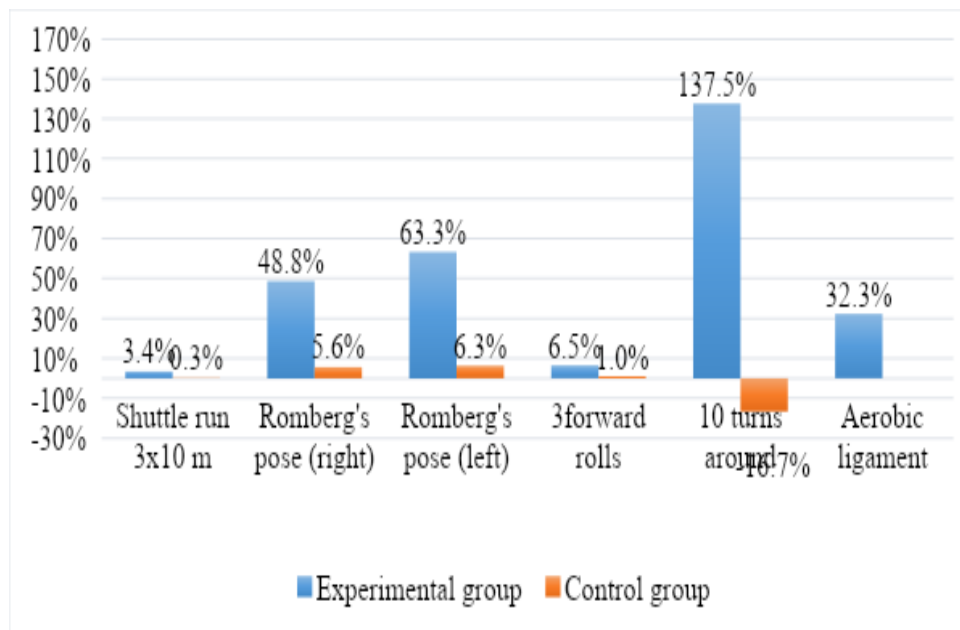
Gradually, from the beginning of the experiment, the complex of basic steps became more complicated: movements of the arms were added to the movements of the legs with advancement, then rotations around the axis. The final step was to complete the basic steps with musical accompaniment. The increase in complexity took place in accordance with the plan indicated in Table 1.

Table 1-Terms of mastering the elements of basic steps

№	Timing	Learning movement elements
1	5.12.2018-28.12.2018	Legs + forward movement
2	11.01.2019-27.01.2019	Legs+ hands+ forward movement
3	28.012019-10.03.2019	Legs + hands + forward movement+ rotation around its axis
4	11.03.2019-15.05.2019	Legs+ hands + forward movement+ rotation around its axis for musical accompaniment

Experimental sessions were held three times a week for half a year (December 2018 - May 2019). Each lesson lasts 55 minutes.

At the end of the experiment, repeated pedagogical testing was carried out (Figure 1). As a result of special coordination tests, the subjects of the experimental group showed a significant increase in such tests as "shuttle run 3 x 10 m", "Romberg's pose", "walking in a straight line after 10 turns around its axis" and reproduction aerobic ligament ($p \leq 0.05$). The subjects of the control group had unreliable shifts ($p \geq 0.05$).



Picture 1- changes in the results of the subjects in coordination motor tests

Results. Comparative analysis of the results of preliminary and final testing allows us to conclude that the final results of experimental group in the tests such as "Shuttle run 3x10 m", "Romberg's Pose", "Three forward rolls" and "Aerobic ligament" are significantly higher the results of the control group. The effectiveness of the developed methodology is represented by a significant improvement in coordination abilities.

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ВЛИЯНИЕ СПЕЦИАЛЬНЫХ УПРАЖНЕНИЙ СПОРТИВНОЙ АЭРОБИКИ ДЛЯ РАЗВИТИЯ КООРДИНАЦИОННЫХ СПОСОБНОСТЕЙ ДЕТЕЙ 5-6 ЛЕТ.

Аннотация. В статье рассматривается вариант применения специальных упражнений спортивной аэробики для развития координационных способностей

дошкольников 5-6 лет. В ходе эксперимента доказана эффективность разработанной методики, которая представлена достоверным улучшением координационных способностей у представителей экспериментальной группы.

Ключевые слова: спортивная аэробика, аэробная гимнастика, базовые шаги, координационные способности, дошкольники

ROWER'S MOTIVATION FACTORS DURING THE COMPETITIONS PREPARATION

Tsutskova A.S.

Abstract. *This article is devoted to study young rower's sports motivation during the competitions preparation. The significance of the study is justified; its connection with the sports result is discussed. The analysis of motivation factors identified through the questionnaire of 75 young rowers is presented. The questionnaire was conducted before the Championship of Russia under 19 years old. Characteristics of each factor influencing the sports motivation of the respondents are given in detail. The significance of each factor and its influence on the athlete's motivation are determined. The research's results are presented in conclusion.*

Keywords: *motivation, motivation factors, rowing*

Introduction: Motivation is one of the most important components of sports activities. Athlete's results largely depend on it. The study of motivation features is a topical issue of sports psychology [3, 5]. Despite theoretical provisions on this issue have been sufficiently elaborated, practical solutions of this problem remain insufficiently justified [4].

Purpose: the purpose of this study is revealing motivation factors of young rowers during the competition preparation.

Participants: 75 young rowers (55 boys and 20 girls) between 16 and 19 years of age participated in the research. All athletes are Candidates Master of Sports.

Procedure: the study was conducted during the Junior Russian Championship under 19 years old. We tested young rowers at the beginning of the competition.

Methods: mathematic and statistical methods, questionnaire.

Results and discussion: we developed a questionnaire consisting of 21 questions and we used it to determine the factors affecting the sports motivation of young rowers.

We analyzed motivation factors of young rowers and could come to some conclusions:

1. Positive emotions during the training process and coach support are the most important factors. These factors are interconnected, because coach support

during the training process has a beneficial impact on athlete's emotions [2]. Coach presence during the training process has a high significance too. Probably, the coach passive interest reduces the motivation of athletes to train. Goal setting for the competition is also important factor for the rower's motivation. Successful previous competitions increase rower's motivation to train. The above motivation factors were noted by all respondents (100%) as the most significant for successful preparation for competitions.

2. Relatives approval is important for 67.8% of the respondents, this factor is not very significant for 21.3% of the rowers, it is not important for 10.9% of the athletes. Despite this factor is not the most significant for high-level athletes, nevertheless, the support of relatives and friends always has a positive impact on the chosen type of activity.

3. Coach presence during the race is important for 79.3% of the respondents; this factor is not very significant for 20.7% of the athletes. In our opinion, coach support during the race help rowers to achieve higher result than their passing the distance «alone».

4. It should be noted that familiarization with the training plan is very important for 79.3% of the respondents (it's not very important for 19.6% of the rowers, it's not important for 1.1% of the athletes). Therefore coaches should take this factor into account during competitions preparation.

5. 90.1% of the respondents believe that a systematic analysis of training and competitive activities increases sports motivation. Thus, this analysis should be permanent during the preparation for the competition.

6. Frequent injuries during pre-competition training have a significant impact on the motivation for 61.5% of the rowers. Injuries do not allow athletes to fully prepare for the competition. It negatively affects the result. 38.5% of the athletes responded that frequent injuries do not significantly affect their motivation.

7. Information about rivals before the race is not very important for 51.9% and it is not important for 35.2% of the respondents, only 12.9% of the rowers replied that this factor is very important for increasing motivation. In our opinion, information about rivals is not important in rowing, but it can contribute to the construction of competent tactics for racing.

8. Unfair umpiring does not affect motivation for 48.9% of the respondents. Only 9.8% of the rowers replied that this factor significantly reduces

their motivation. It should be noted that the rowing umpires can't directly affect the results of races.

9. Complicated relations with the coach during the competitions preparation greatly reduce motivation for 71.4% of the respondents, they do not significantly affect for 27.2% of the rowers, and they do not affect motivation for 1.4% of the athletes. A coach and athletes must become allies and direct common efforts in the same direction to achieve the highest result.

10. The monotony of training has a negative effect on motivation for 87.7% of the respondents. Despite rowing is a cyclical sport, the coach needs to try to prevent the monotony, building the training process rationally, competently and variably.

11. Familiarizing with start lists and crews of rivals is important for 79.5% of the rowers while this factor has no high significance for 19.7% of the respondents, and it doesn't important for 0.8% of the athletes.

12. Material encouragement affects the level of motivation of athletes (61.1%). However, the coach has to remember that spiritual needs are more motivating than material needs.

Conclusion: We analyzed the motivation factors of young rowers during the competitions preparation. Coaches should pay attention to the following factors in their training programs: positive psychology and pedagogical cooperation with athletes, coach support, and provision of athletes with information about the training plan, analysis of training and competitive activities in detail.

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ФАКТОРЫ СПОРТИВНОЙ МОТИВАЦИИ ГРЕБЦОВ-АКАДЕМИСТОВ НА ЭТАПЕ ПРЕДСОРЕВНОВАТЕЛЬНОЙ ПОДГОТОВКИ

Аннотация. Данная статья посвящена исследованию спортивной мотивации гребцов-академистов на этапе предсоревновательной подготовки. Обоснована значимость изучения мотивации, ее связь со спортивным результатом. В статье представлен анализ факторов мотивации, выявленных посредством анкетирования 75 гребцов-академистов, принимавших участие в Первенстве России до 19 лет. Дана подробная характеристика каждого фактора, влияющего на спортивную мотивацию опрошенных. Определена значимость каждого фактора и степень его влияния на мотивацию спортсменов. Результаты исследования представлены в заключении.

Ключевые слова: мотивация, факторы мотивации, гребной спорт

COMPONENTS OF INNOVATIVE MANAGEMENT IN THE STRATEGIC DIRECTIONS OF THE INTERNATIONAL OLYMPIC MOVEMENT IN THE XXI CENTURY

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Melnikov V.V.*

Abstract: *In 2014 the IOC Session unanimously approved the Olympic Agenda 2020, setting a strategic direction for a large-scale revision of all aspects of organizing the Olympic Games from choosing a host city and hosting the Games to creating an Olympic legacy and defining a fundamentally new approach to future Olympics.*

Keywords: *Agenda 2020, International Olympic Committee, Olympic Games*

Introduction. At the 127th emergency session the International Olympic Committee (IOC) approved four dozen rules and amendments, some of which are aimed at optimizing the costs of hosting the Games and the Olympics bidding process. All proposals that were discussed are part of the general program for the development of the Olympic movement in the coming years, which is called "Agenda 2020".

Main study. 14 IOC working groups took part in the creation of this revolutionary program and, based on thousands of proposals, formed 40 recommendations, which were to be considered at the IOC Session. Discussion

and approval of the final version of each of the recommendations were open. Despite the impressive number of proposals the IOC President was confident that the two days allotted for the Session should be enough to form the final version of Agenda 2020.

One of the recommendations suggested that the host city of the Olympic Games could use the infrastructure located on the territory of neighboring states to host the competition. The IOC also intended to increase the funds allocated to fighting match-fixing and doping by \$20 million and to move the Youth Olympics to odd years, starting with the Youth Olympics in 2023.

In 2021, the Executive Committee of the IOC proposed a new strategic roadmap for the Olympic "Agenda 2020 + 5". The document contains 15 recommendations that will determine the work of the IOC and the entire Olympic movement until 2025. It was discussed at the 137th IOC Session in March 2021. The name itself underlines the fact that the new roadmap is the successor to the Olympic Agenda 2020, which was adopted in December 2014 and had a significant impact on the IOC. This document became the reason for changes aimed at protecting Olympic values and strengthening the role of sport in society. The achievements that have been made over the past six years thanks to the Olympic Agenda 2020 have laid a foundation for future development.

The 15 recommendations of the Olympic Agenda 2020 + 5 are based on key trends that will be critical in the post-pandemic world. They also address how sport and Olympic values can help turn challenges into opportunities.

Major trends include: the need for greater solidarity within society and between societies; the growth of digitalization, given the need to expand digital opportunities for those who are currently insufficiently provided with technology; the need to achieve sustainable development; the growing demand for trust in Olympic organizations and institutions; the need to increase resilience in the face of the financial and economic consequences arising from the COVID-19 pandemic and the allocation of priorities for national governments and corporations.

The list of 15 recommendations included in the Olympic Agenda 2020 + 5 contains the following items: strengthening the uniqueness and versatility of the Olympic Games; ensuring the sustainable development of the Olympic Games; strengthening the rights and responsibilities of athletes; attracting the best athletes; further strengthening the safety of sports and protections for clean athletes; strengthening and promoting the Road to the Olympic Games;

coordination of a harmonious sports calendar; growth of digital interaction; encouraging the development of virtual sports and further engaging with the video game communities; strengthening the role of sport as an important factor in achieving the UN Sustainable Development Goals; strengthening support for refugees and populations affected by forced displacement; going beyond the Olympic community; continuation of leading by example in corporate citizenship; strengthening the Olympic Movement through Good Governance; innovative models of income generation.

Conclusions. Based on the analysis of the conducted research, it can be concluded that the "Agenda 2020" has brought significant changes to the Olympic movement and had a positive impact on it. By March 2021, 88% of the recommendations have already been implemented. The IOC Executive Committee identified a small increase compared to December 2020, when this figure was 85%. The growth shows that the Olympic Agenda 2020 is an ongoing process. The changes it brought will have an impact on the development of the Olympic movement in the future.

The 15 recommendations that make up the Olympic Agenda 2020+5 are based on key trends that will be critical in the world following the COVID-19 pandemic. They also address key areas such as: consolidating the uniqueness and universality of the Olympic Games, strengthening the Olympic movement through good governance, strengthening the rights and responsibilities of athletes, safe sports and protecting clean athletes, etc.

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КОМПОНЕНТЫ ИННОВАЦИОННОГО МЕНЕДЖМЕНТА В СТРАТЕГИЧЕСКИХ НАПРАВЛЕНИЯХ МЕЖДУНАРОДНОГО ОЛИМПИЙСКОГО ДВИЖЕНИЯ В XXI ВЕКЕ

Аннотация: в 2014 году сессия МОК единогласно утвердила «Олимпийскую повестку 2020», задав стратегическое направление для масштабного пересмотра всех аспектов организации Олимпийских игр – от выбора города-организатора и проведения Игр до создания олимпийского наследия – и определив фундаментально новый подход к проведению будущих Олимпиад.

Ключевые слова: «Повестка 2020», международный олимпийский комитет, Олимпийские игры, рекомендации

THE USAGE OF ONLINE PLATFORMS FOR DISTANCE EDUCATION IN THE COURSE OF COVID-19 PANDEMIC

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Abstract. *The article gives an overview and analysis of various online educational platforms which were used in massive distant learning educational process during COVID-19 pandemic in various regions of the world.*

Keywords: *distant education, online educational platforms*

As a result of the COVID-19 pandemic many countries and educational establishments had to urgently leave the classrooms and transfer to distance education. All educational establishments had to adapt to the new organization of the educational process and to use various online platforms. Some countries managed to create their own online educational platforms adapted for the individual specifics of the country and its educational process while others started using the existing ones.

The purpose of this study was to analyze the effectiveness of distance education with various online platforms.

There is a number of researches devoted to utilization of multimedia educational systems. The World Bank is cataloguing emerging approaches and is

actively working with ministries of education in dozens of countries in support of their efforts to utilize educational technologies of all sorts to provide remote learning opportunities for students while schools are closed as a result of the COVID-19 pandemic.

The examples given by the World bank on the situation in Russia are as follows. Online platforms such as Russian online school, Yandex.textbook, Teach.ru and Yaklass are available for teachers, pupils, and parents. Russian IT companies are also supporting the Russian education system. For example, Mail.ru provides access to its platform for online learning, Yandex provides video classes for schoolchildren in grades 5-11, and GeekBrains gives free access to its programming courses.

The Ministry of Education has put out guidelines for the implementation of distance learning technologies across all levels of education. It has also launched a hotline to support regional ministries, schools, and tertiary education institutions in organizing distance learning. Guidance has also been provided, with special guidance for educational leaders and staff, for how to cope with the pandemic at a psychological level.

A working group in the Ministry of Science and Higher Education was established to help the higher education institutions to organize distance learning. By now, all the universities, which report to the federal ministry (248), and almost 70% of all the Russian universities have transferred the educational process online, which was launched on Instagram. Using the Instagram hashtag #универдома (“uni at home”), students and university staff are sharing their ideas in adapting to a new online learning environment.

The Ministry holds regular online translation on the Ministry’s YouTube channel and organizes webinars for universities. The Ministry has also launched a hotline and a website for universities (“Keep learning, Keep teaching”) with methodological support and has published a list of available free online courses on its website. The University 2035 (the online platform established by the Agency of Strategic Initiatives) will also provide methodological support to universities. Universities are sharing their experience in the moving educational process online on the Scienpolicy Telegram channel. The Ministry is currently piloting a new service for school graduates so that they can apply to the university programs online, using the state portal Gosuslugi.(1)

Still the analysis of the World bank does not reveal all the remote educational platforms used by the Universities. There are a lot of online video apps such as

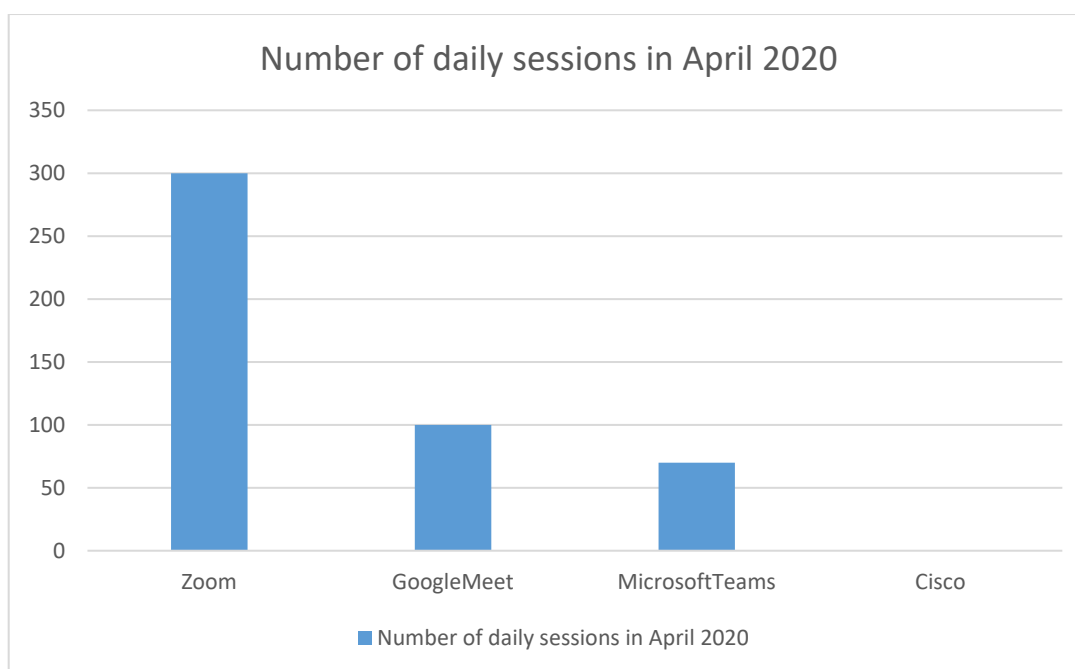
- Dingtalk
- Hangouts Meet
- Google G-Suite.
- Teams

- Skype
- WeChat Work
- Jit.si
- WhatsApp
- Zoom

The choice is big enough but still the most popular platform is Zoom.

Zoom is a video conferencing app, geared towards business usage. It was founded in 2011 by Eric Yuan and launched in January 2013. While gathering considerable popularity and coming to run profitably in the following years, Zoom truly entered the public consciousness during the coronavirus pandemic of 2020. It was to Zoom that users across the world turned to stay in touch during the lockdown effected to stop the spread of the virus. 10 mln events were organized in Zoom in December, 2019 while in February 2020 the daily rate increased to 200 mln and in March 2020 to 300 mln. More than 90 000 educational establishments in the world are using Zoom. However, some universities refuse to use the platform for the reasons of discretion and security (2).

The chart below shows the usage of other competitive platforms in April 2020 (3).



The countries with insufficient internet access still use traditional messengers and social network. The research shows that in Egypt educational establishments are using Facebook (72%), WhatsApp (69.4%), YouTube (63.1%), Wikis (50.2%) and other social networks (19.4%), including blogs and Twitter (4)

Teachers of the foreign languages and linguistics department are successfully using MOODUS platform. BigBlueButton platform is used by the Institute of Tourism, Recreation, Rehabilitation and Fitness. The department is

also using video chats conferences at meet.jit.si which is easy to connect to from any device any time.

We can make a conclusion that the present conditions for teaching in a distance mode require a revision of both the content of education and the technologies of professional training in foreign languages and Russian as a foreign language, which has been the focus of the department's research work since March 2020.

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ИСПОЛЬЗОВАНИЕ ОНЛАЙН ПЛАТФОРМ ДЛЯ ДИСТАНЦИОННОГО ОБРАЗОВАНИЯ В ТЕЧЕНИЕ ПАНДЕМИИ COVID-19

Аннотация. В статье представлен обзор и анализ различных онлайн образовательных платформ, которые использовались во время массового перехода на дистанционное образование в ходе пандемии COVID-19 в различных регионах мира.

Ключевые слова: дистанционное образование, онлайн платформ

ANALYSIS OF THE INFLUENCE OF PSYCHOPHYSIOLOGICAL CHARACTERISTICS OF TENNIS PLAYERS 12-14 YEARS OLD ON THE EFFICIENCY OF ACTION IN CRITICAL COMPETITIVE SITUATIONS

Vanag E. A.

Abstract. *This article examines the relationship between the type of stress response in tennis players aged 12-14 years and typical actions at decisive moments of the match. The obtained data will help to more effectively and individually approach the issues related to the tactical training of young tennis players.*

Keywords: *tennis, stress response, tactical training*

Introduction Currently, the level of development of tennis is at a level where the physical, technical, and tactical qualities of leading athletes are approximately at the same level. Therefore, the outcome of a tennis match will mainly depend on the psychological state of tennis players, as well as on how effectively they will act in the critical moments of the match.

An important place among the tactical components is occupied by the problems associated with the rationalization of actions in critical competitive situations [2]. Unfortunately, as practice shows, even of the top-level athletes, face such issue, which is a direct proof of its relevance. Despite the availability of scientific studies and methodological developments on this problem issue, there are no practical recommendations for optimizing and rationalizing the preparation of young tennis players (12-14 years old) for actions in critical competitive situations [1]. Therefore, the problematic situation of this work is that with an extensive scientific work and methodological development, there are practically no recommendations on the individualization of the preparation of tennis players aged 12-14 years old for actions in critical competitive situations.

Results. At the first stage, 14 tennis players (7 boys and 7 girls) did psychological test, the purpose of that was to determine the type of reaction to competitive stress. Further, according to the test results, the athletes were divided into three groups: group 1 - the optimal type of response to stress, group 2 - the prevalence of the sympathetic division of the ANS (ANS - the autonomic nervous system), group 3 - the prevalence of the parasympathetic division of the ANS. It should be noted that only three tennis players (2 boys and 1 girl) were included in the group with the optimal stress response. The group with a predominance of the sympathetic division (that is, with excessive excitement) were included seven tennis players (3 boys and 4 girls). The group with a predominance of the parasympathetic division (that is, with excessive inhibition, stupor) were included four athletes (2 boys and 2 girls). From the above data, we can state the fact that only 20% of tennis players had an optimal response to stress. Half of them is of type 2 (they are more energized during the match, make many unforced errors, and are generally more tense, both physically and psychologically). And a third of athletes fell into group 3, as they had a type of reaction with excessive activation parasympathetic division of the ANS.

Then, for each of the groups, typical mistakes in critical competitive situations were analyzed.

Table 1 - typical errors for each of the groups

Errors	I group	II group	III group
Double faults	75%	50%	20%
Unforced errors up to 4 hits	10%		
Unforced errors from the short ball	10%	10%	
Unforced errors, net point		35%	
Forced errors, passive points			65%
Others	5%	5%	15%

From the data obtained (Table 1), the following conclusions can be drawn:

1. Typical errors were found for each of the groups, which confirms the influence of psychophysiological characteristics (in this case, the type of reaction to stress) on tactical decisions at the most important moments of the match;
2. The first group was dominated by unforced errors (75%) associated with the desire to quickly finish the rally;
3. In the second group, the highest frequency was found among "double errors" when serving, as well as unforced errors when reaching the net. It can be assumed that this is due to the excessive anxiety of the players from this group;
4. And, finally, in the third group, forced mistakes during passive play became the most common. In this situation, tennis players, sensing the importance of the playing moment, deliberately began to slow down, waiting for an error from the opponent.

Conclusions. This research has demonstrated the relationship between the psychophysiological characteristics of tennis players aged 12-14 years old (such as reaction to stress) with the characteristic individual of actions in certain moments of the match. Based on this, it should be said that to increase the effectiveness of training activities, a trainer must be able to conduct psychodiagnostics, as well as apply the obtained data in practice. In practical terms, the results of the study allow us to recommend that coaches, when working with young tennis players, pay attention to their individual psychophysiological characteristics, as well as to a narrow circle of the most advantageous actions, the use of which in critical situations will more often change the course of events in their favor and achieve victory.

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**АНАЛИЗ ВЛИЯНИЯ ПСИХОФИЗИОЛОГИЧЕСКИХ ОСОБЕННОСТЕЙ
ТЕННИСИСТОВ 12-14 ЛЕТ НА ЭФФЕКТИВНОСТЬ ДЕЙСТВИЙ В КРИТИЧЕСКИХ
СОРЕВНОВАТЕЛЬНЫХ СИТУАЦИЯХ**

Аннотация. Данная статья направлена на изучение взаимосвязи между типом реакции на стресс теннисистов 12-14 лет и типичными действиями в решающие моменты матча. Полученные данные позволят более эффективно и индивидуально подходить к вопросам, связанным с тактической подготовкой юных теннисистов.

Ключевые слова: теннис, реакция на стресс, тактическая подготовка

**THE IMPACT OF THE COVID-19 PANDEMIC AND THE
OPPORTUNITIES FOR DEVELOPMENT OF TOURISM INDUSTRY IN
THE RUSSIAN FEDERATION**

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Komova M.M.

***Abstract.** The tourism industry is affected hard by the measures needed to stop the pandemic and is unlikely to return to normal anytime soon. Even after the gradual increase in containment measures, surviving travel companies are expected to continue to face the challenges of a slow recovery. However, any crisis tends to lead not only to negative consequences. New opportunities and challenges of this serious test for the entire travel industry are likely to appear. The article also examines specific measures of government support provided to the tourism companies in Russia as well as the measures to be considered by the companies to successfully cope with the crisis in the sector*

***Keywords:** tourism industry, impact of COVID-19, development of tourism, opportunities, domestic tourism, Russia*

According to the World Tourism Organization (WTO), Russia is one of the ten most visited countries in the world. According to the global rating of competitiveness in the field of tourism by the World Economic Forum (The Travel and Tourism Competitiveness Report), in 2019 Russia took 39th place out of 140, up four points compared to the previous similar rating in 2017. The main competitive feature of tourism in Russia is the presence of many points of attraction of worldwide importance for foreign and domestic tourists. At these locations almost any type of tourism can be developed.

In 2020, the Russian travel industry faced a serious challenge in its development - a severe crisis associated with the rapid spread of COVID-2019 pandemic across the planet. The tourism industry is hit hard by the measures

needed to contain the pandemic and is unlikely to return to normal anytime soon. Even after the gradual lifting of containment measures, surviving enterprises are likely to continue to face the challenges of a slow recovery.

According to global experience crises are not only inevitable, but in a certain sense necessary, since they have been associated not only with negative phenomena and processes but also tend to bring up additional opportunities for further growth and development.

It is noteworthy that tourism in crisis situations is a rather vulnerable type of economic activity, reacting quickly to ongoing changes, while the recovery period is relatively short. At the same time, the demand for tourism products and services is decreasing, but not completely extinguished.

In early 2020, all countries were swept by a pandemic of a new type of coronavirus, COVID-19, announced by the World Health Organization. The virus, the first outbreak of which was recorded in Wuhan, China at the end of 2019, has spread to all countries and continents. According to a study by the World Tourism and Travel Council (WTTC) conducted in spring 2020, the coronavirus pandemic began to cut up to a million jobs in global tourism every day. In this regard, Germany was the worst-hit European country, with nearly 1.6 million jobs at risk. In second place was Russia, in third - Italy and Great Britain.

As for Russia, according to the Federal Tourism Agency, the drop in sales in the tourism industry in the spring of 2020 reached almost 100 percent, the total lost revenue of the industry in the first half of the year alone could amount to about 1.5 trillion rubles, including the revenues of hotels, recreation facilities, tour operators, travel agencies and all types of tourist transportation.

The WTO has prepared its recommendations to mitigate the socio-economic impact of the pandemic on tourism in various countries.

At the end of March 2020, the Government of the Russian Federation identified the sectors of the economy that will be the first to receive government support in connection with the pandemic, including tourism, hotel business and resort activities. These industries will be granted six months of deferred payments for taxes (excluding VAT), insurance contributions to state extra-budgetary funds. The deadlines for submitting tax returns and calculations are extended by three months.

The issues caused by the pandemic may become a source of opportunities for the travel companies in Russia. Among these opportunities and challenges are the accelerated conversion of travel services into digital form, the more active use

of modern technologies like big data, artificial intelligence, mixed and augmented reality etc., the use of ideas from the experience economy, updating of an individual approach to the customer, as well as the ecological aspect of the tourist product, expansion of the geography of tourist routes, etc.

Redistribution of streams between different locations, and between different types of tourism will occur under the influence by the pandemic. Interest in travel to distant parts will increase transformational journeys that should not only entertain, but also to attract travelers to active adventure tours. On the contrary, the demand for business travel for meetings and negotiations will decrease. Some forms of tourism may never fully recover (e.g. cruises). In the short term countries and cities with more favorable sanitary and epidemiological environment and accepted safety standards will become more competitive.

People will be afraid to fly to other countries, therefore domestic traveling will grow more and more popular. Nowadays the experience of China shows that 90% of travel is domestic tourism. On the other hand, a number of countries, such as Italy and Spain, do not plan to open borders to foreign tourists so far, but at the same time grants will be issued for inland travel to families with low income level.

In Russia, the pandemic can become a catalyst for the growth and development of domestic tourism, at least in the nearest future. During the period of self-isolation, the number of those wishing to travel in Russia exceeded the number of those who would like to go abroad. In general, the popularity of domestic tourism has been growing steadily over the past 5 years: according to Yandex.Travel data, in 2014–2019 the number of travel requests in Russia has tripled.

However, the willingness of more citizens to travel domestically is not enough to increase the share of domestic tourism. To keep domestic travel industry growth in the medium term, it is necessary to increase the level of service and develop tourist infrastructure. Most experts have agreed on the fact that the lack of infrastructure (hotels, hotels, roads), as well as low awareness of travelers about the variety of existing routes are the two critical barriers to the development of the segment. Those people who are used to vacationing in Europe expect a certain level of service and a variety of attractions. Even nature lovers and adventure seekers want to maintain that level the comfort they are used to.

These are the current trends in which the tourism industry in Russia is most likely to develop:

- Revival of domestic tourism. Formation of new types of tourism, including interregional destinations, primarily for active adventure tourism.

- Business tourism crisis. The number of business trips will decrease, in part replaced by digital meetings.

- Travel as a "reboot" through an authentic experience: acquaintance with locals, volunteering, acquiring new skills. As a consequence, non-standard tourist destinations are bound to develop.

- Development of “second” cities as new tourist centers: travelers will make a choice not in favor of the capitals of countries or regions, but in favor of smaller cities, which at the same time can offer the same set of available attractions and services.

- Development of medical tourism. Regional medical facilities will appear and strengthen their positions in the field of medical tourism, working also on the markets of neighboring countries.

Conclusion: According to the global experience, an important feature of international tourism is the relative stability of this industry during the period of economic downturns and geopolitical instability and fast recovery from these and other types of crises. The coronavirus pandemic followed by current crisis in tourism is unprecedented in terms of expected losses and impacts.

Huge pent-up demand is expected to be accumulated in the tourism industry by the time the pandemic ends and the borders between countries open up. Domestic tourism is anticipated to be the first to recover. However, most likely, with the decreased purchasing power of the population, the demand for budget tours in their own countries is expected to grow. As for inbound tourism, it may take a lot longer period of time to recover. In this regard, it makes sense for the participants of the tourism market to focus their efforts on the segment of domestic travel, studying and promoting potentially promising destinations and elaborating brand new attractive offers.

Along with this, due to the feared large crowds of people, mass tourism is likely to become more and more individual, the popularity of ecological tourism is expected to increase, which previously had great potential for development in the country.

Another expected consequence of the crisis will be the fact that more attention will be paid by tourists to travel safety, as well as sanitary and epidemiological situation.

An important consequence of the current crisis will be continuously greater strengthening of the long-standing trend of digitalization of tourism.

The crisis will end sooner or later, and the tourism industry will begin to recover. Subjects of the tourism industry of Russia should unite (Rosturizm, RST, Rospotrebnadzor, etc.) in order to jointly develop effective measures to challenge global threats this industry may face again in the future.

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**ВОЗДЕЙСТВИЕ ПАНДЕМИИ COVID-19 И ВОЗМОЖНОСТИ ДЛЯ РАЗВИТИЯ
ИНДУСТРИИ ТУРИЗМА В РОССИИ**

Аннотация. Сфера туризма сильно пострадала от мер, необходимых для остановки пандемии, и вряд ли в ближайшее время вернется в нормальное состояние. Однако любой кризис имеет тенденцию приводить не только к негативным последствиям. Вероятно, появятся новые возможности и вызовы после этого серьезного испытания для всей туристической индустрии. В статье также рассматриваются конкретные меры государственной поддержки, оказываемой туристическим компаниям в России, а также некоторые меры, которые следует рассмотреть компаниям, чтобы успешно справиться с кризисом в отрасли.

Ключевые слова: индустрия туризма, воздействие пандемии COVID-19, развитие туризма, возможности развития внутреннего туризма в России

INDIVIDUALIZATION OF TECHNICAL TRAINING OF QUALIFIED SAMBO ATHLETES

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Abstract. *In this study, an analytical analysis of the parameters of the athlete's technical and tactical preparedness at the 2018 Russian Sambo Championship in the weight category up to 64 kg and similar parameters of the competitive activity of his opponents was carried out. This analysis allowed us to develop a plan for the technical preparation of the athlete for the 2019 Russian Sambo Championship.*

Keywords: *sambo, technical preparation, competitive activity, parameters of competitive activity*

Introduction

The analysis of the competitive activity of athletes at the stage of sports improvement is necessary to obtain data that reflect significant parameters that determine the victorious outcome of the fight. Such an approach, especially at the stage of an athlete getting into the leading group of athletes of a given weight and age category, can provide information about competitive activity and create a number of prerequisites for targeted sports training, ensuring the maximum realization of the motor potential of athletes in competition conditions.

Research results and discussion

The questionnaire survey showed, that the vast majority of coaches do not plan the technical training of athletes, and if they do, it is more intuitive, relying on their experience.

Since at the stage of sports improvement, the training process is individual, it is important to develop a training plan correctly.

We have developed a model for the technical training of qualified athletes. First, you need to formulate the goal of technical training. Next comes the collection of data about the opponents and the athlete. Based on the data obtained, we can develop a plan for the technical training of an athlete, taking into account the personal technique of the rivals and the athlete..

In the training process, we implement the previously drawn up plan. Control over the implementation of the plan takes place at competitions. Depending on the

result at the competition, we continue the entire cycle at a new stage, making the necessary adjustments.

When planning the training material in defense, we analyzed the attacking actions of the opponents. Technical actions that opponents lost in fights, were used as material for the formation of attack skills.

As a result of collecting and processing information, the following recommendations were developed for drawing up a technical training plan:

1. The athlete needs to devote more time to learning and improving the protection against Inside the knee takedown, back leg body drop, e foot sweep, inside ankle hook, thigh reap, shoulder throw and hold down, since the athlete skips these technical actions.

2. In the attack it was necessary to pay attention to the following technical actions: inside the knee takedown, Inside ankle hook, thigh reap, big circle throw, shoulder throw and hip throw, hold down, arm lever and legs lever.

3. In a standing position, you need to study and improve the throws, that pose a potential threat to rivals, since they miss them in fights.

To assess the effectiveness of the developed experimental training plan, the athlete took part in a series of sambo competitions. According to the sum of the points scored in the competitions of 2018 and 2019 in accordance with the rating, the athlete improved his performance by 30% (from 924 to 1202 points). Also, as a result of the auto experiment, the athlete fulfilled the standard of the master of sports of the Russian Federation and got into the Russian national sambo team.

Conclusions

1. Analysis of parameters of technical readiness of an athlete and his rivals in the weight category allowed to determine the list of attacking and defensive actions, which must first of all be included in the preparation plan for the upcoming competition.

2. The experimental plan of the technical training of the athlete allowed to improve the performance indicators in competitions. According to the sum of the points scored in the competitions of 2018 and 2019 in accordance with the rating, the athlete improved his performance by 30% (from 924 to 1202 points).

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ИНДИВИДУАЛИЗАЦИЯ ТЕХНИЧЕСКОЙ ПОДГОТОВКИ КВАЛИФИЦИРОВАННЫХ САМБИСТОВ

Аннотация. В статье представлен анализ параметров технической подготовленности спортсмена на чемпионате России по самбо 2018 года в весовой категории до 64 кг и его соперников. Данный анализ позволил разработать план технической подготовки спортсмена к чемпионату России по самбо 2019 года.

Ключевые слова: самбо, техническая подготовка, соревновательная деятельность, параметры соревновательной деятельности

MODERN TECHNOLOGIES OF FUNCTIONAL TRAINING OF WOMEN IN THE COURSE OF AQUAGYMNASTICS CLASSES IN A SPORTS POOL

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***Abstract.** The article presents methodological and practical material on the organization and content of functional training of women in the course of aquagymnastics classes in a sports pool, which is adapted to the conditions of the pandemic: it is available to a wider segment of the female population, is not limited by the requirements for the levels of physical, functional and swimming fitness, and the requirements for regular attendance of classes.*

***Keywords:** aquagymnastics, functional training, sports pool*

Introduction. According to numerous studies, it has been revealed that one of the best methods of physical training with mature people is water aerobics,

since it has the least number of medical contraindications. Physical training in water gives an incentive to important growth processes for the body, activates the performance of internal organs [1]. Aquaerobics perfectly trains the activity of the cardiovascular and respiratory systems, which is extremely important for the prevention of coronavirus infection and recovery after the disease.

Aquafitness and its constituent part - aquaerobics or aquagymnastics - are currently developing dynamically due to the increased interest in innovative programs in the water and a decrease in the number of people who can withstand physical exertion, such as running, functional training, sports games, and high-intensity aerobics [2]. Therefore, at the moment there is a need to study the individualization and differentiation of physical activity in the water, the selection of means, methods and organizational forms of classes to improve the functional and physical condition of women.

The existing variety of water programs, including aquagymnastics, allows us to meet the needs of the female population, but all of them impose certain requirements both for the conditions of classes, and for the level of swimming and physical fitness of the students. But at present, in the context of the pandemic, there are difficulties in the practical implementation of these programs, due to difficult life circumstances, namely, the inability to form full-fledged groups for each level of fitness for classes in the sports pool.

We assume that the actualization of the program for the functional training of women in the course of aquagymnastics in a sports pool through the introduction of additional activities will have a positive impact on the physical development of women.

Research purpose: development of a program for the functional training of women in the course of aquagymnastics in a sports pool.

Research objectives: a) to identify features of aquagymnastics training in a sports pool according to the scientific-methodical literature; b) to conduct pedagogical experiment on the organization of women' functional training in the process of the aquagymnastics classes in the sports pool; c) to develop practical recommendations for the program; d) to implement the program in practical activities in the sports pool of Velikie Luki State Academy of PE and Sport.

Research object: process of organizing the functional training of women in aquagymnastics classes in a sports pool.

Research subject: functional training of women in the process of practicing aquagymnastics in a sports pool.

Practical significance. The practical significance of the work lies in the fact that the program on functional training of women in the aqua gym classes was tested and implemented in practical activities of a sport pool in Velikie Luki State Academy of PE and Sport.

The scientific novelty lies in the fact that for the first time a program for the functional training of women in the course of aquagymnastics in a sports pool has been developed and adapted to the conditions of the pandemic.

Results and discussion. It was identified that swimming is the most accessible type of motor activity. The focus of swimming classes at any age is of a health-improving and preventive nature and includes the improvement of swimming techniques.

When summarizing the analysis of the special literature and practical experience in the sports pool of Velikie Luki State Academy of PE and Sport, it was stated that there are many innovative programs for special training of children and adults, the ODA program (recreational swimming for the prevention of musculoskeletal system diseases) and also several programs of aquagymnastics classes. When organizing group swimming classes, the gender, age, health status and physical fitness of the participants were taken into account.

However, during the survey of women who are engaged in aquafitness in the sports pool of Velikie Luki State Academy of PE and Sport, it turned out that it is difficult for untrained students who come training for the first time or go non-systematically to join the program of aquagymnastics classes, since the existing programs of various directions impose certain requirements on the physical and swimming fitness of students and on the regularity of visits. In addition, at the first (diagnostic) stage, the following targets were identified for physical exercises and the level of functional state, physical fitness, health level, body composition indicators and the nature of the diseases of the subjects were determined.

Further, a program of functional training of women in aquagymnastics classes in a sports pool was developed. This program provides for the use of additional technical means for the hands and feet: aquacombats and aquabots, which increase the surface-resistance support to the external environment, and therefore contribute to the even greater development of the power parameters of students. Also, special attention is paid to breathing exercises with increased exhalation into the water (develop respiratory endurance), which are performed during the entire program. In addition, a system of complementary activities was

built (preliminary exercises on land, health monitoring, recommendations on the motor regime during the day, etc.).

Conclusions. During the pedagogical experiment, which lasted from October to December 2020, it was identified that this program is really available to all segments of the female population, it meets the requirements and pertains to the current needs of society at the moment, does not impose strict limitations on the level of swimming and physical fitness of students, and the implementation of this program is possible in a sports pool.

Since a positive result during the implementation of the experiment was received (starting from January 2021), the program of functional training of women in the course of aquagymnastics classes in a sports pool was adjusted and implemented on a permanent basis. This program has gained popularity among women. This becomes a real chance to increase interest in fitness as a tool to strengthen the immune system, which is a priority task around the world in this difficult time.

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СОВРЕМЕННЫЕ ТЕХНОЛОГИИ ФУНКЦИОНАЛЬНОЙ ПОДГОТОВКИ ЖЕНЩИН В ПРОЦЕССЕ ЗАНЯТИЙ АКВАГИМНАСТИКОЙ В СПОРТИВНОМ БАССЕЙНЕ

Аннотация. В статье рассмотрена программа по функциональной подготовке женщин в процессе занятий аквагимнастикой в условиях спортивного бассейна, которая адаптирована к современным трудным жизненным обстоятельствам (пандемия): доступна более широким слоям женского населения, не ограничена как

требованиями к уровням физической и плавательной подготовленности, так и к регулярности посещения занятий.

Ключевые слова: аквагимнастика, функциональная подготовка, спортивный бассейн

IMPROVING THE FUNCTIONAL STATE OF MIDDLE-AGED PEOPLE WITH THE HELP OF NORDIC WALKING AND FUNCTIONAL TRAINING

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Abstract. *Nowadays, the motor activity of people is significantly reduced. Physical inactivity can negatively affect a person's health, well-being and their functional state. It is widely believed that that systematic physical activity 3 times a week and daily morning exercise can have a positive impact on the functioning of all human systems. The World Health Organization recommends that young and middle-aged people engage in 150-300 minutes of physical activity per week.[3] This can be any physical activity, but specialists give the greatest preference to cyclical loads and general physical training. This article examines the impact of a training program that includes functional training and Nordic walking on the functional state of middle-aged people.*

Keywords: *development of physical qualities, motor activity, middle age people, Nordic walking, functional training*

Introduction. The Russian scientist-physiologist V. I. Medvedev defined the functional state of a person as "an integral complex of existing characteristics of those functions and qualities of a person that directly or indirectly determine the performance of an activity." In the modern world, the role of physical activity in the average person is often reduced. As a result of inactivity and stress, a decrease in the functional capabilities of the body is formed, which is characterized by a decrease in performance, rapid fatigue, reduced adaptation to physical exertion, insomnia, headaches, and exacerbation of chronic diseases. To improve health, as well as prevent age-related diseases, the World Health Organization advises young and middle-aged people to devote 150 minutes a week to high-intensity aerobic activities or 300 minutes a week to moderate-intensity aerobic activities, which corresponds to 3-4 times of 50-90 minutes of training per week cycle.[3]

The main part. After studying a number of literature sources, it was found that Nordic walking can effectively affect the improvement of the functional state of a person, the development of his physical qualities, the adaptation of the body to physical and household loads.[1]

Nordic walking is a cyclic exercise of an aerobic nature, which has a positive effect on the cardiorespiratory system, involves 90% of large muscle groups, and strengthens the musculoskeletal system. It is less traumatic than running, since there is no flight phase and no shock load on the joints of the lower extremities and spine. Thanks to the active involvement of the upper shoulder girdle, Nordic walking is more energy-intensive than conventional metered walking.[1]

Since a variety of physical activities is necessary for harmonious development, Nordic walking exercises are effectively combined with general physical training exercises that are performed at the beginning or at the end of the main part of the lesson.

The aim of this study was to develop and experimentally substantiate a training program for Nordic walking in combination with general physical training exercises for people aged 35-45 years.

Characteristics of the contingent: men and women aged 35-45 years (7 women and 8 men), systematically not engaged in physical education.

Research methods: 6-minute walk test - assesses the level of endurance and fitness for physical exertion; pulse before/after and pulse recovery time after the "6-minute walk" test – adaptation of the cardiovascular system to stress; test "2-minute walking on the spot" with a high hip lift – endurance of the muscles of the lower extremities; push-ups for 30 seconds (for women was a relaxed position with support on their knees) - the strength endurance of the upper limbs is evaluated; the "catching the ruler" test-evaluates the reaction speed and concentration of attention. [2]

The course of the study. For two months, training sessions were held 3 times a week for 80-90 minutes. Classes included: warm-up exercises in the form of joint exercises, stretching exercises, active breathing exercises; the main part with leading exercises to Nordic walking, Nordic walking (4-7 km), exercises of general physical training using the simplest gymnastic equipment (elastic bands, balls, small weighted cuffs, etc.), exercises for the development of coordination and balance; the final part with stretching exercises and breathing exercises.

Results. Before and after the study, control tests were conducted to evaluate the effectiveness of the developed training program. The results of the study are presented in table 1.

Table 1 – Comparison of the results of the control tests before and after the study

	Beginning of the study (M ±m)	After 2 months of training (M ±m)	Difference in units	Difference in %
6-minute walk test (m)	480±25	560±18	80	16,6%
Pulse before test	78±8	75±6	3	3,9%
pulse after test	138±18	121±9	17	12,3%
pulse recovery time	4,5±1,2	3,2 ±1,3	1,3	19%
test "2-minute walking on the spot" (quantity of times)	75±12	96±15	21	28%
push-ups for 30 seconds (quantity of times)	8±5,6	15±1,8	7	87,5%
test "catching the ruler" (cm)	18±11,6	16±12	2	11%

Conclusions. As a result of the analysis of the obtained data, an improvement in the studied indicators was revealed. The best result is observed in the test "push-ups for 30 seconds.", which indicates the strengthening of the shoulder girdle and the development of endurance. This result was achieved due to the work of the shoulder girdle during Nordic walking, as well as due to general physical training exercises. A good result is observed in the test "2-minute walking on the spot", which indicates an increase in the endurance of the lower limbs and the ability to maintain the pace for a given time. In the "catching the ruler" test, insignificant indicators are observed. This is due to the fact that the classes did not focus on fine motor skills and reaction speed. However, a small progress in this test suggests that the concentration of attention has improved.

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УЛУЧШЕНИЕ ФУНКЦИОНАЛЬНОГО СОСТОЯНИЯ ЛИЦ СРЕДНЕГО ВОЗРАСТА ПРИ ПОМОЩИ ЗАНЯТИЙ СКАНДИНАВСКОЙ ХОДЬБОЙ И ФУНКЦИОНАЛЬНЫМ ТРЕНИНГОМ

Аннотация. В настоящий момент наблюдается тенденция гиподинамии, что отрицательно сказывается на здоровье и самочувствие человека, а также на его функциональном состоянии. Считается, что систематические занятия физической активностью 3 раза в неделю и ежедневная утренняя зарядка могут оказывать положительное влияние на функционирование всех систем человека. Всемирная Организация Здравоохранения рекомендует лицам молодого и среднего возраста заниматься 150-300 минут в неделю физической активностью. Это может быть как циклическая, так и функциональная тренировка. В данной статье рассмотрено влияние программы занятий, включающей в себя функциональные тренировки и скандинавскую ходьбу на функциональное состояние лиц среднего возраста.

Ключевые слова: развитие физических качеств, двигательная активность, средний возраст, скандинавская ходьба, функциональные тренировки

FACTORS OF POPULARITY OF MARTIAL ARTS PROGRAMS IN THE FITNESS

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Abstract In this study, we analyzed the structure of martial arts that have already been implemented in the fitness industry. This work allowed us to represent a set of features that attract consumers and encourage them to attend classes.

Keywords: fitness, martial arts, rating of martial arts, consumers

Introduction. The creation of any sports program in the system of fitness services begins with monitoring various criteria. There are a number of martial arts that have been successfully implemented in the fitness industry, so they have already taken into account all the important components, tried them out in practice and made the necessary adjustments to their programs.

The topicality of the study is to establish the features of martial arts, due to which they attract consumers.

The aim of the work is to determine the factors of popularity of martial arts programs in the fitness.

Organization of the study

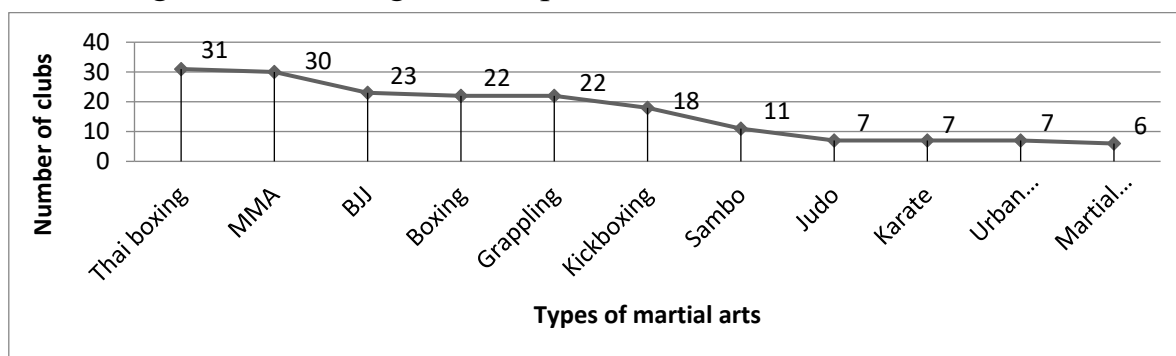
The rating of various martial arts of 37 popular fitness clubs in Moscow for September 2020 was compiled. A total of 27 types were recorded. Data on the list of popularity, promotion and safety of these martial arts were recorded.

Research methods

1. The analysis of literary and informational sources
2. The method of comparison
3. The method of mathematical statistics

The results of the study

We get the following list of top martial arts in fitness clubs of Moscow:

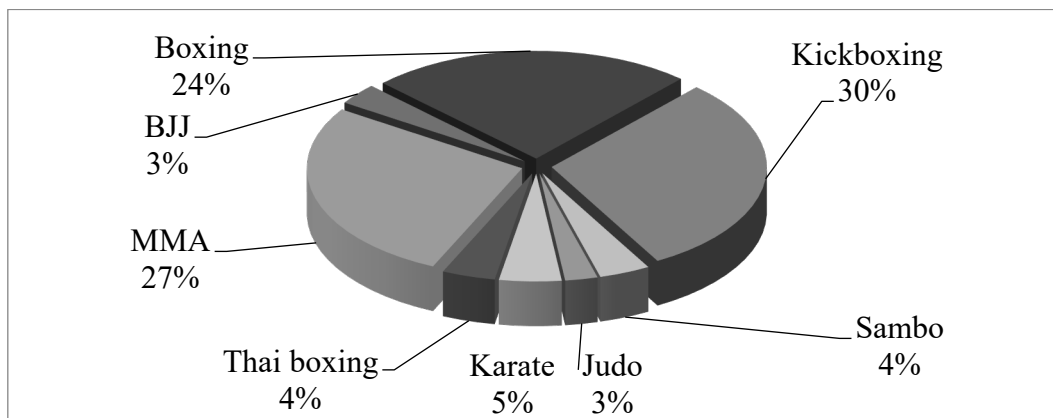


Picture 1 - Number of fitness clubs in Moscow that promote martial arts

According to the diagram, there are three most popular types of martial arts: Thai boxing with a rating of 31. MMA is only one position behind (30). Brazilian Jiu-Jitsu-rating 23.

The popularity of each martial art is determined by the number of hours of broadcasting and their setting in prime time. The calculation was based on the five sports channels (“Match TV”, “Match! Fighter”, “Match! Arena”, “Eurosport” and “FightBox”) in the period from 01.11.2020 to 30.11.2020. Popularity points were awarded as follows:

1. the total broadcast time and prime time were calculated;
2. the broadcast time coefficient was calculated ($T_{tr}/720=K_{tr}$), where T_{tr} – the broadcast time, K_{tr} is the broadcast coefficient; and the prime time coefficient ($T_{pr}/198=K_{pr}$), where T_{pr} – the time in the prime time, K_{pr} – the prime time coefficient.
3. the coefficients were equated to points. The data is shown on Figure 2.



Picture 2 - Coefficient of broadcast of martial arts on leading sports channels

The figure shows two of the most popular sports on the leading TV channels, in particular Kickboxing, MMA and Boxing. According to the total amount of broadcast time, MMA takes the first place, and according to the hours in prime time, kickboxing took the first place.

The "Safety" section is very important, especially if the martial art contains throws and striking techniques. 5 points are given for the presence of a ground fighting to a greater extent and the absence of blows in the content of the program. The safest martial arts are Brazilian Jiu-Jitsu and Grappling.

Conclusions

1. According to the total number of points, there are top three leaders: MMA, Boxing and Kickboxing due to their developed promotion.
2. Due to the high security in the classroom, Brazilian Jiu-Jitsu (second place in the ranking) and Grappling (third place due to its low level of advertising) are in the lead.
3. Sambo is a program that has an average level of advertising and safety in the classroom, having the second place in the ranking of this study.
4. Thai boxing did not show a high rating during the process of calculating points, however, it's promoted in the programs of many fitness clubs in Moscow. This means that this sport has an active policy of introducing its type of sport into the fitness industry.

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ФАКТОРЫ ПОПУЛЯРНОСТИ ПРОГРАММ ЕДИНОБОРСТВ В СФЕРЕ ФИТНЕСА

Аннотация. В данном исследовании был проведен анализ структуры единоборств, уже реализованных в фитнес-индустрии. Данная работа позволила составить ряд тех особенностей, которые привлекают потребителей и побуждают их посещать занятия.

Ключевые слова: фитнес, единоборства, рейтинг единоборств, потребители

TACTICAL ANALYSIS OF RETURN OF SERVE IN TENNIS

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***Annotation.** We have analysed tactical aspects of serve in modern tennis among top professional players; we have created new measures of efficiency, which allow coaches to get new information about efficiency of return of serve; we have developed some recommendations for coaches and players which help to improve the efficiency of training and competitive process.*

***Key words:** return of serve, tactical analysis*

Introduction. There are some reasons why return of serve is one of the most important technical and tactical elements in modern professional tennis:

- the quantity of return of serve in tennis on different preparation stages is 20% (± 1) from the whole quantity of shots. Serve - 24% (± 2), baseline shots 40,5% (± 17), volleys 11% (± 8), other shots 4,5% (± 3) [1].

- there are 62,36% of points with amount of shots 1-4 at Roland Garros, US Open, Australian Open from 1992 to 1994 [2]. We have the same trends in modern tennis. At the US Open-2015 - 69%. There are 20% of points with amount of shots 5-8, 30% of point with amount of shots 9+. We have the same statistics on different surfaces (grass, clay, hard court) [3].

Main part. These reasons allow us to get recommendations for tennis player how to play on the return of serve: tennis player should attack more with small amount of mistakes.

There are 21 measures of efficiency which allow to analyze technical and tactical activities. These measures are based on 4 measures: variety, frequency, efficiency, consistency [4].

If we use these measures to analyze receive we can get the following information:

- variety - the ratio of different types of receives to all kind of returns;
- frequency - the ratio of all kind of returns to all kind of shots;
- consistency - the ratio of “IN” returns to all kind of returns;
- efficiency - the ratio of winners from return to all kind of returns.

Imagine two points:

Point №1 - serve / return / winner.

Point №2 - serve / return / neutral shot. The Serves were absolutely the same, but the return was on half-court in the point 1. After that shot server attacked and won that point. The return was on the baseline in the point 2. After that shot server played neutral shot.

If we analyze the returns only by using “efficiency” and “consistency” they are absolutely the same, but we understand that there is a big difference between them in characteristics of the ball. In the result there is a difference in the second shot of the server.

That is why we have created a new measure of efficiency - “effect of the return”. It is subdivided in:

“Attacking effect of the return” - a server lost a point or played defensive shot in the result of attacking return.

“Neutral effect of the return” - a server played a neural shot in the result of return.

“Defensive effect of the return” - a server played a defensive shot in the result of return.

Results. The “effect of the return” allows to get new practical information for players and coaches, which could help to win more points on the return.

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ТАКТИЧЕСКИЙ АНАЛИЗ ПРИЕМА ПОДАЧИ В ТЕННИСЕ

Аннотация. Проанализированы тактические особенности приема подачи в современном теннисе среди лучших профессиональных спортсменов; предложены новые показатели, позволяющие получить дополнительную информацию о результативности приема подачи; разработаны практические рекомендации игрокам и тренерам по использованию получаемой информации в процессе спортивной подготовки.

Ключевые слова: прием подачи, анализ тактики приема

RHYTHMIC GROUP ACTIVITY IN DANCE AND MOVEMENT THERAPY AS A METHOD OF FORMING THE MENTAL AND PHYSICAL HEALTH OF OLDER PRESCHOOL CHILDREN

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Dytko E.V.

***Abstract.** The article presents the results of using the method of rhythmic group activity as a method of dance and movement therapy among older preschoolers. During the experiment, aimed at identifying the nature of the impact of the above-mentioned method on the formation of mental and physical health of children of older preschool age, anthropometric and somatoscopic indicators of the musculoskeletal system were measured in 5-7 y.o. children, parents were interviewed to assess the psychoemotional state of children. It was found that the method of rhythmic group activity has a positive effect on the health of children and improves their psychoemotional development.*

***Keywords:** older preschool children, rhythmic group activity, mental and physical health of children, somatoscopy, anthropometry*

Introduction. Older children of preschool age have a natural grace and freedom of the body. They are energetic, mobile, their behavior is almost entirely manifested through movement. Initially, almost all information about the world around a child receives through bodily sensations, so it is very important to try to leave as few negative "prints", stresses and clamps on his body as possible during the development of the child. The less psychological and motor clamps occur, the healthier, freer and more prosperous the child feels [4,5]. That is why in the development of a child it is necessary to use the methods of dance and movement therapy, in particular the method of rhythmic group activity.

Research object: children of older preschool age (5-7 years).

Research purpose: to study the influence of rhythmic group activity on the formation of mental and physical health of older preschool children.

Research objectives:

a) consider the theoretical aspects of dance and movement therapy and rhythmic group activity,

b) study the main characteristics of the physical and mental development of older preschool children,

c) identify the impact of rhythmic group activity on the physical and mental development of older preschool children.

Research methods: analysis of scientific and methodological literature and Internet resources, questionnaires, anthropometry and somatoscopy.

Rhythmic group activity is a method of dance and movement therapy that is closely related to music, and represents the joint movement of group members to a certain rhythm. The use of this method allows you to solve such problems as:

a) the removal of emotional tension in children after intellectual activities, b) the development of communication skills in children experiencing problems in communication, c) the removal of muscle tension, d) the development of creative activity [1,2,3].

Results. Children of senior preschool age (5-7 years), 2 dance groups of 20 people were involved in the experiment. In the experimental group (10 people set in 2020), the method of rhythmic group activity was used during the year, in the control group (10 people set in 2021), the above method was not used. Anthropometric and somatoscopic parameters of the musculoskeletal system were measured before and after the experiment in both groups, and parents were interviewed about the mental and physical condition of children before and after the experiment.

Using the ϕ -Fischer criterion, it was found that 40% of the experimental group had postural disorders in 2020 ($\phi = 1.369$), and in 2021 there were no postural disorders in this group ($\phi=0$). It was also found that there were statistically significant differences at the level of significance $p<0.01$ between the indicators of postural disorders in the experimental group before and after the experiment ($\phi \text{ emp} =3.51$), which indicates that in 2021, it improved in children with previous postural disorders. In the control group, 30% of children have posture disorders in 2020 ($\phi=1,159$), 50% of the control group have posture disorders in 2021 ($\phi=1,571$). It was found that there were statistically significant differences between the indicators of postural impairment in the control group before and after the experiment at a significance level of $p<0.01$, which indicates that in 2021, it remained in children with previous postural disorders, and also there were postural disorders in healthy children. ($\phi \text{ emp} =3.51$)

According to parents questionnaire results, 80% of respondents noted that the participants in experimental group in 2021 have increased discipline, independence, openness and sociability, immediately after classes using methods of rhythmic group activity in children, improved mood, while 90% of the parents surveyed in control group noted there was no improvement in the children's behavior. Furthermore, using the methods of mathematical statistics, we found out that rhythmic group activity does not affect the anthropometric indicators of children, but at the same time 80% of the parents surveyed note the improvement in such indicators of the physical development of their children as flexibility and improved coordination abilities.

Conclusion. The method of rhythmic group activity is one of the non-traditional health-improving technologies in the field of physical education. It was experimentally found that the method of rhythmic group activity helps to improve posture, reduce the number of cases of somatic diseases. Based on the results of a questionnaire survey of parents, it was revealed that the method of rhythmic group activity also positively affects the development of such physical qualities as

flexibility and coordination, and mental development as well: children become more disciplined, sociable, open and have an upbeat mood after classes.

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РИТМИЧЕСКАЯ ГРУППОВАЯ АКТИВНОСТЬ В ТАНЦЕВАЛЬНО-ДВИГАТЕЛЬНОЙ ТЕРАПИИ КАК МЕТОД ФОРМИРОВАНИЯ ПСИХИЧЕСКОГО И ФИЗИЧЕСКОГО ЗДОРОВЬЯ ДЕТЕЙ СТАРШЕГО ШКОЛЬНОГО ВОЗРАСТА

Аннотация. В статье представлены результаты использования метода ритмической групповой активности как метода танцевально-двигательной терапии среди старших дошкольников. В ходе эксперимента, направленного на выявление характера воздействия вышеуказанного метода на формирование психического и физического здоровья детей старшего дошкольного возраста, осуществлялись измерения антропометрических и соматоскопических показателей опорно-двигательного аппарата у детей 5-7 лет, проводилось анкетирование родителей для оценки психоэмоционального состояния детей. Было установлено, что метод ритмической групповой активности положительно влияет на здоровье детей и улучшает их психоэмоциональное развитие.

Ключевые слова: дети старшего дошкольного возраста, ритмическая групповая активность, психическое и физическое здоровье детей, соматоскопия, антропометрия

LINGUISTIC EDUCATION IN THE CONTEXT OF THE MODERN COMMUNICATIVE SPACE FOR STUDENTS OF NON-LINGUISTIC DIRECTIONS / SPORT DIRECTIONS

Zhamaletdinova T.A.

***Abstract.** The article deals with analyzing the process of teaching foreign languages at universities. The article examines the importance of linguistic competence as an essential condition and factor for the successful development of social processes and individuals in the modern world. In this regard it would make sense to revise the requirements for teaching and mastering English for students of non-linguistic directions.*

***Keywords.** professional sphere, skills, terms, career*

In the context of Russia economic reorientation and its integration into the world community, the issues of language policy for our country are becoming more and more urgent. Educational language policy is the main component of the general educational policy in terms of solving economic and social problems, in maintaining democratic citizenship.

In the texts of modern official documents on domestic educational policy, the following are proclaimed as key imperatives and goals: integration of the Russian educational system into the common European education space and taking a competitive position in this system; joining the global and regional expert community, sharing a common ideology and culture, ensuring the development of a common metalanguage, a common understanding of the education content and its results.

A special role in solving the set tasks is assigned to teaching a foreign language, which certainly requires revision. The last decades have been characterized by an unprecedented surge of interest in the study of foreign languages, especially English, the teaching of which has become a powerful industry in various world regions. English can be called the language of the world community in the globalization era. According to the well-known English linguist D. Crystal, there are 1 billion 100 million English-speaking people in the world and only a quarter of them are native speakers. [Crystal, p. 14]. Russia is not an exception. Command of at least one foreign language in addition to the native language becomes the key to getting a promising job, movement upwards in the hierarchy of the positions, successful economic and political cooperation and, finally, common human communication and mutual understanding.

The revolutionary changes in communication technologies development has a significant impact on the change in the teaching and learning of languages. Russians are involved in the social, scientific and cultural life of other countries through new media such as satellite television, video and audio products, and other modern communication methods. The new cyberspace of the information society not only opens up access to a huge volume of authentic discourses of various orientations, but also makes it possible to communicate interactively with speakers of other languages and cultures.

The problem of linguistic competence is an essential condition and factor for the successful development of social processes and individuals. We can see it in the competitive field for jobs in the international labor market, in the expansion of opportunities for free choice of place of residence and tourism. Linguistic competence contributes to the understanding of other systems of values, worldviews, lifestyles. It is a condition for participation in the social structure. Linguistic codes adopted in society reflect the real social organization and can contribute or, on the contrary, slow down the formation and development of new relationships. Thus, the language competence is the key problem of the educational program for teaching foreign languages.

Communicative linguistic "competencies" are considered as basic skills necessary for any member of society to get education, work, cultural and SPORT interaction and realization of his personality. Learning foreign languages, in accordance with this approach, directly contributes to the creation of a competitive economy, strengthening the skills of the mother tongue and helps in the formation of an entrepreneurial spirit IN THE SPHERE OF PROFESSIONAL COMMUNICATION.

New educational and professional perspectives of activity in the international context OF SPORT DIRECTION are a source of external motivation in the study of foreign languages, bring "healthy pragmatism" into the formation of learning goals, encourage entry into the world educational space, which also means integration into the international language educational system, involving the application of uniform educational standards, the development of comparable criteria for assessing educational levels and training programs.

In this regard, it would make sense to provide in the program the requirements for teaching and mastering the features of English-speaking and

Russian-speaking scientific communication, focusing on the transfer of information, since the characteristics of the formal side of informative communication presuppose some differences in the presentation and the nature of the argumentation. Representatives of Western cultures have linear thinking, which is the basis of structuring and is manifested in the strictly regulated rules of an English-language scientific report. An obligatory element in the introduction of a report or monograph, along with the justification for the need to address the chosen topic, which is usual for Russians, is its preliminary review in the form of a plan in order to make the text as predictable and easy to understand as possible. The terminology used in the report is accompanied by definitions and is provided at the initial stage. An obligatory element of the presentation is a concluding overview, designed to establish feedback from the audience. In discussions, the main argument is first put forward in order to make opponents want to hear the rest of the information. On the contrary, there is no pronounced formalization in the approach to scientific communication in Russian culture. By the nature of the argumentation and composition of the presentation, the report of the Russian scientist is not strictly regulated. For the Russian scientific community, there is no need to introduce and define the terms in advance.

Thus, teaching English as a foreign language, it is necessary not only to transfer cultural information and their linguistic expression, but also to teach the student to express professional competence by means of this language.

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**ЛИНГВИСТИЧЕСКОЕ ОБРАЗОВАНИЕ В КОНТЕКСТЕ СОВРЕМЕННОГО
КОММУНИКАТИВНОГО ПРОСТРАНСТВА ДЛЯ СТУДЕНТОВ НЕЯЗЫКОВЫХ
НАПРАВЛЕНИЙ/СПОРТИВНЫХ НАПРАВЛЕНИЙ**

Аннотация. Статья посвящена анализу процесса обучения иностранным языкам в вузах. В статье рассматривается важность владения языковой компетенцией как важнейшего условия и фактора успешного развития общественных процессов и отдельных личностей в условиях современного мира. Все это говорит о необходимости пересмотреть требования к преподаванию и изучению английского языка студентами неязыковых направлений.

Ключевые слова: сфера профессиональной деятельности, навыки, термины, карьера

**CHARACTERISTICS OF ADAPTIVE PHYSICAL EDUCATION OF
CHILDREN WITH INTELLECTUAL DISABILITIES**

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***Abstract.** The article contains an analysis of the theoretical achievements in the adaptive physical education of children with intellectual disabilities. The authors refer to the nosological group of children with Down syndrome. The purpose of this research is to specify the theoretical orientations of their adaptive physical education. On the basis of methods of analysis of scientific and methodical resources, the objectives of the pedagogical process and tasks have been defined and motor training tools and methods have been specified. The results provide specific information on the current issue.*

***Keywords:** adaptive physical education, children with intellectual disabilities, Down syndrome*

Introduction. In modern times, medical and pedagogical statistics show an annual increase in the number of children with intellectual disabilities. This group ranges from mental retardation to profound intellectual disabilities. One such group is children with Down syndrome. The leading characteristics of their dysontogenesis are mental retardation, which has different depths. What is more, the negative characteristics of the psychophysical development of children with Down syndrome do not indicate that they cannot be corrected. Some researchers believe that with the help of specially organized motor activity, it is possible to create the prerequisites for the equalization of children's abnormalities. Adaptive physical education plays a major role here [2]. As a general education discipline, adaptive physical education has pedagogical, educational, remedial and

educational objectives. Moreover, the specific characteristics of the APE are precisely the existence of corrective target mindsets. They are aimed at: correcting basic motor activities (walking, running, jumping, crawling, climbing); correction of coordination abilities (ability to coordinate movements, to maintain equilibration, to orient in space, to differentiate muscle forces; correction and development of sensory, mental and psychomotor abilities (development of perception at the level of all sensory systems, development of memory, attention, thinking, reaction to stimuli); correction and development of physical qualities; health promotion and the correction of somatic disorders (strengthening of the cardiovascular, respiratory and locomotor systems). In addition, it is the development of pupil's personality and mental characteristics.

Research results. It was found, that the general pedagogical and educational objectives are aimed at establishing a base for movements by children with Down syndrome, training them in various sports techniques, health systems, technologies and vital motor skills. This applies equally to children with Down syndrome. It goes without saying, that the educational orientation of the APE for children with Down syndrome should ensure the development of the personality of the child, positive features of his or her character. It is evident, that the most important condition for the effectiveness of the APE for children with Down syndrome is the implementation of diagnostic measures. They should take the form of preliminary, ongoing, operational and final screening. It assesses the parameters of the leading characteristics of dysontogenesis – the state of children's health, the development of their motor base, the development of coordination abilities, and the manifestations of the mental sphere. So, taking these characteristics into account will make it possible to divide children into subgroups depending on the level of preservation of their intellectual and motor spheres. And for children with Down syndrome, the preservation of intelligence will be the leading characteristic. The need to comply with this rule is emphasized in many researches' studies.

It has been established that, pupils with a slight intellectual deficiency may follow the basic school physical education program and even sports. Children with medium and deep intellectual deficiency, as part of their physical training, learn only elements of physical education and movement technology. One of the main factors ensuring the effectiveness of remedial and pedagogical support for children with Down syndrome is the consideration of the individual possibilities

and abilities of the pupil. This makes it possible to draw up an individually oriented route of corrective and health work for each pupil.

The means of APE for the children of the study group are the following.

1. Physical fitness. Physical exercises are aimed at strengthening muscle groups in order to protect the safety of joints and reduce excessive flexibility, forming a muscular corset that provides reinforcement of the locomotor apparatus, stimulation of functional systems [1];

2. Elements of different sports. The use of athletics, gymnastics, and football in the practice of working with children with Down syndrome ensures the expansion of their locomotive base, coordination abilities [3];

3. Elements of health systems and technologies. The health of children with Down syndrome is promoted through the use of breathing exercises, massage procedures and simple cross-training;

4. The healing forces of nature and the means of injection. The use in practice of the simplest adjustment procedures in the form of foot drops and air baths will improve the health of children with Down syndrome [2].

Conclusions. From the above, the important part of the pedagogical process of the APE for children of this nosological group is the data of special methods of influence and organization of motor activity. They are based on general pedagogical, remedial and specific physical education methods. The methods used can be divided into educational methods, the development of knowledge, and development of physical qualities and the raising of the personality. An analysis of the results of teaching practicum showed that the use of pedagogical methods should be aimed at changing the options of motor activity, redirecting child's attention, maintaining their intellectual and psychophysical state for work at classes. Thus, the APE for Down syndrome children uses generally accepted forms of educational organization. These forms include individual and group activities, morning exercises, physical fitness breaks, dynamic changes, recreational walks and home exercises. The most desirable form, as we consider, is the individual form of motor activity organization.

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ХАРАКТЕРИСТИКИ АДАПТИВНОГО ФИЗИЧЕСКОГО ВОСПИТАНИЯ ДЕТЕЙ С НАРУШЕНИЯМИ ИНТЕЛЛЕКТА

Аннотация. В тексте статьи приводится анализ теоретических наработок адаптивного физического воспитания детей с нарушениями интеллекта. Авторы останавливаются на нозологической группе детей с синдромом Дауна. Цель данной работы заключалась в конкретизации теоретических ориентиров их адаптивного физического воспитания. На основе методов анализа научно-методической литературы определены целевые установки педагогического процесса и задачи, конкретизированы средства двигательной подготовки, методы. Полученные результаты позволяют получить конкретную информацию по изучаемому вопросу.

Ключевые слова: адаптивное физическое воспитание, дети с нарушениями интеллекта, синдром Дауна

PHYSICAL CULTURE AND SPORTS IN SYRIAN SOCIETY DURING THE WAR: PROBLEMS AND CHALLENGES

Zino Hala

***Abstract.** The physical culture and sports sector in Syria has suffered, like other areas of life in Syrian society, due to the Syrian war, which has gone on since 2011. The purpose of the article is to shed light on the current realities of the state of physical culture and sports during the Syrian war, to find the most important problems faced by the Syrian people to improve the efficiency of the organization and development of physical culture and sports in modern Syria.*

***Keywords:** Syrian war, physical culture, sports*

It is not lost on everyone at present the importance of physical activity in the life of human societies since ancient times so that this physical activity has developed in the modern era under the concepts of physical culture that is part of the general human culture that expresses the values, knowledge, and customs developed by society for physical development and the intellectual property of the individual and improving his physical activity for forming a healthy lifestyle through physical education, physical training, and physical growth. And sport, which reflects the competitive form of this physical activity which developed in the form of competitions and special exercises to prepare a person for them.

At present, the sports movement in Syria is running an organization founded in 1971 called the General Sports Federation in Syria, which is concerned with organizing sports, includes in its membership masses of athletes from different age groups and social strata in society, it also supervises for sports, social and cultural activities that it practices in its institutions and the other concerned authorities shall organize its sporting activities in coordination with him. The General Sports Federation manages all the sports listed in it through federations of all kinds of sports, which are 26 federations for different sports, in addition to the Special Sports Federation and the Syrian Special Olympics in charge of physical culture and sports for people with disabilities, as well as the Sports Medicine Federation, and the Sports for All Federation responsible for publishing Physical culture in society, including aerobics, yoga, Zumba, sports dancing, and some types of sports that have recently entered Syria, such as rugby and teq ball, in addition to the School and University Sports Federation responsible for sports in Syrian schools and universities [3,4].

The General Sports Federation and all its affiliated sports federations work to develop physical culture and sports in Syria within the available capabilities.

Including holding periodic competitions at the national level in various sports, and striving to spread the sport in society through many community initiatives for which the Sports for All Federation is responsible, including sports festivals, marathons with popular participation, bike rallies with popular participation and others.

However, these efforts are hindered by many challenges resulting from the Syrian war since 2011, including:

- Development of school sports: Children practice sports in school from the primary stage until the end of high school, but unfortunately at an irregular rate, school sports facilities before the war were not well equipped. This situation worsened after the war as a result of the destruction of many schools and they're out of service, forcing other schools to receive students that exceeded their numerical capacity. As the number of damaged schools reached 5288 schools, in addition to 6328 inaccessible schools and 31 schools used as temporary accommodation centers for our families displaced by terrorism [2].

- Restoration of playgrounds, sports facilities: many sports facilities were damaged during the war, as the President of the General Sports Federation, Professor Firas Mualla, confirmed that the "Abbasid" the stadium in the capital, Damascus, cost more than three billion Syrian pounds (one million and 428 thousand and 571 US dollars). While the "Al-Faiha" stadium costs 125 million Syrian pounds only (59,523 dollars and the official Syrian News Agency (SANA) estimated the cost of maintaining the Al-Hamdaniya stadium in Aleppo at 225 million Syrian pounds, which adds to the challenges of the current reality is that in a country that still suffers from war, the restoration of the sports infrastructure may not be considered a priority when compared to other sectors such as health, education, and industry. And what makes the reality more difficult is the stopping of the subsidies provided by international organizations to the sports sector such as the International Olympic Committee and the freezing of funds The Syrian presence in some of those organizations, such as FIFA, as a result of the economic sanctions imposed by the United States of America, the most recent of which was the Caesar Act, which was imposed on the Syrian government [1].

- Security and safety challenges: In the poor security conditions in Syria, it has become impossible to use public squares and parks to practice sports, so private fitness clubs crowded with large numbers of people being the safest option, but unfortunately, this option may not be available for many people, as a result of the high cost, the onus is on the federation to find free or less expensive

alternative solutions that are available to all.

The development of physical education curricula and increasing the weekly lessons is an urgent need, especially in war conditions, so that physical activity is a good outlet for school students from the psychological pressures they suffer as a result of the war. The Syrian government represented by the General Sports Federation and the Syrian Ministry of Education is making vigorous efforts to restore the stadiums, sports facilities and schools during the next two years, but these efforts are hampered by the economic sanctions imposed on Syria, and the cessation of support and material aid from international sports organizations. Therefore, it is necessary to work on building confidence between these international organizations and the Syrian government to lift the ban and work on separation and independence sports from political conflicts.

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ФИЗИЧЕСКАЯ КУЛЬТУРА И СПОРТ В СИРИЙСКОМ ОБЩЕСТВЕ ВО ВРЕМЯ ВОЙНЫ: ПРОБЛЕМЫ И ВЫЗОВЫ

Аннотация. Сектор физической культуры и спорта в Сирии пострадал, как и другие сферы жизни сирийского общества, из-за сирийской войны, которая продолжается с 2011 года. Цель статьи - пролить свет на текущие реалии состояния физической культуры и спорта во время сирийской войны, определить наиболее важные проблемы, с которыми сталкивается сирийский народ, для повышения эффективности организации и развития физической культуры и спорта в современной Сирии.

Ключевые слова: сирийская война, физическая культура, спорт

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