VIII INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE OF STUDENTS AND YOUNG SCIENTISTS „MODERN UNIVERSITY SPORT SCIENCE“
MAY 27-28, 2014

This publication contains abstracts of The VIII Annual International Conference for Students and Young Researchers “Modern University Sport Science” held in the frames of International Congress “Nations’ Health: Systems of Lifelong Physical Education as a Foundation of Public Health”, 19th Biennial Conference of ISCPES. May 27-29, 2014. This book of abstracts considers issues of Theory and Methods of Physical Education; Physical Education and sports for All; Physical Education & Rehabilitation and Adapted Sports; Biomechanics, Sport physiology, Sport medicine; Sport Psychology; Sport and Society; Sport Management, Marketing & Sport Media; Sport Methodology & Comparative Study in Sport and Physical Education; Issues of the Modern Olympic Movement and is intended for the scientists conducting research of physical education and sport, lecturers of Higher Educational Establishments, students, post-graduates, coaches and athletes.

The abstracts are published as they have been submitted by the authors.


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ABSTRACT. Since 2001, the Venezuelan National Football Team, best known as La Vinotinto, started having victories and gradually became a winning team in present time. One of the tools that contributed to this change was the use of sport psychology. Nevertheless, there is little evidence in Venezuela about the psychological preparation carried out in this level of national football. The purpose of this study was to analyze which are the methods that have been used for the psychological preparation of the footballers of La Vinotinto, from the 2001-2007 and the 2007-2013 periods. Methodologically speaking, an emergent design was used. The data recollection techniques consisted of in-depth interviews with 2 psychologists that worked with La Vinotinto, 2 footballers that played in La Vinotinto, 2 coaches that worked with La Vinotinto and the documental analysis of print sources and electronic sources of information where the psychological work of the team is mentioned. Taking in account that this research is in its application phase, the results are much updated with the changes that have been occurring with the national football team that in the last years has been improving its international performance. In the past it was not identified as a winning team and at the moment it is becoming a national symbol of prestige. In the 2001-2007 periods, the following content categories in the psychological work were obtained: scientific work and attitude change. In the 2007-2013 periods, the following content categories in the psychological work were obtained: scientific work, tools and routine.

Keywords: La Vinotinto, psychological preparation, sport psychology, football.

MRI RESEARCH OF BRAIN AREAS RESPONSIBLE FOR SHOOTING

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Abstract. It is shown that visualization or ideomotor training activates a
certain shooters’ brain area, located in a visual system of cerebral cortex.

**Topicality.** A modern professional sport is based on deep scientific investigations of all its components: sport techniques, methodics, sportsman’s psychology, equipment, buildings etc. The clay pigeon shooting is a high-tech and multivariate kind of sport, requiring from an athlete a good combination of physical, psychological, mental and technical skills. The improvement of effectiveness in clay pigeon shooting strongly depends on psychophysiological dominant, which makes it necessary to study shooter’s motor control mechanism.

**The aim.** To estimate a possibility of determination of active brain areas involved in athletes’ firing by using a functional Magnetic Resonance brain Imaging (MRI scan).

**Introduction.** The human mind is capable to influence on subconscious regulation of vital processes and muscular activity via the central nervous system. A creation of neural networks in the brain and strengthening the existing neural connections is a physiological basis of visualization. The same mechanism takes place in the actual implementation of any movement or exercise. Visualization allows to set these neural connections without direct execution of movements and finally let the athlete get necessary skills.

**The experiment.** At the first stage, we conducted a computer research of the brain activity while firing visualization (when observing a movement trajectory of a yellow circle on the target field, mentally making a shot at the moment of it’s passing through the center of the target field). A studied group consisted of 26 people: 17 athletes, who professionally engaged with clay pigeon shooting (9 masters of sport and 8 one and two rated athletes) and 9 untrained people.

At the second stage of research, the cerebral cortex was scanned by firing imitation with the use of shotgun layouts. The target was displayed on the screen like in the first stage. In doing so, a yellow circle moved with different directions and speeds. At the moment of it’s passage through the center of the target, it was necessary to make a shot (to pull the trigger).

Our research was conducted in the Russian State University of Physical Education, Sport, Youth and Tourism (GTSOLIFK). For Magnetic Resonance brain Imaging (MRI scan) it was applied Siemens Magnetom Avanto, 1.5T. The subsequent processing of obtained data, individual and group analysis, as well as comparisons between groups were performed by SPM8 based on MatLab.

**Discussion of research results.** Results of the experiment showed that the functionally important brain areas involved in the act of firing for both untrained people and athletes are:

- The left fusiform gyrus;
- The right axillary gyrus (BA 33);
- The left upper parietal gyrus;
- Left precuneus;
- The left middle occipital gyrus;
- The left middle frontal gyrus;
- The triangular part of the inferior left frontal gyrus (BA 10);
The right middle occipital gyrus;  
The left precentral gyrus (M1);  
The left supplementary motor area.

When fMRI research, firing imitation made it possible to discover increasing of activities in the four brain areas. Moreover, the ‘X’ area activation differs athletes from untrained ones. This area is located in a visual system of cerebral cortex.

The main areas involved in a visual perception of shooters when firing:
– The lateral intraparietal area – is responsible for visual-spatial attention and eye movement planning;  
– Frontal eye fields – has close links with the previous area and plays an important role in visual attention and eye movements. Stimulation of this area causes saccades;  
– Visual area V5 (MT) – is the secondary area of visual cortex responsible for motion perception;  
– Brodman area 46 (DLPFC).

The lateral intraparietal area  
Frontal eye fields  
Visual area V5 (MT)  
Brodman area 46 (DLPFC)  

The LIP, FEF and BA 46 interaction is a key importance for visual attention and planning the motor act.

Conclusion
1. Shooting visualization in the training process of athletes activates the certain areas of brain.
2. The activation brain area, which differs shooters from untrained ones was determined.
3. We need to conduct extra researches making it possible to establish a clear correlation between brain activity and the effectiveness of shooting exercises.
4. Stimulation methodics, leading to much more rapid development of the abilities in the clay pigeon shooting are being designed.
OPTIMIZATION OF TRAINING PROCESS IN THE CLAY PIGEON SHOOTING (TAKING THE LOAD INTENSITY OF EXERCISES AND ATHLETE’S QUALIFICATION INTO ACCOUNT)

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Topicality. Clay pigeon shooting – is a complex of sports exercises, based on a large volume of training load that requires concentration and accuracy of muscular efforts from the athlete. Great physical loads are accompanied with high psychophysiological efforts. Therefore, high and stable shooting effectiveness can be achieved when properly structured training process is optimized with exercise selections, intensity and a rhythm of their performance.

The aim. The aim of investigation is to determine an athletes training structure, considering their load intensity by analyzing training load of athletes of different qualifications in a skeet shooting during their basic training for the competitions, as well as in their precompetitive cycle.

Research procedure.
– A questionnaire development and survey of athletes, specializing in clay pigeon shooting on issues related to the training process. 45 athletes of different qualification were involved in the survey;
– An analysis of data obtained as a result of questionnaire, as well as the main parameters of the training process, which are given in the basic M.I. Polyakov
educational-methodical manual in skeet shooting "Strel’ba po letyashim mishenyam" (hereinafter - the Polyakov manual).

**Discussion of results.** The load intensity volume in the clay pigeon shooting is estimated by the following parameters:

a) A number of shots, fired at a certain stage (at the certain training, precompetitive period, in basic training period, during the year, etc.);

b) A number of symbolic shots, made on simulators or directly on the shooting site, or the shots mentally made by a shooter;

c) Time spent for performing the work mentioned above.

The intensity of the training exercise is assessed by formula:

\[ I = \frac{\sum_{i=1}^{n} t_i}{S} \]

\( I \) – stress intensity, \( t_i \) – performing time

By this formula, the load intensity can be estimated both in scores and in percentages.

**Table 1**

Training and competitive ranking of exercises according to the load intensity (by the Polyakov manual)

<table>
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<th>Type of exercise</th>
<th>Subtypes of exercises</th>
<th>Scores</th>
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<tr>
<td>Training without gun</td>
<td>1. General physical training&lt;br&gt;2. Special physical training&lt;br&gt;3. Active recreation (tourism, hunting, fishing)</td>
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<tr>
<td>Training without cartridge</td>
<td>1. Training on simulators&lt;br&gt;2. Warming up&lt;br&gt;3. Training with a symbolic shot on the site&lt;br&gt;4. Mental rehearsal of the shot</td>
<td>2</td>
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<tr>
<td>Training without considering firing result</td>
<td>1. Work on shooting technique&lt;br&gt;2. Working out of the firing on certain flight trajectories targets&lt;br&gt;3. Testing sites, guns, cartridges, shooting vest, glasses, etc.</td>
<td>3</td>
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<tr>
<td>Training considering firing results</td>
<td>1. Testing a reliability the individual elements of shooting technique&lt;br&gt;2. Checking the development shooting degree&lt;br&gt;3. Self-assessment of the shooting results&lt;br&gt;4. Assessing shooting results by a coach</td>
<td>4</td>
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<tr>
<td>Checking firing</td>
<td>1. Screening the competition groups&lt;br&gt;2. Screening a scoring team&lt;br&gt;3. Transferable tests&lt;br&gt;4. Offset participation in the competitions</td>
<td>5</td>
</tr>
<tr>
<td>Medium level competitions</td>
<td>All competitions for a year (except for highest rank competitions)</td>
<td>6</td>
</tr>
<tr>
<td>High level competitions</td>
<td>The main competitions of the year</td>
<td>7</td>
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In skeet shooting the load intensity is worth estimating in scores. 1, 2, 3, 4, 5, 6 – training exercises assessed according to table 1 with 1, 2, 3, 4, 5, 6 scores, respectively.

Figure 1. Training structure for athletes with different qualification
Figure 2. Load intensity changes of clay pigeon shooters during training and competitive periods, depending on their qualification

**Conclusion**

1. Based on the ranking of load intensity exercises as well as survey data of athletes, specializing in clay pigeon shooting; with the help of the main recommendations of the basic educational-methodical manual in skeet shooting, it was determined a well-balanced training structure for shooters with different qualifications.

2. We established the athletes load intensity in different training periods. In the main training period it is about 2.1–2.6, and can rise to 20% in the competitive period. Depending on athletes’ qualification, it is suggested to follow the obtained data on the load intensity levels in the training and competitive cycles.

3. A structure and load intensity levels determined make it possible to optimize the training process on physical and psycho-physiological efforts of an athlete to avoid overtraining and mental tiredness as well as to achieve high stable effectiveness in skeet shooting.

**References**


THE INITIAL STAGE OF KICKBOXING DEVELOPMENT IN THE USSR: DIFFICULTIES AND FIRST ACHIEVEMENTS

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Kickboxing is considered to be a very young kind of sport. It was born in Europe in the 80s. Kickboxing is synthesis of martial arts (flexible and multifunctional sport which can be practiced from 10 years old till extreme old age).

For the first time kickboxing started to be practiced in the soviet times in the forms of self-regulating clubs and initiative groups. It started in 1987. Great interest for new sport led to fast-growing development of kickboxing in the USSR [1].

For observing all stages of kickboxing development as sport I initiated research. The goal of research is to find out the stages of kickboxing formation and development in the USSR. According to opinion poll – questioning of coaches who are considered to be the originators – the main factors of kickboxing initiation and development in the USSR were considered to be high level of sport and martial arts, audience appeal and applied significance, financial opportunities of people who are looking for something new and unknown in combat sport and people themselves, big amount of schools in martial arts, the representatives of which were eager to test their styles and training systems while holding official competitions, the possibility of becoming famous and respected, of being a part of contribution to harmonious development of a human and a wish to earn money in new sphere of sport business. This was the situation in the early 90s of the 20th century, when kickboxing began to develop [2].

The reason of rapid increase of kickboxing is its availability and flexibility as a kind of sport. The training can be held in simple conditions without huge expenses. The first kickboxing trainings were held in physical education halls and at sport grounds at schools. Special development of kickboxing has been caused by its flexibility. Huge number of its types made it interesting for a lot of people.

1. **Semi-contact (limited contact)**

   In this type of kickboxing it is prohibited to make strong and accent hand and foot hits. And because of these limits the fight speed is much higher than in full-contact. The win goes to a sportsman managed to show better hand and leg technique and in accordance to a sportsman who made more hand and leg hits. The fight has
intermittent character as after each proper hit with a leg or a hand the referee stops the fight for scoring.

2. Light contact
   
   In this type of kickboxing it is prohibited to make strong hits (except for the case when a competitor makes an unexpected hit), but knock-outs and knock-downs are approved but with no scores counted. It is preferable to make leg hits with more scores for jump hits. The referee scores each hit which reached its aim.

3. Full contact
   
   In this type of kickboxing the hand and leg hits are made with no strength limit – with full contact. And as well as in boxing, the knock-downs and knock-outs are counted.

4. Full contact with low kick
   
   In this type of kickboxing it is allowed to make kicks at inner and external surface of hips [3].

   The main problem was the lack of qualified coaches. The coaches available were the representatives of karate and boxing schools. Only in 1991 the first students started their full-time education with the kickboxing specialization in the State Institute of Physical Education. At the time of kickboxing initiation the most critical problem was considered to be the financial support issue. The issue has been solved only after the convincing victory of the USSR team in the European championship, full contact (Madrid, 1991).

   In this investigation I have highlighted the stages of kickboxing initiation and development. The problems which prevent sport development nowadays were shown via coach interviewing and questioning. Kickboxing is young kind of sport and it experiences rapid development. The performed research showed the main factors which prevented kickboxing from development. These are the lack of financial support together with the lack of qualified coaches. Thus, preparation of high-qualified coaches in the universities is considered to be the basis for further development and consolidation of kickboxing in Russia.

Reference
1. Ivanov A. "Kickbozing"/Ivanov A. , 1995
2. Drugin J. «Russian Federation of Kickboxing in IAKSA version»
In a modern elite sport the application of efficiency estimation of competitive activity programs became already habitual. From the scientific point of view, detailed analysis of such statistical information allows to reveal tendencies, regularities, and also typical mistakes in game actions of teams and athletes in particular that, in turn, can be used when planning training process.

The accounting of the received data allows coaches and experts more precisely to define strong and weak sides of players, both at high skill level and at initial preparation stage.

In curling, as well as in any other sport, the content of competitive activity bears a large number of parameters that can be systematized and can influence the final productivity of game actions. But, at present, observation of these data through a prism of statistical assessment in curling has not yet received necessary attention.

The topicality of our research consists of high significance of using statistical estimation of competitive activity during curlers training and at the same time lacks of studying this problem in the theory and methodology of curling.

Research hypothesis: it was supposed, that curlers training management on the basis of complex statistical assessment of player’s technical and tactical actions during competitive activity will allow to increase its efficiency.

As an object of our research training process of curlers was chosen.

The subject of research is training process management on the basis of complex statistical estimation of curlers technical and tactical actions during competitive activity.

The aim of our studies is development and experimental substantiation of methods using a complex statistical estimation of player’s technical and tactical actions during competitive activity for optimizing training process management.

According to the above mentioned aim there has been arisen a necessity to solve the following tasks:

1. To study a problem of using statistical estimation data of player’s technical and tactical actions during competitive activity.
2. To determine the most important parameters of technical and tactical actions defining level of game efficiency.
3. To develop the special software for complex statistical assessment of game actions parameters.
4. To develop methods of using statistical assessment of competitive activity for optimizing curlers training process management.
5. To check experimentally the efficiency of developed methods.

Cleanliness of pedagogical experiment provided formation of two groups (control and experimental). Groups were made of 10 athletes in each and included participants of the Russian Men’s Championships 2012 with 5–7 years curling experience as Masters of Sport.

Training in control group was conducted by the standard methodology applied to preparation of high qualification curlers. Training in experimental group was conducted according to offered recommendations.

Pedagogical supervisions were made within the 1st and 2nd round of the Russian Men’s curling Championships (season 2012-2013) and were directed to determination of curlers game activity parameters values.

There have been included the following parameters of pedagogical supervision: type of given rotation to stone, tactical task, type of throw, weight zone, a mistake (if it exists), throw accuracy and the parameters connected with score and actions of the opponent team.

**Conclusions**

1. The analysis of special literature and experts poll results defined the high importance of statistical estimation of athlete’s technical and tactical actions in the training process.

2. The importance of comparative analysis of the game efficiency in curling showed that the most significant among them are: type of throw, weight zone, a mistake and throw accuracy; as the least significant parameter the type of given rotation to stone was defined.

3. The methodology of complex statistical estimation of competitive activity developed by us allows to determine quickly and objectively the level of technical and tactical actions of players and team as a whole.

4. Application of the developed methodology during pedagogical experiment allowed to bring necessary adequate corrections of training activity therefore we have reached the increase of throws accuracy in the experimental group.

5. Curlers training management due to taking into account complex statistical estimation of competitive actions promotes the increase of technical and tactical readiness level, and as a result, to enhance curlers competitive activity efficiency.

**SECULAR CHANGES OF ANTHROPOMETRIC DATA OF ATHLETES SPECIALIZING IN SPEED SKATING**

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*Russian State University of Physical Education, Sports, Youth and Tourism Moscow, Russia*

**Introduction.** Studies of secular changes in different populations remain one of the most important research topics in human biology. Manifestations of a secular
trend include changes in morphological characteristics for children and adults. While a lot of data is known for general populations, not many studies deal with the same subject for professional sportsmen. In our previous publications secular changes in the free wrestlers have been studied (Godina and Kolomeichuk, 2012). The aim of the present paper is to follow secular changes in speed skaters for the last 40 years.

**Methods.** In 2012/13, 85 athletes specializing in speed skating were investigated in Moscow according to the standard anthropometric protocol. All were of high sports qualification (Master of Sports or Master Candidate), 18-24 years old. The results were compared with archive data on speed skaters from the previous generation (Gladyshcheva et al., 1979). Anthropometric program included about 30 measurements; body mass index (BMI) and body mass components were calculated. Statistical analysis was performed with STATISTICA 6.0, 8.0 packages.

**Results and discussion.** Anthropometric data of high qualification men specializing in speed skating in 1979 and 2012/13.

<table>
<thead>
<tr>
<th>Traits</th>
<th>Men Speed skaters</th>
<th>CMS</th>
<th>MS</th>
<th>CMS</th>
<th>MS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>n=17</td>
<td>n=29</td>
<td>n=11</td>
<td>n=11</td>
</tr>
<tr>
<td>Stature (cm)</td>
<td>174,2*</td>
<td>177,7*</td>
<td>173,9</td>
<td>176,1</td>
<td></td>
</tr>
<tr>
<td>Trunk length (cm)</td>
<td>57,1*</td>
<td>54,0*</td>
<td>57,7*</td>
<td>53,9*</td>
<td></td>
</tr>
<tr>
<td>Leg length (cm)</td>
<td>90,5*</td>
<td>94,3*</td>
<td>92,2</td>
<td>93,7</td>
<td></td>
</tr>
<tr>
<td>Arm length (cm)</td>
<td>76,3*</td>
<td>78,6*</td>
<td>77,3</td>
<td>77,0</td>
<td></td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>71,8</td>
<td>70,8</td>
<td>73,5</td>
<td>70,6</td>
<td></td>
</tr>
<tr>
<td>BMI (kg/m2)</td>
<td>23,7</td>
<td>22,4</td>
<td>23,8</td>
<td>22,7</td>
<td></td>
</tr>
<tr>
<td>Chest circumference (cm)</td>
<td>89,5*</td>
<td>86,2*</td>
<td>89,3*</td>
<td>85,6*</td>
<td></td>
</tr>
<tr>
<td>Upper arm circumference 1 (cm)</td>
<td>28,9</td>
<td>27,4</td>
<td>29,7*</td>
<td>28,3*</td>
<td></td>
</tr>
<tr>
<td>Upper arm circumference train(cm)</td>
<td>31,3</td>
<td>30,4</td>
<td>31,8</td>
<td>31,1</td>
<td></td>
</tr>
<tr>
<td>Forearm circumference (cm)</td>
<td>27,4</td>
<td>26,2</td>
<td>27,3</td>
<td>27,1</td>
<td></td>
</tr>
<tr>
<td>Thigh circumference (cm)</td>
<td>57,9</td>
<td>56,4</td>
<td>57,7</td>
<td>57,3</td>
<td></td>
</tr>
<tr>
<td>Shin circumference (cm)</td>
<td>37,7</td>
<td>36,7</td>
<td>38,1</td>
<td>37,1</td>
<td></td>
</tr>
<tr>
<td>Elbow breadth (mm)</td>
<td>64*</td>
<td>70*</td>
<td>65*</td>
<td>72*</td>
<td></td>
</tr>
<tr>
<td>Wrist breadth (mm)</td>
<td>56*</td>
<td>55</td>
<td>56*</td>
<td>57*</td>
<td></td>
</tr>
<tr>
<td>Knee breadth (mm)</td>
<td>89*</td>
<td>98*</td>
<td>91*</td>
<td>99*</td>
<td></td>
</tr>
<tr>
<td>Ankle breadth (mm)</td>
<td>68*</td>
<td>72*</td>
<td>72*</td>
<td>74*</td>
<td></td>
</tr>
<tr>
<td>Biacromial diameter (cm)</td>
<td>39,6</td>
<td>39,4</td>
<td>40</td>
<td>39,6</td>
<td></td>
</tr>
<tr>
<td>Pelvic diameter (cm)</td>
<td>28,6*</td>
<td>27,3*</td>
<td>28,2</td>
<td>27,9</td>
<td></td>
</tr>
<tr>
<td>Chest diameter sagittal (cm)</td>
<td>28,6*</td>
<td>27,3*</td>
<td>28,9*</td>
<td>26,9*</td>
<td></td>
</tr>
<tr>
<td>Right hand grip (kg)</td>
<td>56,9*</td>
<td>40,6*</td>
<td>56,5*</td>
<td>46,9*</td>
<td></td>
</tr>
<tr>
<td>Left hand grip (kg)</td>
<td>52,9*</td>
<td>36,9*</td>
<td>51,8*</td>
<td>44,0*</td>
<td></td>
</tr>
</tbody>
</table>
# – data collected by the authors
*-statistically significant differences (p<0.05).

There are noticeable changes in main body dimensions in modern speed skaters as compared with their counterparts from the previous years. While stature remained practically the same, as well as biacromial and pelvic diameters, body weight and BMI significantly decreased (weight: 73.5 kg in 1979 vs 70.6 in 2012/13; BMI: 23.8 vs 22.7 correspondingly), leg length increased, chest and some other body circumferences decreased. There is a significant increase in bone component, measured as elbow and knee breadth (e.g., knee breadth: 91 mm in 1979 vs 99 mm in 2012/13 the differences are statistically significant). The hand grip strength in 2012/13 athletes showed significant decrease the differences are statistically significant. Discussion In our previous study it was shown that secular changes in free style wrestlers could be connected with their typical morphological structure and adaptation to specific sports activity (Godina, Kolomeichuk, 2012). The comparison of body dimensions in high qualification speed skaters examined in 1979 and in 2012/13, revealed that modern athletes express the tendency towards leg length increase, elbow and ankle breadth, as well as decrease in all circumferences of the body. The increase in leg length is part of the general secular trend (Bogin and Varela-Silva). The changes in bone mass shown in this study could be associated with the cardinal change of skates’ model in the middle of the 1990’s and with the techniques of run. The decrease in BMI, some body circumferences and hand grip might demonstrate the trend to asthenic body build, which was found in some modern populations (Godina, 2011).

References

THE INVESTIGATION OF MUSIC ACCOMPANIMENT IN MALE AND FEMALE SINGLE FIGURE SKATING FROM 2005 TO 2014

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Russian State University of Physical Education,
Sport, Youth and Tourism,
Specialization theory and methodic of figure skating

Relevance. It becomes more and more important to obtain reliable information about musical preferences of competitive programs. Successfully picked
accompaniment, which reflects the individual characteristics of a skater, resonates with Components score.

The purpose of this work is to study the preferences of musical accompaniment in male and female single skating during the period from 2005 to 2014 and to identify future trends regarding the use of musical accompaniment in figure skating.

To achieve the objectives of the research we have solved following tasks:
1) To analyze the literary sources and data on the Internet;
2) To classify musical genres used in figure skating;
3) To explore musical accompaniment of competitive programs of top athletes on examples of the European and World championships, Olympic Games;
4) To identify the correlation between the selected music and the Interpretation score;
5) to predict future changes in rules, connected to music accompaniment in figure skating.

The study presents data on the use of musical accompaniment of figure skaters, who took the first 20 places in the World, European Championships and the Olympic Games from 2005 to 2014.

Summary. Based on the analysis of literary sources were identified eight major genres of music in figure skating (folk music, Latin, pop, electronic music, instrumental music, soundtrack, jazz or blues and classical music).

Tables 1 and 2 provide links relevant to frequency of use of various musical genres in competitive programs male and female single figure skating from 2005 to 2014.

Table 1

<table>
<thead>
<tr>
<th>Year</th>
<th>Folk music</th>
<th>Latin music</th>
<th>Pop music</th>
<th>Electronic music</th>
<th>Instrumental music</th>
<th>Soundtrack</th>
<th>Classical music</th>
<th>Jazz, Blues</th>
<th>Etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>2</td>
<td>12,5</td>
<td>4</td>
<td>4</td>
<td>12,5</td>
<td>29</td>
<td>27</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2006-07</td>
<td>3</td>
<td>3</td>
<td>9</td>
<td>-</td>
<td>17</td>
<td>38</td>
<td>26</td>
<td>-</td>
<td>4</td>
</tr>
<tr>
<td>2007-08</td>
<td>-</td>
<td>2,5</td>
<td>8</td>
<td>2,5</td>
<td>34</td>
<td>29</td>
<td>24</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2008-09</td>
<td>3</td>
<td>16</td>
<td>13,5</td>
<td>-</td>
<td>21,5</td>
<td>16</td>
<td>30</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>2009-10</td>
<td>1</td>
<td>10</td>
<td>11</td>
<td>-</td>
<td>20,5</td>
<td>30</td>
<td>22</td>
<td>5</td>
<td>0,5</td>
</tr>
<tr>
<td>2010-11</td>
<td>-</td>
<td>8</td>
<td>7</td>
<td>-</td>
<td>15</td>
<td>33</td>
<td>30</td>
<td>7</td>
<td>-</td>
</tr>
<tr>
<td>2011-12</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>4</td>
<td>10,5</td>
<td>37,5</td>
<td>27</td>
<td>8</td>
<td>3</td>
</tr>
<tr>
<td>2012-13</td>
<td>4</td>
<td>6</td>
<td>5</td>
<td>5</td>
<td>14</td>
<td>30</td>
<td>23</td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td>2013-14</td>
<td>3</td>
<td>9</td>
<td>20</td>
<td>1</td>
<td>10</td>
<td>28</td>
<td>22</td>
<td>6,5</td>
<td>0,5</td>
</tr>
</tbody>
</table>
Table 2

Usage of different musical genres in competitive programs of female single figure skating from 2005 to 2014

<table>
<thead>
<tr>
<th>Year</th>
<th>Folk music</th>
<th>Latin music</th>
<th>Pop music</th>
<th>Electronic music</th>
<th>Instrumental music</th>
<th>Soundtrack</th>
<th>Classical music</th>
<th>Jazz, Blues</th>
<th>Etc.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005-06</td>
<td>5</td>
<td>12.5</td>
<td>7</td>
<td>3.5</td>
<td>3.5</td>
<td>20</td>
<td>43</td>
<td>5</td>
<td>0.5</td>
</tr>
<tr>
<td>2006-07</td>
<td>10</td>
<td>19</td>
<td>2.5</td>
<td>-</td>
<td>5</td>
<td>32</td>
<td>24</td>
<td>5</td>
<td>2.5</td>
</tr>
<tr>
<td>2007-08</td>
<td>5</td>
<td>7</td>
<td>2.5</td>
<td>-</td>
<td>2.5</td>
<td>27</td>
<td>49</td>
<td>5</td>
<td>2</td>
</tr>
<tr>
<td>2008-09</td>
<td>-</td>
<td>14</td>
<td>-</td>
<td>-</td>
<td>12</td>
<td>27</td>
<td>45</td>
<td>2</td>
<td>-</td>
</tr>
<tr>
<td>2009-10</td>
<td>4</td>
<td>18</td>
<td>2</td>
<td>-</td>
<td>10</td>
<td>31</td>
<td>31</td>
<td>4</td>
<td>-</td>
</tr>
<tr>
<td>2010-11</td>
<td>4</td>
<td>19.5</td>
<td>-</td>
<td>-</td>
<td>8</td>
<td>41</td>
<td>23</td>
<td>4</td>
<td>0.5</td>
</tr>
<tr>
<td>2011-12</td>
<td>2</td>
<td>9</td>
<td>4.5</td>
<td>-</td>
<td>16</td>
<td>23</td>
<td>36</td>
<td>9</td>
<td>0.5</td>
</tr>
<tr>
<td>2012-13</td>
<td>1</td>
<td>9.5</td>
<td>11</td>
<td>-</td>
<td>11</td>
<td>33</td>
<td>25</td>
<td>9.5</td>
<td>-</td>
</tr>
<tr>
<td>2013-14</td>
<td>2</td>
<td>17</td>
<td>18.5</td>
<td>-</td>
<td>13</td>
<td>17</td>
<td>29.5</td>
<td>3</td>
<td>-</td>
</tr>
</tbody>
</table>

According to the results of table 1 soundtracks were the most popular in male skating (29% of the total number of tracks). Different images you can create on ice using this kind of music adds variety to competitive programs. Memorable, outstanding image will be marked in Component score.

Data in the table 2 illustrate that classical music occupies a leading position in the women's figure skating, and attracts, sometimes, almost half of athletes (35% of the total number).

![Pic 1, 2 Structure analysis of musical compositions in male single figure skating from 2005 to 2014](image-url)
Pic 3, 4. Structure analysis of musical compositions in female single figure skating from 2005 to 2014

Analysis of the structure of musical compositions in men’s and women's singles figure skating showed similar results. In short programs have been used, mainly one-part composition. This structure is the most convenient, considering the small duration of the program (2:50).

Free program provides more opportunities and the number of structural elements ranging from 1 to 8. Mostly used are one-part compositions, which is also connected to genre preferences of athletes.

According to the result of the analysis of final place’s dependence on Interpretation score was the approval that even though this dependence is present, it is not a direct correlation. Successful performance of skater depends on many other factors, for example, the technical execution of the program. It becomes especially relevant in such an important competitions like the Olympics, where the cost of failure is very high and emotional stress exceeds all limits.

References
Over a long time in the history of the Olympic movement was dominated by the concept of «sport is out of politics», proclaimed by Pierre de Coubertin. However, the founder of the modern Olympic Movement recognizes the possibility of using sport for the decision of important political problems, believing that the political influence of the Olympic Movement should be eliminated.

Spreading the ideas of the Olympic movement in the world community and the leadership of the Olympic Movement is the mission of the International Olympic Committee.

Positive processes in the growing importance of the International Olympic movement in the political, public and cultural life of the world community to encourage the study of all areas in its development.

At the moment we can speak about the relative independence of the Olympic Movement from the policy, but the protests remains relevant and not previously been the subject of scientific study, which led to the novelty of the research.

Object of research – the Olympic Games.

Subject of research – the acts of the protests in the period of the evolution of the Olympic Movement.

The study of protests in the evolution of the Olympic movement and the analysis of the causes and forms of their appearance can promote its development.

Protests (in the form of boycotts, military actions, terrorist acts) periodically become the subject of public debate.

In our study, we identified the forms of protests, which were declared in the process of development of the Olympic movement, has defined the reasons of their occurrence.

On the basis of important historical events, we have identified three periods in the development of the Olympic movement.

In each selected period counted acts of protests, total number of which amounted to 74. Having analysed the reasons for their occurrence, we have grouped the acts of protests as follows highlighting 24 protest in which we conducted the study.

The most frequent reasons of acts of protests following circumstances are: political; race; sport; economic; environmental.

Consider an act of protest for political reasons, for example, Games of the VII Olympiad in Antwerp in 1920, the reason was the outbreak of the First world war, in consequence, the International Olympic Committee of the Olympic games were not invited athletes Germany and its allies.
Also due to political reasons took place protests at the games of the XXIX Olympiad in Beijing - the Chinese Government was accused of violent suppression of separatist movements in Tibet, as well as existing ones, according to human rights problems and censorship.

An example of an act of racial protest circumstances was the XIX Olympic Games in Mexico city (1968) – black American athletes Tommy Smith and John Carlos, the gold and bronze winners of track and field athletics, at the awards ceremony during the anthem of USA defiantly lowered his head and raised his clenched hands were in black gloves speaking against racism in the United States.

In recent XXX Olympic games in London, took place offensive remarks athletes from Greece Paraskevi Papachristou in the address Africans, which, in her opinion, had been much in Greece. This incorrect statements led to its suspension.

The act of protest on sports circumstances was demonstrated at the Games of the XX Olympic games in Munich (1972), when team of USA in basketball game with the national team of the USSR, in protest against the decisions of the judges, refused to come to the ceremony. Silver medal of the American athletes are still kept in the Fund of the International Olympic Committee.

So example took place at the XXIX Olympic games in Beijing, when the Swedish wrestler Ara Abrahamian, during the ceremony of awarding threw awarded him the bronze medal on the carpet in protest against the decision of the arbitrators.

Act of protest for economic reasons can be considered games of the IV Olympiad, where because of the public pressure the Prime Minister of Italy Giovanni Giolitti was forced to declare about the refusal of the organization of competitions in connection with financial difficulties.

An example of a protest by environmental reasons are considered IX Olympic winter games, which were held in Denver, USA, but by resolution of the residents of the state in connection with the environmental threat games were moved to Innsbruck where and passed in 1976.

In the evolution of the Olympic Movement protests not only negative, but also played an important role in protecting the interests of the athletes. An example is the games of the XXVI Olympiad in Atlanta 1996, when representatives of the International Olympic Committee reported that tests the Russian swimmer Andrey Korneev, who won a bronze medal in swimming at the 200 m butterfly, as well as a bronze medalist in the category to 48 kg Russian wrestler of Zafar Guliyev tested positive for the presence in the body of prohibited drug bromantan. The Russian delegation has submitted a protest to the international court of arbitration for sport in Lausanne, arguing that the medical Commission of the International Olympic Committee banned bromantan already during the Games and in the black list to make't have time. The court acknowledged the correctness of the Russians.

We can assert that the Olympic movement is not just a separate branch in the development of the cultural heritage of mankind, but weighty force in the solution of various political and international disputes, which requires a strong guiding force in the face of the International Olympic Committee.
Thus, examining the factors of protests, we found that to determine monotonous classification not possible, however, the causes can be determined and that was done in our work.

In our study identified the following forms of attacks protests:
1) political;
2) terrorist;
3) military;
4) demonstrative behavior athlete.

We classified the causes of acts of protests, as follows:
1) for political;
2) racial;
3) sports;
4) economic;
5) environmental circumstances.

**USING INDIVIDUAL APPROACHES TO SWIMMING TECHNIQUE CORRECTION WITHIN AN ANNUAL TRAINING CYCLE**

Borovsky Viktor,
Kuban State University of Physical Education,
Sport and Tourism, Krasnodar, Russia

**Introduction.** While analyzing the preparation of top level athletes it becomes evident that the performance of most exercises under the conditions of insignificant similarity between external parameters of the training process and competitive activity characteristics is often accompanied by less expressed autonomic nervous system responses and inadequate motor coordination structure. Therefore, it is very important to develop methodological approaches to creating conditions for the best manifestation of motor abilities and resources of functional systems of the body by considering athlete personality traits.

**Methods.** The following methods were used to solve the problems of this study: analysis of methodological literature, educational experiment, educational testing, timekeeping, calculation techniques, computer-aided motion analysis of swimmers based on recording lateral and frontal swimming motions with a SDR video camera. Swimmers were filmed underwater without stopping the training process. The digital video data collected were subjected to frame-by-frame swimming technique analysis by using motion capture software specifically adapted to swimming. Tests of research participants and educational experiment were conducted in the KSUPEST swimming pool and training camps. The training program for the Krasnodar Region swimming team was adjusted by taking the technical training tasks into account. 20 masters and candidate masters of sports who are members of the Krasnodar Region swimming team volunteered to participate in this study. The experiment lasted 8 months (two 12-week macrocycles and one 8-week intermediate recovery cycle). The study included three stages corresponding to annual training
macrocycles. For the whole year of research, the technical training was aimed at improving quality of swimming technique self-control, development of self-correction of technical swimming skills, as well as formation of special senses of time, distance, pace, stroke length and rhythmic movement.

**Results and Discussion.** Exercises with targeted action on key biomechanical characteristics of swimming technique, as well as exercises increasing linear swimming speed were included into experimental training sessions. Exercises intended for improving senses of water, time, pace, stroke length, as well as training aids for the biomechanical structure regulation of a swimming stroke were used as components of tested training approaches. To gain the greatest effect, such training aids as rubber dampers, fins, swim paddles of various sizes, swimming by using sparring, swim tethers and changing resistance were used. Dosage, intensity and goals of exercises differed depending on a training period.

Results of the study showed that correction of internal kinematic stroke parameters and use of progressively increasing working loads in the technical training process led to significant improvements of speed and acceleration, depth of dive and hand trajectory length during the key working phases in swimming.

Thus, specially developed and experimentally validated training aids that improve physical coordination skills including senses of speed and time, as well as biomechanical stroke technique elements made it possible to increase the management process quality in technical training of skilled swimmers.

**DEVELOPMENT OF SPEED-POWER SKILLS AT SCHOOLCHILDREN BY USING JUMPING EXERCISES**

Burnashev Rashid

*Uzbek State Institute of Physical Culture*

**Keywords:** explosive strength, shock method, school age, speed-power qualities.

**Summary.** In work the modern sights on a technique of development of special speed-force qualities are considered, during physical education of children of 9-10 years age. The author used for study of speed-force qualities of children the specially picked up tests, and also tool technique (UDS). In work the specially picked up speed-force exercises bringing up "explosive" force of muscles are used. The received parameters have allowed defining parameters of development of explosive force of muscles at the younger schoolboys at use of a shock method.

**Relevance.** An important problem of preparation process of primary school children is development of physical qualities that enhance the level of physical preparedness. Currently, the issue of improving methods of physical education is very important.

In this regard, it is relevant scientific research and creation of new programs and methods directed to rapid development of physical qualities and increased
physical preparedness. In the learning process at secondary school at the lessons of physical culture, schoolchildren need to develop physical qualities like speed-power. For example, in the first and fourth terms - athletic exercises require good speed-power preparedness, in the second and third - speed-power exercises are use in gymnastic and acrobatic exercises, and during the active and sports games.

The purpose of work – to learn the impact of special jumping exercises on the development of speed-power skills of schoolchildren. In the course of our experiment were set follow tasks: 1. determine the dynamics of speed-power indicators of schoolchildren. 2. To learn the impact of special set of exercises on level of speed-power preparedness of schoolchildren. To perform of set tasks were used next methods of research: pedagogical observations, pedagogical experiment, pedagogical testing. In order to determine the parameters of power gradients we used universal dynamo graphical stand (UDS).

Results of research. In the result of the analysis revealed: at the beginning of the pedagogical experiment of experimental groups (boys) were not significant statistical differences between the studied parameters, although we have observed in two indicators high indicators of averages magnitude in control group. The received data of among boys the experimental group and boys in the control group indicate that, at the beginning of the pedagogical experiment to the experimental groups (boys) were choosen with the same level of physical preparedness. Comparing the received results at the beginning of the pedagogical experiment among girls of experienced groups, we are observe that indicators of experimental group have no authentically statistical differences with received data in control group.

Discussion. Comparative statistical analysis of studied parameters in the experimental groups revealed the following values. Boys of experimental group during the experiment have found a significant rise of studied indicators. At the end of the pedagogical experiment, we did a comparative analysis of the parameters of speed-power preparedness of experimental groups. We have found that the results of pedagogical experiment among boys experimental groups defined authentically statistical differences. Among girls, the experimental group at the end of pedagogical experiment observed some changes. The same comparison at the end of pedagogical experiment we conducted among girls of experimental groups (between the experimental and control groups) and found some changes. In order to check the effectiveness of elaborated methods of pedagogical experiment usually organize so, that one could compare the results of experimental groups with the received data in control groups. In pedagogical experiment, we simultaneously observed for children from experimental and control groups. In control group during the pedagogical experiment, training sessions were conducted according to approved annual plan. Our pedagogical observations conducted in control group showed that some indicators which characterize the speed-power opportunities of children have improved, however, authentically statistical differences we did not observe, both girls and boys. Thus, our statistical analysis, received material in pedagogical experiment, indicates about superiority of elaborated method by us speed-power qualities, using specially selected exercises - jumping into the depth. We have found that the elaborated
method of development explosive strength that encourages speed-power, children of experimental group defined a significant superiority over the traditional system of training sessions on physical culture. The results of research showed the core curriculum should be supplemented with special physical exercises, such as jumping into the depths that contribute to improve the effectiveness of physical education, and are the most effective means of increasing the level of speed-power preparedness of schoolchildren.

**Conclusions.** 1. The research allowed to definite the dynamic of speed-power indicates of schoolchildren. Thus, during the period of experiment have found a significant rise of the studied indicators. Authentically statistical differences were observed as among boys, as at the girls. 2. The results of research showed that the combination of the core curriculum with additional use of physical exercise - jumping into the depth promotes the rise effectiveness of process of physical education and it is an effective means for increasing the level of speed-power of preparedness of children of primary school age. 3. During the period of experiment in control group was found a slight rise of studied indicators. There were insignificant statistical differences.

**References**

**TYPICAL INJURIES AND DISEASES PREVENTION OF FENCERS BY MEANS OF ADAPTIVE STRENGTHENING TRAINING. FIRST RESEARCH PHASE: COMMON INJURIES AND DISEASES OF THE MUSCULOSKELETAL SYSTEM OF FENCERS**

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Adolescence starts at the age of 12–13. At this time the puberty is accompanied by rapid physical development.
At the age of 7–13 years especially intensively there is a formation of all departments of the locomotors system. Muscles quality change in the process of development of the musculoskeletal system: velocity, force, dexterity and endurance. Their development is characterized by the unevenness of development. First, the development of velocity and dexterity of movements is observed. The most considerable rates of increase in indexes of flexibility in the movements made with participation of large links of a body (for example, in limit inclinations of a trunk), are observed, as a rule, up to 13–14 years of age. Then these indexes are stabilized and, lacking the performance of flexibility oriented exercises, start decreasing considerably at the teen age. For this reason we chose fencers from sports groups (12–13 year olds).

The studied problem, particularly in fencing, has revealed its importance. Native and foreign specialized literature review showed that attention paid to the prevention of traumas and diseases of the musculoskeletal system of fencers is quite insufficient. There are some materials which talk about the necessity to perform special exercises for the purpose of injuries and diseases prevention.

Absence of data interrelation between health preventive actions and fencers’ training process for the purpose of training process optimization as well as the influence of preventive actions on efficiency and productivity of training allowed us to consider the chosen research direction urgent and up to date.

Research Object:
Educational and training process of fencers in sports groups.

Research Subject:
Typical traumas preventive methods in fencers’ training process in sports groups.

Working hypothesis:
The assumed preventive methods of musculoskeletal system traumas will considerably reduce the number of injuries and improve sports skills.

Supposed solutions to a problem:
To define general injury causes based on the specifics of the activity.
To develop, to prove and introduce in educational and training process of fencers of 12–13 years (sports groups) adaptive strengthening training and specialized exercises for strengthening of the musculoskeletal system, as additional factors of training process, in combination with other physical exercises for increase of special physical readiness, prevention of injuries, traumatism reduction and, as a whole, encouraging skills mastering and sports longevity.

The purpose of the study:
To develop common injuries preventing methods for training process of fencers.

Research problems:
1. To study and review scientific and methodical literature.
2. To define common injuries major etiological and risk factors of young fencers.
3. To develop preventive methods by means of adaptive strengthening training and specialized exercises for strengthening of the musculoskeletal system during the training process of the young fencers, sports injuries reduction and encouraging skills mastering.

4. To estimate the efficiency of the developed methods on the basis of the obtained information.

   Research methods:
   1. Analysis and synthesis of data of special scientific and methodical literature.
   2. Pedagogical supervision.
   3. Pedagogical experiment.
   4. Control and pedagogical tests.
   5. Methods of mathematical statistics.

   Prospective research organization. The study has been carried out since November 2012 at the Department of Sports Medicine (Moscow State Academy of Physical Education), the Moscow Research Center for Medical Rehabilitation and Recovery and Sports Medicine Department of Health in Moscow.

   Assumed contribution to the theory and practice of physical training, sports training, health and adaptive physical education:

   Results of research can be used by fencing trainers of sports schools, in teaching therapeutic gymnastics as a discipline, the results obtained can be used to prepare instructors of therapeutic gymnastics.

   The first phase of the research. Common injuries of fencers.

   At the first stage of the research 143 literary sources have been analyzed. 46 coaches from across the country (Moscow, Odintsovo, Lobnya, Ufa, St. Petersburg, Novosibirsk, Vladikavkaz) have participated in a scientific survey. In addition, 137 medical cards of fencers of different qualifications groups (ranging from training groups up to the members of the national Russian team) of different ages, gender and weapons practiced have been checked. After processing the data, we found that among the most common injuries of the musculoskeletal system of fencers are meniscus lens, capsular ligament and lateral ligamentous apparatus of the knee joint, which constitute more than 34%, other injuries of various locations – 19.1% and muscle damage – 28.6%. Just often occurs sprains, subluxations and joint sprains (generally ankle, wrist and elbow joints) – 14.3%

   Among the chronic diseases of the musculoskeletal system of fencers are the most common spinal osteochondrosis and scoliosis. They make 32.4% out of all pathology. Also found protrusion and disk herniation (4.2%). Followed by chronic 0020 diseases of bone and periosteum (epicondylitis condyle of the humerus, and periostitis periosteopatii tibia) – 11.7%, the patellar tendon disease (tendinopathy) – 11.3%, tendon disease (chronic paratenonit Achilles tendon) – 6.3%, diseases of the joints (arthritis) – 14.9%, bursitis joints – 5.8%.

   Based on these data, we identified the most commonly injured locations of the musculoskeletal system of fencers. They are back and knee joints. Therefore, we are working on developing adaptive-strengthening exercises to be included later on in the training process of fencers.
Further results of the study will be introduced next year.

**INFORMATION NECESSITIES ANALYSIS AS A WAY OF INFORMATION POTENTIAL DEVELOPMENT (ON THE BASE OF A VIDEOPROJECT)**

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**Introduction.** The problem of the development of student’s information potential in sports higher educational establishments is a very important one. A film can be used in the analysis of the results of learning activity for which scientific data concerning with foreign languages, is being collected, and then it must be specially stated, transformed and spread. This is the key principle for working on video projects. The teacher of English tries to enable his students to think in a more creatively, designing a path for them, which they take and prepare their own project.

Scholars regard a video-based project as a means to neutralize language barriers, a strong motivating factor in language learning as well as a powerful resource of information potential development [3].

According to S. N. Bekasova, the students’ level of information potential is likely to develop quickly because there are many different factors to consider – communicative professional situations, cross-cultural communication peculiarities, nonverbal communication and many others [2].

Purpose of investigation is students’ information potential development with the use of a video project.

20 students were the subjects of investigation (intermediate – upper intermediate English language knowledge). The investigation was based on information necessities questionnaires and video project analysis.

Investigation aims:
– measurement and analysis of students’ information potential level before creating the project;
– analysis of students’ language activities during filming work process;
– measurement and analysis of students’ information potential after the film was created.

The subjects the research (20 students of 2nd, 3rd and 4th years of studying) under the guidance of the chair of foreign languages of Velikie Luki State Academy of Physical Education and Sports took part in the 16th Russian Festival of sports educational establishments (“Lingua” nomination) which was held in September, 2013.

The participation in “Lingua” nomination means presentation of a definite topic in the form of a film project. In the year 2013 the topic of nomination was the 22nd Winter Olympic Games in Sochi. This task demanded a very careful choice of language means, specific lexical units and set expressions. Before working on the
film the volume of subjects’ information necessities was measured and analyzed with the help of a questionnaire [1] and the same procedure was performed after the shooting process was over. The initial measurements showed that at first 40% of the subjects had very little interest in being part of the project, compared to 60% of subjects, very eager to show their artistic abilities and knowledge of English. Working on the film project has also made a significant change in students’ motivation because every day they gradually became more involved into the idea of unity and presenting the topic of volunteering as well as they could. After the working process was finished, we took the second information necessities’ measurement. It showed that the initial ratio has changed the following way – 80% of subjects became more involved in working with English language data, at the same time 20% of subjects showed indifference towards this type of activity.

In the process of professionally-oriented interactive learning a lot of language obstacles are easy to overcome, the atmosphere of cooperation and mutual aid appears, the motivation and readiness to a more profound language learning are being formed, backed up by positive emotions and interest, as considered by Gasparyan L.A. [4]. Having a various didactic potential, the creation of video projects used in a foreign language course within the frames not only of foreign language classes but within the variety of cultural and sports festivals is not only one of the most important means of learning-cognitive activities of students but also the method of students’ independence, creativity, self-actualization development.

Audiovisual information presented in one type of activity is an excellent way for students to be motivated and tuned into voluntary transformation of their own ideas within the frames of a set topic or project, and film creation makes this task quite possible, making students more language-confident, bringing their information potential of an individual to a higher scale which they used to have before taking part in a video project.

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TRAINING PRINCIPLES IN FENCING INITIAL EDUCATION

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Key words: fencing, training principles, education settings, primary specialization.

Introduction. Determining of the blade movement components is important in the training content of novice fencers. It is general practice that children start doing fencing at the age of 9. However, experience shows the interest to fencing of 7-year-old children.

Objective. Definition of basic principles for improvement of the theory and methodology of young fencers.

Object of study. The process of teaching and training children starting practicing fencing.

Subject of study. Content and principles of young fencers training in both primary education and primary specialization.

Objectives of the study:
1. To explore the general principles of training in fencing.
2. To establish principles of fencing training process at the initial stages of training and initial specialization.
3. To formulate training principles of practice in familiarizing with fencing of 7–8 year-old children.

Research methods:
1. Literature survey.
2. Experience generalization.
3. Education observations.

Results.
Fencing training system has been studied by us for 7–8 year-old children. When teaching children the following principles should be observed:
1. Narrowing of technical and fighting components.
2. Limiting the number of situations to prepare offensive and defensive actions.
3. Exclusion of fights with simultaneous attacking attempts.
4. Fighting stance and movement performed with a partner in a half-turn position to him.
5. Face (chin) directed straight towards the opponent.
6. Elbow of the arm with the weapon should not be extended in the outer side of the torso and its projection.
7. Positions and defense should be only upper and direct.

In contrast to the 7–8 year-old children when teaching 9–12 year-old children the following principles should be observed:
1. Limiting the number of observation and tactical analysis points.
2. Simplification of choice in varieties of attack and counter attack.
3. Deliberate decision on attacks launching, the use of maneuvering and use of protective reflex in defensive actions.

4. Specification of basic and alternative actions.

5. Selection of basic actions relevant only to the priority ones in the form of fencing.

**Conclusion.**

Teacher observations and synthesis of coaching practice have made it possible to identify the specific principles of the classes with young fencers aged 7–8 and 9–12. The conducted research has allowed to distinguish between content selection and special training techniques for the two age stages of training.

**CONTENT OF HYDROKINESITHERAPY PROGRAMME FOR PRIMARY SCHOOL CHILDREN WITH COXOFEMORAL JOINT COXARTHROSIS**

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According to Kralina S.E. Kozhevnikova O. V. a coxarthrosis owing to congenital and degenerative dystrophic diseases of a coxofemoral joint develops at 37-85% of patients and occupies the first place among arthroses of other etiology, has the expressed tendency to growth worldwide and makes considerable specific weight in disability structure as a whole.

Unfortunately, as the authors note, the treatment of this disease in children's age has not found a solution.

Due to the stated, our research was aimed at developing the hydrokinesitherapy program of primary school age children with a 2nd degree coxarthrosis.

**Object of research** – hydrokinesitherapy of primary school age children

**Subject of research** — contents of a hydrokinesitherapy program for children with a coxarthrosis.

For realization of the research objective the following tasks were set.

**Tasks:**

1. To analyse existing techniques of coxarthrosis joints mobilization at children's age.

2. To define the contents and to introduce the hydrokinesitherapy program at children with a coxarthrosis.

3. To estimate efficiency of the developed hydrokinesitherapy program

For the solution of objectives the following methods of research were used.

**Anthropometrical methods of research.**

1) goniometry (goniometer of model 01135, Lafayette Instrument Company, USA);

2) change of extremity circumference (a standard technique with the use of a centimeter tape);
3) gait somatoscopy (limping, step length: healthy foot and affected foot);
Pedagogical methods of research.
4 . pedagogical experiment (model of consecutive experiment)
5 . studying of references
Psychological methods of research
6 . the visual analog scale (VAS) of pain assessment at children
Research organization.
  Research was conducted on the basis of Physical Education Health Complex "Brateyevo" of South Administrative Region of Moscow, in three stages.
  Stage II. From September 2013 to December, 2013 — selection of the contingent of children. Program introduction in the conditions of Physical Education Health Complex pool.
  8 girls of the contingent took part in the research, with 2 degree coxarthrosis of coxofemoral joint. At 5 girls (62%) had dextral coxarthrosis and 3 girls sinistral coxarthrosis (38%). All girls possessed initial skills of swimming.
  We developed the hydrokinesitherapy program realized in the conditions of the (not standard) pool, intended for beginner swimmers training, health improving swimming, hydromassage).
  According to the theory and practice of medical physical education the program includes three periods (adaptation-4 weeks), training and corrective – 10 weeks, stabilization - 2 weeks).
  Results of research.
  Introduction of the developed program caused change in all studied indicators.
  Conclusions.
  Application of the developed hydrokinesitherapy program will allow to achieve a certain therapeutic effect which is expressed in dynamics of indicators of applied methods of research.
  Achievement of reliable distinctions demands inclusion in research of a bigger number of examinees and to prolong program application for half a year with obligatory correction of loading. This work demands continuation.
PROBLEM OF INTEGRATION OF PHYSICAL EDUCATION WITH OTHER FORMS AND TYPES OF PEDAGOGICAL ACTIVITY

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Most programs of upbringing and organization of recreation for young people are oriented towards utilization of game competition. As a rule, this type of organization is used in modern sport, for example, and has a negative influence on the personality and social relations, as it develops the desire to win at any cost, even at the cost of one’s health and moral principles; it promoted monodirectional personal development; limits creative abilities, gives rise to manifestations of nationalism; leads to development of such negative personal qualities as selfishness, aggressiveness, envy, etc.; makes social integration of disabled people difficult, as it isolates them from people who do not have such disabilities, etc [1, 2].

Therefore, at present it is important to look for and implement such innovative trends, forms, and methods of work, that both declaratively and objectively contribute to its inclusion into the proclaimed humanitarian ideals and values into the practice of upbringing and organization of recreation for children and young adults.

One of the options for the solution of this problem is offered in the present work. Namely, it is organization and holding of the Spartan Games, which help to develop orientation towards the personal ideal for the youth, which was described and justified by V.I. Stolyarov in 1990 in the new humanitarian project called SpArt [2].

The essence of the project is to develop and implement into practice innovative forms and methods of humanitarian upbringing, invigoration and organization of recreation for various population groups, that presuppose humanization (increase of spiritual and moral orientation) of sport, its integration with art.

These forms and methods are designed to help finding solutions to a number of socio-cultural and pedagogical problems. The main problems are:

– upbringing of a viable personality oriented towards self-development, revealing, development and manifestation of one’s creative abilities;
– sound and proportionate development of external (physical), mental and spiritual (moral and esthetic) qualities, i.e. harmonious development;
– upbringing of a versatile (universally-developed) personality that manifests its creative abilities in various fields;
– patriotic upbringing, exposure to national culture alongside with nurturing of tolerance: respect to values of other cultures, ideologies, and beliefs;
– organization of active creative recreation and socialization with various groups of population;
– drug abuse prevention, as well as prevention of other aspects of deviant behavior in children and young people;
– social rehabilitation and integration of the disabled [2, 3].

In the course of long-term practical realization of the “SpArt” project we utilized a complex of innovative SpArtian forms and methods. At present they are used in the system of upbringing, invigoration and organization of recreation of various groups of population in 20 regions of Russia. The most active and versatile work is carried out in such regions (apart from Moscow) as the Republic of Bashkortostan, Krasnodar and Krasnoyarsk Krai, Kemerovo, Kursk, Nizhny Novgorod, Saratov, Smolensk, Tomsk, Tyumen, and Ulyanovsk regions, the Republic of Sakha (Yakutia).

The system of upbringing and organization of recreation for children and young people based on the deployment of the StArtan games and other SpArtan forms and methods is currently important not only for Russia. A number of factors determine its international importance. First of all, this system reflects the growing tendency of the XXI century civilization not only to proclaim and declare the ideas, ideals, and values of humanism, but also to find ways of their practical realization.

Secondly, SpArtan forms and methods (among them SpArtan Games are of a great importance) are a complex scientifically justified program for realization of goals, ideals, values of humanism in the process of upbringing and organization of recreation for children and youth. Secondly, SpArtan forms and methods are connected with the growing concern of scientists and practical specialists about the low level of physical activity in children and young people in devaluation of moral and other internal values in modern sport (especially in high performance sport). They are meant to assist in the process of raising the level of attractiveness of physical education and sport for children and young people, humanization of sport, activization of sporting and humanitarian upbringing of the young generations that has been going on in the course of the recent decades in a number of the world countries.

Thirdly, SpArtan forms and methods form the scientifically justified methodology of solution for the timely and debatable problem of integration of physical education with other forms and types of pedagogical activity, strengthening of the connection between sport and art in the system of upbringing and organization of recreation for children and young people.

References
SOCIAL, PSYCHOLOGICAL AND PEDAGOGICAL ASPECTS OF
EDUCATION AND ORGANIZATION LEISURE CHILDREN AND YOUTH

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Complicated social and demographic situation, state of health, low level of physical fitness, increase in crime and drug abuse, devaluation of spiritual and moral values in the conditions of modern Russia make the problem of physical, psychological and spiritual health of young people extremely important. Development of ideals, cultural examples and role models that can motivate to achieve, be successful in one’s life and professional career not by any means, but rather by means of moral, cultural, scientific, intellectual, and physical perfection is especially important.

Over the recent years attention of the scientists has been attracted by the problems of recreation for the youth. This is mostly connected with the scale of changes this sphere of life is characterized by. It has become possible to talk about the growing role of recreation for children and young people, and as a consequence, about the increase of its influence on the process of socialization of the young generation.

The process of upbringing as well as the sphere of recreation, leisure and free time that includes individual or organized forms of activity (leisure, entertainment, socialization with other people, self-development, etc.) that a person carries out according to his/her personal will after having fulfilled his/her professional and social duties are of significant importance for personal participation in social experience, creation of ideals and cultural values.

Recreation can positively affect all spheres of human activity and contains significant educational potential. The nature of this sphere of human activity’s influence on the personality and relationships with other people is essentially dependant on the type of things a person does during his/her free time.

Recreation marked by relatively low culture of its employment (spontaneity of its course, consumer attitude, prestigiously-conformist motivation, etc.) can prevent from the expected recovery of energy, spiritual, cultural, and physical development, reviviscence of creativity, and, moreover, turn into the criminogenic social factor [1].

Analysis of forms of recreation preferred by young people shows that “over the recent years in Russia not much attention has been paid to educational aspects of recreation, which leads to spreading of spontaneity of spending free time… Due to the structure of recreational activity, productive and substantial forms of recreation are gradually disappearing. They are replaced with the types of activity oriented towards joint spending of free time, conformism, behavioral ostentation, and aggressiveness” [3, C. 97-98].
Infantile attitudes, pleasure, spending nice time and entertaining oneself have become young people’s priorities. These priorities very often contradict the norms of morality, esthetics, and culture of truly human communication. Passive recreation that negatively influences physical fitness of a person is becoming more widespread, mostly because of television and computer games. Preference to certain types of activity that involve either purely physical, or creative (technical, etc.) ability become prevalent. Therefore, people tend to be drawn to a certain specialization. Naturally, it discourages realization of the humanitarian ideal of the comprehensive personal development in the sphere of recreation.

The important question one has to ask is how to provide young people’s recreation with humanitarian focus, i.e. to fill it with activities and organize it in the way that it provides not only interesting and entertaining leisure time, but also contributes to physical, mental, spiritual and moral perfection, harmonious versatile development [2].

This does not mean that certain ideals, cultural standards, or models of behavior should be enforced. We mean providing conditions where children and young people realize the attractiveness of socially significant ideals and forms of behavior for themselves, have an opportunity to “try them on”, evaluate them and if they want to, they can take active measures to adopt them further on based on self-realization and self-development.

Researchers of modern problems of upbringing and organization of recreation for young people tend to link it to reconsideration of major goal forming elements, re-evaluation of values, search for new prominent features of the youth policy. Nevertheless, we are faced with the crucial problem of the necessity of the new content, as well as new forms and methods of work with the youth. First of all, we are talking about getting young people interested, making them active partners of social and pedagogical activity, subjects of development of their personal individuality. The program and means that young people recognize and that spark their interest can serve as an impulse that motivates young people to cooperate in terms of this problem’s solution.

Effect and social importance of this type of social and pedagogical activity concerned with upbringing and organization of recreation of young students greatly depends on the type of ideals, cultural standards, and models of behavior that are utilized, as well as the forms, methods and means that are used.

References
FORMATION OF A SPORTS HERO CULT

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**Actuality.** The concept of an idol in the modern world is more topical than ever. XXII Olympic winter games took place in Sochi, victorious volleys in the honor of the heroes died down, but there is still a desire to analyse such a contradictory phenomenon as a cult of a sports hero, forged during the Olympic. The features of a cult of the sports heroes will be considered in this report.

Any person always tries to achieve a success in his kind of activity. But it is not always possible, so here the ideal images of successful people come, worthy of admiration and imitation. Athletes like no other fit this category, as sport is a perfect field for the manifestation of the power, will and character. An athlete by his example teaches us not to give up, fight till the end and achieve our goals. Nowadays people are more and more eager to look like their idols, and see a role model in them. Why this happens?

First of all, many people often need to see the example of a bright and unusual person, capable of leading and proving that anything is possible. Secondly, it is human nature to project themselves, their successes and failures on an object of their adoration. And here athlete acts as an embodiment of fans’ expectations. The failure of an athlete is perceived as a personal fans’ failure; and the victory – as a personal fans’ triumph and commitment to the winning event. Often the admiration of an athlete leads to the frantic fanaticism, absolute idealization, which could be a source of aggression and deformation of human mental conditions. Often, in different situations, illusions crumble, and there stands an earthly figure of an athlete with his own human weaknesses. Any cult, as any phenomenon of the reality, has its own positive and negative sides, it is impossible to judge clearly about it just from the one angle of view. The cult could have both creative and destructive sides, forming the personality of man, setting up the values and shaping his behavior.

**Purpose:** analyse the process of formation of a sports hero cult and compare religious cult with a cult of a sports hero.

**Research methods:** qualitative and quantitative analysis of theoretical sources, materials of the Internet, newspaper publications, a comparative analysis of materials.

**MAIN TERMS:**

- **Cult**
  - in religion: the service to the deity and rites connected with it
  - in a figurative sense: the worship before someone or something, veneration of someone or something

Cult is embodied in ritual and ceremony.

**Cult image (or idol)** is a human-made object that is venerated for the deity, spirit or daemon that it embodies or represents.
Sacralization – is a transformation into sacred, the endowment of the objects and events of the outside world, mental images, scripts, non-verbal symbols, actions, words with sacred meaning, providing the formation of the primitive populations rudimentry, the most ancient forms of conscious understanding of the world. The origins of the sacralization root in faith in the supernatural.

Hero - refers to characters who, in the face of danger and adversity or from a position of weakness, display courage and the will for self-sacrifice—that is, heroism—for some greater good of all humanity. This definition originally referred to martial courage or excellence but extended to more general moral excellence.

Hero cults were one of the most distinctive features of ancient Greek religion. In Homeric Greek, "hero" refers to a man who was fighting on either side during the Trojan War. By the historical period, however, the word came to mean specifically a dead man, venerated and propitiated at his tomb or at a designated shrine, because his fame during life or unusual manner of death gave him power to support and protect the living. A hero was more than human but less than a god, and various kinds of supernatural figures came to be assimilated to the class of heroes; the distinction between a hero and a god was less than certain, especially in the case of Heracles, the most prominent, but a typical hero.

A culture hero is a mythological hero specific to some group (cultural, ethnic, religious, etc.) who changes the world through invention or discovery. A typical culture hero might be credited as the discoverer of fire, or agriculture, songs, tradition, law or religion, and is usually the most important legendary figure of a people, sometimes as the founder of its ruling dynasty.

The basic elements of religious cult are the soul, the spirit (life force); the spirit as the source of knowledge); spirits, angels and demons; miracles; the Messiah; the crucifixion of the Messiah (in Christianity); the prophets, speaking from God; the Holy books; God is the Creator and the Almighty.

Let’s draw a comparison. For any fan his sportsman-idol is some kind of deity, whom he praises to, and whom he gives all power, emotions and feelings. The sportsman is the Creator, sometimes "the healer of human soul". We could see a clear parallel with the religious cult, which gives us a basis to believe that sports event has signs of sacred ritual. We go further. God tends to work miracles. A miracle, something supernatural, is one of the most important components of religion. The athlete also makes wonders. His "miracles" are expressed in sports records, overcoming extreme physical exertion. Washer, abandoned at the last minute of hockey match ( in the case of a draw the account or in the case when abandoned washer helped to level the score), is regarded as the action of supernatural powers, entering fans into ecstasy, making them pay to their favorite athlete (the group of athletes) honors. In this case it is possible to draw an analogy with religious prayer. Sometimes unconscious fan’s exhortations and prayers in the athletes’ address can be considered as the most important moment of the ecstatic adoration and worship, cry for help and support. A personal and intimate moment of communication with fan’s "God." Fan chants, addressed to teams and individual athletes carry a powerful unifying supply, some kind of a group prayer, giving a tremendous energy and
possessing a creative force that changes the morale state and attitude of both fans and athletes, as well as allowing to set the similarity feedback: "crying out" - the ritual praise - sports result. We can consider Sports arenas, stadiums as a "temple, shrine", where any fan comes to "communicate" with his idol, to support him. Just as people attend Churches of religious, to facilitate their soul, repent of all sins and acquire an enlightenment; so the fans come to the stadium in order to relieve from emotional tension, get positive emotions, to get rid of burden of everyday worries. Sports merchandise can be also attributed to religious subjects, accompanying the worship of the idol. It gives a feeling of a single whole with the idol, allows to become a part of a single action, helps to become closer to the athlete. We can say that thereby fans send a strong message to the athlete, talking about their belonging to the same case, to a victory or defeat. The athlete sometimes is perceived as a "martyr", sacrificing everything for the sake of victory, entirely devoted to sports ideals and fighting for them until the end. Lots of songs and hymns are written in the honor of sportsmen. And this creative work also carries a sacred burden, allowing us to talk about identity of religious and sports cult. It's some kind of ritual actions, serving as an important link in communication between the fan and the athlete. Pagan prayers about the harvest assimilate with different kinds of actions like the prayers and spells of the victory addressed to the athletes by fans. It’s possible to refer the sports arenas to the likeness of a sacrificial altar. What does athlete sacrifice for the sake of victory? Actually, almost everything. He often will deprive himself of the usual pleasures of an earthly man, donating his health, time and nerves. But this sacrifice is justified by the further triumph. Fan also brings some kind of certain sacrifices to his "sports deity" – his personal time, emotions, finally, money spent for sports attribute, tickets. And athletes always try to give an answer and some kind of feedback such as victory.

**Conclusion:** fans tend to create myths about their favorite athlete, they believe in. People unconsciously, instinctively create the image of the hero, who becomes the standard of behavior, and sometimes life. The human race has been always having a faith in something mysterious. So the athlete becomes the chosen one, sent to carry out his mission.

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Actuality. Hosting the XXII Olympic Winter Games in 2014 in the resort city Sochi made big impact on development of social and economical sphere of Krasnodar region, the main influence was made to host city - Sochi.

Purpose of research- is to identify the influence of the XXII Olympic Winter Games in Sochion the development and growth of the social and economic sphere of Krasnodar Region during the Olympic business cycle.

To achieve the above goals we set and solved the following problems:

1. Explored Olympic business cycle of the XXII Olympic Winter Games in Sochi;
2. Studied influence of the XXII Olympic Winter Games in Sochi on the social and economical development of the Krasnodar Region and Sochi.

XXII Olympic Winter Games in Sochi was an object of study. The subject of research is the impact of the XXII Olympic Winter Games in Sochi on the social and economical development of the hosting city and the Krasnodar region as a whole during the Olympic business cycle.

Hypothesis is the assumption that hosting of the XXII Olympic Winter Games of 2014 had a significant impact on the social and economic development of the Sochi and Krasnodar region.

Scientific novelty of the research is a comprehensive assessment of the world experience of Olympic Winter Games impact on social and economical development of the venue, as well as an analysis of the impact on the Sochi and Krasnodar region on the basis of the XXII Olympic Winter Games.
To analyze the impact of Sochi Olympics let’s describe what is the Olympic business cycle first. Olympic business cycle - a period of time between the decision of the city to fight for the right of hosting the Olympic Games and the moment of economic decline in the region after the Games. Usually 3 stages are isolated: 1) Pre-Olympic stage (sub step participation in the struggle for the right of hosting the Olympic Games and substep preparation for the Olympic Games); 2) Stage of the Olympic Games and 3) Post-Olympic stage.

Social and economic factors give an overall assessment of the social and economical structure. The main factors acting in this system are: own resource potential of the region (labor, natural, manufacturing, financial resources) and attracted to the region resources (usually in form of investments and centralized capital investments), and the actual processes of social production.

Investments in the economy of Krasnodar region for Olympic business cycle per capita exceeded the average. In 2012, the difference was more than 1.7 times: 150,312 in the Krasnodar region against 87,770 on average in Russia (see table 1).

Thus, the volume of investment in fixed assets per capita region has moved from 27th place in the rating of Russian regions in 2005 on the 11th - in 2011 Inflows identified priority development of the construction industry, which largely contributed to a change in employment.

| Main economic indicators of Russia, Southern Federal District and Krasnodar region (2012 vs 2005) |
|--------------------------------------------------|-------------------------------------------------|-------------------------------------------------|
| Krasnodar Region | Southern Federal District | Russia |
| Capital Investments per capita, RUB (Rank) | 22,236 | 150,312 | 17,692 | 88,666 | 25,161 | 77 |
| Unemployment (%) | 7.4 | 5.6 | 8.4 | 6.2 | 7.1 | 5 |
| Income per capita, RUB | 5,545 | 21,077 | 5,757 | 18,603 | 8,088 | 23 |

Source: created by authors on Goskomstat data (www.gks.ru)

Volumes of investment in fixed assets in Sochi above regional index by 3.3 times. The growth rate of investment in the Sochi economy exceeded the average rates between South area by 65.3%, while the share of investment in the economy of Sochi in the total value of investments of the Krasnodar region has grown steadily.

After the occurrence of stage of preparation and hosting of the Olympic Winter Games in Sochi (2007) unemployment in the Krasnodar region has declined significantly and was lower as a nationwide level and mid-level in Southern Federal District.

As a result the dynamics of gross regional product (GRP) of Krasnodar Region in 2005 was characterized by accelerated growth with some reduction in the
peak of the crisis in 2008 and then returned to the uptrend line in 2010 (see figure 1). During the period 2005–2011 the effect of the influx of Olympic investments is most clearly manifested at the regional level of the budget, acting as one of the factors of stable annual growth rate (average for the period - about 10–15%) of budget revenues Krasnodar region, which helps to mitigate revenue decline during the crisis.

Figure 1. Gross regional product index growth (2006=100)

Source: created by authors on Goskomstat data (www.gks.ru)

Since the beginning of the Olympic business cycle the number of children's health institutions in the Krasnodar region is higher than the region as a whole and increases at a faster pace of growth than in other regions of the Southern Federal District.

The results confirm the hypothesis, research of the Sochi Olympic business cycle revealed that hosting of the XXII Olympic Winter Games in Sochi, have made positive impact on the development of the socio-economic sphere as the city of Sochi and the entire Krasnodar region. OWG influence affected the main social and economical indicators in the region.

Despite the fact that the approximate costs may seem huge, they represent a relatively modest 2.4% of annual GDP, Russia (which now exceeds $ 2 trillion per year) itself will not have a significant impact on public finances or Russia’s debts.

GENDER EDUCATION BASIS IN PHYSICAL TRAINING

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Theoty and method of physical education and sport

One of the main direction of sport development ways on modern lap is formation of new scientific knowledge branch about children education and
upbringing of the different sex - gender upbringing. The subject of gender research is a correction process of growing generation socialization according to sex in epoch of the global social- economical and cultural transformation.

Gender features of athletes influence efficiency of communication not only in team, but also direct communication between the coach and the athlete. Social and psychological interaction peculiarities of trainers and athletes, cause efficiency of educational - training process.

Personal self-determination in sports as a resultant factor of development of its values assumes subject position existence of athlete in educational - training activity. Attitude to activity, choice of aims, ability to understand yourself and others, to set the tasks, purposefully and effectively to work according to them are of particular importance.

Defining role in a context of our research plays young athletes knowledge formation about contents and feature of the concept "gender", children formation of moving skills and facilities according to specifics and tasks of gender education.

An important role in the pressing problems solution of athletes gender education at a stage of initial preparation plays educational - training classes in sports which at improvement of quality, efficiency and availability of sports education, changes in the program material maintenance on physical culture in Children's and Youth Sports Schools, the organization educational process, differentiation and an choice individualization of means and methods of education and upbringing more to consider pupils' interests, tendencies and abilities of a different sex, as a whole stimulates each personality on purposeful increase of health and physical preparation level in a context of gender socialization of pupils.

On the basis of the carried-out scientific researches analysis in the area of gender education it was established that gender identity represents basic social identity structure which characterizes the person from the point of view of his belonging to male or female group, thus the most significant is how the person categorizes him/herself. In scientific literature gender socialization considered as process of assimilation of norms, rules of behavior as installations according to cultural ideas of a role, state and mission of the man and the woman in society, happens by means of imitation and identification mechanisms to parents of own sex.

The gender relations in modern science are considered as realized in society at different levels:

- microsocial, presented by the public relations and system of gender representations; the mesolevel, concentrating the gender relations between groups of men and women; macrolevel where the gender relations reveal in interpersonal contacts between representatives of different sex and are set by gender installations; individual that is shown in the form of the self-relation and experience by the identity of own gender identity.

As V. N. Platonov specifies, one of the main system improvement directions of athletes training, is the maximum orientation to individual inclinations and abilities of each specific athlete at a choice of sports specialization, development of
all system of long-term preparation, definition of competitive activity rational structure.

Sports activity of boys/girls on training always is the general. However, the same activity can make different sense for young athletes of a different sex. Owing to unequal motivation to sports activities children it is formed differently depending on as far as the trainer gives self-realization opportunities through educational activity. Such situation leads to different behavior types of boys and girls on education - training classes.

Communication of the couch with athletes at a stage of initial preparation proceeds in the form of helps during game, instructions, explanations and persuasion during breaks. However it is thus important to choose the right time for this or that form of the intervention. The couch must not only able to communicate with athletes, but also to demand during game of intra-group communication from the athletes (especially if it is the mixed groups).

Experts note that time which is necessary for the warming-up period on training, at children depends on a sex. Girls usually after the beginning of lesson quickly get an optimum level of working capacity.

Especially sad phenomenons in formation of masculinity models are combat sections. So, the conducted research, showed that among young athletes by types of single combats the vast majority (85%) is made by boys. And the girls who have got to this category, differed from others rather traditionally man's qualities while the qualities characterizing intelligence or social activity, practically weren't presented.

It is necessary to focus the program and methods technique on concrete group of boys/girls so that it was possible to show as much as possible their opportunities, to lean on type of thinking peculiar to them.

**MIXED SINGLE COMBATS IN RUSSIA HISTORY AND DEVELOPMENT**

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Nowadays mixed martial arts (MMA) are getting more popular in both Russia and the whole world. In spite of its short history (about 20 years) and in the connection with the attack on this sport as “bloody slaughter” the organizers have introduced some additional restrictions to increase the safety of athletes and attract more spectators. Modern MMA are one of the most rapidly developing sport single combats. The rating indices of fights TV broadcasting, growth of athletes number who practice this sport, increase of sales of goods connecting with MMA – all that prove it.

This research represents a short historical analysis of MMA origin and development in Russia.
The aim of the research is to reveal the historical aspects that influenced upon MMA development in Russia. The task of the research is to conduct the analysis of conditions and prerequisites of MMA origin on the territory of Russia. The main prerequisite of the origin of modern MMA was the idea of revealing the representative of the best school of single combats and thereafter the most efficient single combat. [1]

As far back as the ancient Greeks introduced a kind that was included into the Olympic Games programme and called *pankration* where practically any impact and wrestling technique both in standing and parterre were allowed. Within the time when the sport movement in 19th – beginning of 20th century was reviving in some countries (Germany, England, USA) peculiar “cross-matches” were popular – the world champion in boxing vs the world champion in wrestling. Modern competitions in mixed single combats were named “fights without rules”. In fact the competitions had clear rules. The interest to those combats was rousing first of all by an intrigue of revelation of the strongest athlete from various single combat schools according the rules with minimal restrictions.

The assessment of technical actions (strokes, throws, holds) were absent in the rules. The victory was awarded when one athlete gave up or was unable to continue the fight, after knock out or injury. The athletes’ uniform was no more than shorts or tracksuit trousers, sometimes thin gloves were allowed. The protection equipping consisted of an athletic supporter and a gum shield. Fights were held on a special ground with soft cover bordered with a metal net or ropes (ring, polygon). A judge (referee) presence was compulsory in the fight zone. He could interfere into the fight if necessary and stop it if there was a danger of a serious injury for one of the athletes.

After USSR collapse MMA development in Russia and CIS states was of a chaotic character and in general showed itself in the form of separate tournaments or just fights without a tournament scale that started to be held from the mid 1990s. Because of the absence of structures regulating the rules, medical provision and conditions for fights holding the level of competitions depended only on the sponsors’ desire to invest money to fights. That often led to holding fights in very bad conditions. Athletes fought on the unequipped circus arenas practically without protecting equipping. It was then when the peculiar folk name “fights without rules” was fixed. Of course this name is not quite right. Within the time even the organizers realized the “black PR” of such a name and changed it for more harmonious “pankration” or “mixed style”. At that time International Absolute Fighting Council was established. It held its first tournament in 1995. This date can be conditionally considered the beginning of “fights without rules” history in Russia and CIS. The Council was headed by a producer and promoter Georgy Kobylyansky and a stunt man Alexander Inshakov. By the number of championships held and by spectacular impression «IAFC» was an indisputable leader on the post Soviet space [2].

A considerable improvement into MMA development in Russia was brought by the appearance on the Russian market fight shows of Japanese organization
"RINGS" which made available the access of Russian athletes to the world arena where they did their best. It is remarkable that the champions of that time became namely the representatives of Russian school of sambo Magomedkhan Gamzatkhanov (Wolf Khan), Mikhail Ilyukhin, Nikolai Zuev and other. It is then that "RINGS" gave a stert to Fedor Yemelyanenko, 4 times world champion in combat sambo, many times MMA world champion according to various organizations versions. His victories in "RINGS" and later in the most prestigious versions of “fights without rules” – Japanese "PPJDE" were interrupted by the purchase of the athlete by Fertitta brothers, the owners of American ZUFFA corporation. They own the rights for holding tournaments according to the American version of MMA - "UFC" [2].

In Russia the situation is cardinally different especially because of the absence of adequate cover of mixed single combats by media and of general opinion of many people that MMA is a bloody sport.

The state also doesn’t finance this sport and thus its evolution is taking place due to the efforts of a few enthusiasts.

In 1997 a promoter Vadim Finkelstein created a fight club in St.-Petersburg called "Red Devil". Soon after its creation the club was registered in IMA registries i.e. it became a full and official member of Mix-fight International Association.

A bit later St.-Petersburg Federation of mixed single combats patented a prefix name М1. So Russia has got its own “fights without rules“ professional league - "Mix-fight - М1" that gave a appreciable impulse to many Russian fighters careers development.

In 2001 М-1 first used quite popular nowadays “Russia vs World” format. The Ukrainian and Byelorussian club leagues were established at that time.

Kamil Gadzhiev created in 2010 a Russian promoter company "FIGHT NIGHTS" which held its first combat show called “Moscow Battle” that combined fights according to the rules of MMA, K-1 and professional combat sambo.

In spite of many short-lived companies "FIGHT NIGHTS" not only stopped its activity but increased its level from tournament to tournament opening to the single combats world new bright stars from Russia and bringing to Russia legendary foreign athletes.

In 2012 a “Union of Russian MMA” headed by Fedor Yemelyanenko was established. It held the first in Russia history amateur championship. The peculiarity of the tournament were the two round fights and some restrictions and additions to the rules namely for amateurs. A protective equipping was introduced.

In 2013 the first European championship was held in Kiev where the Russian athletes gained a successful victory.

The key event for MMA development in Russia was the fact of recognition MMA as a sport, getting federation accreditation from the Ministry of Sport and creation of prerequisites for standardization and regulation of MMA industry on the state level.
Today one can declare with confidence that Russian MMA is on its peak. Many fighting clubs have brought up and promoted some generations of experienced athletes who occupy the top lines not only in Russian but also in the world ratings.

Conclusions
1. Aspiration for revelation of the best and the most efficient single combat according to average rules with minimal restrictions led to creation of a new sport – MMA that is getting more and more popular in Russia. That has changed the concept of preparing highly skilled athletes.
2. Analysis of world athletes’ ratings and fight results on the international arena within the whole MMA history shows the successfulness of Russian sambo school representatives that is undoubtedly testifies the sambo efficiency as the universal fighters preparation system.

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VALUE ORIENTATIONS OF OPTIMISTS AND PESSIMISTS

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Introduction. The major characteristic of the person is orientation defining the purposes which the persons put before themselves, aspirations which are peculiar to the person, motives, according to which he/she operates. The orientation of the person is defined by ideals, belief and the valuable orientations promoting of the formation of outlook of the person. Studying of one of components of an orientation and outlook of the person - valuable orientations - allows to reveal the origin and development of vital perspectives of the person, their features at representatives of certain age groups of people.

Despite considerable interest to psychology of optimism-pessimism and value orientations of the person in the western psychology and their big practical importance, in a domestic science it is obviously paid insufficient attention to.

The work purpose was to study value orientations of children from unsuccessful families depending on personal optimism or pessimism.

Methods:
1) a technique «Valuable orientations» (M. Rokich);
2) a technique "Optimist-pessimist" (Obozov N.N).
The research organization was carried in May 2013. The participants of the study were the pupils of 10-11 forms of the school orphans and children who have remained without care of parents. 27 pupils took part in the study.

**Results.** According to the results of the technique "Optimist-pessimist" by Obozov N.N. it was revealed, that there were 29 % of pessimists and 71 % of optimists in the group.

The technique «Valuable orientations» (M.Rokich) helped to define what of values are the most preferable both to optimists, and to pessimists are.

The comparative analysis of the differences in the choice of vital values between optimists and pessimists was carried out. It was revealed, that the greatest importance for optimists are such values as health, development, good and true friends, good breeding, erudition and responsibility. For pessimists the most valuable are happy home life, health, beauty of the nature and art, erudition, cheerfulness and independence. The results of analysis showed that such values as happy home life, independence, firm will and tolerance differ most all with optimists and pessimists at a choice. Happy home life and independence are much value for the pessimists, and firm will and tolerance - for optimists.

Optimism is confidence in the best future. Optimism asserts, that the world is remarkable, from any situation there is an exit, and all people in general good. The cheerful attitude is peculiar to optimists. They are full of belief in the future, and to see a lot of kind ad good things.

On the contrary, pessimism is negative outlook on life. The negative, suspicious relation to the world, often decadent their mood is a peculiarity of pessimists.

**Conclusion.** The results of analysis showed that there was a significant difference in the choice of values depending on whether the person optimist or pessimist is.

**METHOD OF COMPLEX ASSESSMENT OF THE FUNCTIONAL STATE OF TRACK AND FIELD MIDDLE DISTANCE RUNNERS**

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**Relevance.** Modern professional and Olympic sports are characterized with high intensity of physical activity.

In this regard, complex assessment problem of the functional state of athletes is very interesting. Thus, we determined the **purpose** of our research – development
and experimental justification of technique of preparation track and field runners on average distance on basis of the complex assessment of the functional state.

**Research organization.** The research was conducted on the basis of laboratory Naberezhnye Chelny branch Federal State Educational Institution Povolzhskaya Region State Academy of Physical Culture, Sport and Tourism. Runners on average distance 30 people (15 athletes are in the control group and experimental group) took part in this research.

The research was conducted in 3 stages. For definition the functional state of the athletes we used several methods and means: the Test PWC170, test «Reaction to a moving object» (RMO), heart rate variability (HRV), S.A. Dushanin’s method, the method of polimiografy.

We conducted mathematics and statistical analysis of the data.

**Results.** The complex diagnostics of the functional state of the runners on average distance has been conducted in the first stage of our research and we defined the source data. Total 34 parameters.

Identified indicators allowed conducting a correlation analysis of the obtained data. Analysis helped us to establish significant correlation between the registered data in the research period. However, this action is represent complexity for analyze large number of indicators. It is necessary to select the major components, which influence to studied object, in this case, the functional state. Methods of factor (component) analysis decide this problem. Factor analysis allowed selecting five components, which characterize the structure of the functional state of the athletes. Amount of contributions in all components was 65,29%, the proportion of unaccounted factor was 34,71%.

The I structural component of the functional state was interpreted as "functional productivity" by us (the proportion of the total variance accounted 19,23%). It includes some indicators of physical working capacity (absolute and relative indicators of PWC170), maximum oxygen consumption (MOC), parameter VLF and with a lower load factor accuracy of RMO, FSnms.

The II structural component connected indicators of HR, tendency of RMO to lag, variation range. Indicators of parasympathetic autonomic nervous system (%HF), stress index (SI) and with and a negative correlation entered indicators of running for 1500 m and ten jumping were in this group with a smaller factorial loading. This component can be interpreted as the "economization of recovery processes."

The III structural component of the functional state (weight factor 12,35%) was named" as the indicators of central regulation". It united indicators in running for 800 m, indicators TP (total spectral power), with a negative correlation entered power of glycolytic source of energy supply (PGL), long jump with space and the functional state of the central nervous system (FScns).

The IV structural component (11,14%) is "efficiency of metabolic processes" against weak loads attract attention off actor loadings overall metabolic capacity, aerobic metabolic capacity, power of creatine phosphate source of energy supply, power of aerobic source of energy supply, HR  on the threshold level of anaerobic metabolism.
The V component of the structural functional state is "the functional state of the neuromuscular system" has a share of total dispersion 9.07%. The largest factor loadings indicators entering speed arbitrary intension of relative, the functional state of the muscles in the component.

Allocated components describe the significance of physiological systems and make the largest contribution to the change in functional state. Conducted factor analysis allow estimate the functional state in summary form, structural indicators which are average statistical. Owing to it, we have developed estimation scale for every indicators, which is entered into the structure component analysis. For construction a 10-point estimation scale, we used the scale intervals. Proceeding from this, it is possible to calculate the total score of indicators group and its arithmetic mean value, which characterizes every component.

Thus, the complex assessment method includes a comprehensive diagnosis of functional state of the athlete, revealing its most significant components, also the estimation of the functional state of every indicator scale, which enters into the structure of the factorial analysis. It is allowed to compare mean group model values and factual values of the level of development of the structure of the runner’s functional state.

TECHNOLOGIES OF PREPARATION OF RACING SKIS FOR IMPROVEMENT OF SLIDING TAKING INTO ACCOUNT WEATHER CONDITIONS

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Introduction. In skiing as in any other sport not only high-level training of athletes is important but also the preparation of skiing equipment – skis, suites, ski poles, and other outfit. And skis preparation has key importance because there are a lot of factors that influence it, for e.g., weather conditions, ski greasings applied to skis, the parameters of height and weight of athletes.

The aim of investigation:
– the analysis of variants of preparation of racing skis with a various polyethylene covering (considering the selection of skis for a certain athlete with their subsequent preparation for classical and skating stride styles of movement);
– development of detailed recommendations for practical use of available means and ski greasings by skis preparation.

Methods of investigation:
– literature analysis;
– questioning (after the ointments for skis were tested in practice);
– research experiment.
During the analysis of the scientifically-methodical literature and practical approbation of skis of different firms it was revealed that it was necessary to consider the following statements for coaches and athletes:

– the conformity of skis on rigidity of the base plate of a ski to the athlete’s weight, this requirement should be fulfilled at the stand or considering the weight of an athlete itself;

– the characteristics of sliding plastic on the skis chosen (now there are more than one hundred kinds of covering available);

– temperature mode of sliding covering recommended for corresponding weather conditions [1];

– the necessity to have several pairs of skis with different rigidity degrees of toe and calcaneal parts of a ski. That will be used for various snow structure and ski track condition.

In practical activities, having such characteristics for skis choice sliding improvement can be reached with the use of machine processing (steinschliff – structure drawing on a sliding surface processed by a machine), and also manually using milling tools of different firms. All the machines of the kind provide polishing and drawing of structures for the improvement of sliding taking into account the structure of snow and air temperature [4].

In the absence of machining of a sliding surface we applied milling tools (adaptations in which rotary rollers various in structure are inserted). For approbation we used the standard breadboard models of skis on which we put various structures with milling tools in the preliminary preparation of a breadboard model of a ski by sliding lubricant means. Then the best variants were put on racing skis (two or three pairs, as a rule). The sportsman himself rolled away the prepared skis and chose the best pair according to the distance and acceleration. The researches took place in precompetitive and competitive micro cycles at the place of calendar starts in Northwest Federal District (ski tracks of Murmansk, Petrozavodsk, Ostrov, Velikie Luki, Zapadnaya Dvina).

During the research process the following conclusions were made:

– senior category sportsmen should have skis for warm and cold weather conditions, two or three pairs for both movement styles (classical and skating stride one), skis with different degree of rigidity of base plate, as well as of tip and calcaneal parts of a ski;

– the pair of skis should correspond to the weight-height parameters of an athlete;

– the structures used for drawing with milling stones at correct drawing give improvement in sliding;

– for competitions in different regions it is desirable to have lubricants taking into account climatic conditions where they provide good sliding.

References
If you are interested in sports medicine and health care, kinesiotherapy can be a great lifelong career.

Kinesiotherapy (formally Corrective Therapy) is an allied health profession that has been in existence since 1946. The roots of this profession began during World War II. With the increased survival of troops suffering from illness or injury, there was a great demand to return soldiers to active duty. Corrective physical reconditioning units were established to enhance this process.

Kinesiotherapy today is the assessment and treatment of individuals with disabilities through scientifically based exercise principles adapted to enhance the strength, endurance and mobility. A kinesiotherapist helps people who have limited mobility to increase their functionality. To become a kinesiotherapist, it is necessary to undergo intensive study in kinesiology, which is the science of human movement. Kinesiology, also known as human kinetics, focuses on how the human body moves and functions. This is not to be confused with applied kinesiology, a controversial alternative medicine practice used in chiropractics.

Kinesiotherapy is an allied health career. Allied health professionals are not medical professionals, like doctors or nurses. There is no medical license required to become a kinesiotherapist. Nevertheless, these positions are necessary to keep a healthcare system running smoothly. The allied health professions also include medical assistance and midwives as well as radiologists and pharmacists. Understanding biomechanics, anatomy and physiology are required to become a kinesiotherapist.

Deciding to become a kinesiotherapist means working with the public and applying human kinetics principles to your patients. Most of the work is done in a medical setting, such as a hospital or rehabilitation clinic. Kinesiotherapy treatments might include in-home exercise therapy, driver training and geriatric rehabilitation. Patients who see a kinesiotherapist can only do so after being prescribed the treatment from a qualified medical professional. This usually happens
after that patient has suffered from acute state of illness or injury. Kinesiotherapy patients should be in a medically stable condition and mentally ready to work on regaining lost functionality. Kinesiotherapy patients may include cancer patients in remission, recent amputees or stroke suffers. For example, a kinesiotherapist might treat an elderly man who has lost some function in his right side due to a stroke. Therapy may consists of therapeutic exercise to rebuilt strength or ambulation training to improve walking. On the other hand and amputee may see a kinesiotherapist for training to use his new prosthetic leg.

In many cases, becoming a kinesiotherapist reques a Bachelor’s-level education comparable to a physician therapist or occupational therapist. However, because a kinesiotherapist works under a physician’s guidance to provide care, there is growing need for individuals trained at certification or Associate level.

Regardless of your degree type, your course may include:
- Therapeutic exercise
- Ambulation training
- Geriatric rehabilitation
- Aquatic therapy
- Adapted fitness and conditioning
- Prosthetic rehabilitation
- Psychiatric rehabilitation
- Driver training
- Adapted exercise for the home settings.

Upon completion of your coursework, you will typically need to become registered through the American Kinesiotherapy Association.

Registered kinesiotherapists are employed in Department of Veterans Affairs medical Centres, public and private hospitals, medical fitness facilities, rehabilitation facilities, learning disability centres, schools, colleges and universities, private practice and as an exercise consultants.

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   www.healthcarebuilder/kinesiotherapy
   kinesio-therapy.com

PHOTO AS A DIAGNOSTIC TOOL OF HEMISPEHERIC ASZMMETRZ OF BOXERS

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The research concerns the use of the photo as a mean of psychological influence on the athlete. A photo can be used a mean of information as well as a mean of psychoregulation.

One of the main advantages of photo as a communication tool is its high objectivity.

Moreover, human perception of photos requires much less time than the perception of the text. It is important for quickly change of mental attitude (for example a condition of the athlete immediately before training or competition).

Photography can serve as a mean of creating of the optimal mental attitude of the athlete before competition and training activities. Photographic image can create both positive and negative attitude of an athlete. This significantly affects the activation of the cerebral hemispheres.

The purpose of the research was to find out what impact does the picture on the mental state of the athlete. Boxers saw themselves on photos with different situations of competition.

To fix changes in the mind of the athlete were used:
– lusher test (on the base of which was calculated the vegetative coefficient);
– measurements of biopotenciometry;
– measurements of heart rate;
– measurements of activity of the cerebral hemispheres with the device activaciometr.

The research was in three stages. During the first stage were fixed indicators at the normal state of an athlete. During the second stage were presented the images of different competition’s situations. There were three types of photo situations: neutral situations, exposure to aggression from the opponent and expression of aggression from the subject of the test. Photos were presented in a mixed order. After viewing each photo were realized measurements of activity of the cerebral hemispheres. The criteria for selection of photos in each group were: 1) distance; 2) body posture of boxer; 3) position of strike limbs; 4) mimicry of athletes. During the third stage after viewing all the photos were realized measurements of biopotenciometry and heart rate and was calculated the vegetative coefficient. These indicators were compared with indicators of normal state of the athlete.

The research found that in normal state 64% of boxers have predominance of the right hemisphere activity, despite the fact that all the examinees were right-handed. 27% of boxers have predominance of the left hemisphere activity, 9% have hemispheric balance.

During the photo viewing 63% of boxers reached the hemispheric balance and 27% had no change in hemisphere activity.

At the perception of images with the expression of aggression from the examined boxers 81% had increase of activity of the right hemisphere. Athletes felt good and did not feel the necessity of logical evaluation of the situation. At the perception of images with exposure to aggression from the opponent only 64% had increase of activity of the right hemisphere, 27% had increase of activity of the left hemisphere and 9% had hemispheric balance. The reaction of the left hemisphere
may be caused by the fact that this type of photos caused concern and the necessity think logically visual information. Athletes begin to assess the situation and try to identify the reasons for which they were in a quandary.

**VENTILATORY CONSUMPTION INDEX AND RESPIRATION REACTION DURING CRITICAL STATES OF MUSCLE ACTIVITY IN MIDDLE AND LONG DISTANCE RUNNING**

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**Abstract.** Ventilatory consumption index is closely related to main parameters variation of oxygen demand during muscle activity at maximum power level and maximum duration and could be used for quantification and regulation of workloads [3]. Main factors of aerobic metabolism were determined, which support high level of sport achievements in middle and long distance running. Total increase of respiratory minute volume (VE), maximum oxygen uptake (VO2max), carbon dioxide output (CO2) and tissue oxygen saturation (StO2) – main factors of aerobic metabolism.

**Introduction.** Variation of maximum aerobic capacity was not noticed in scientific studies in last decades [1, 2]. Adaptation capability in increasing maximum aerobic capacity is totally fulfilled. It is suggested, that anaerobic capacity improvement in next 20-30 years leads to performance increase through high efficient training methods. From this point of view carrying out special research, which will be focused on studies of factors, that determine anaerobic capacity of runners, appears important for further training program development.

The **objective** of this study lies in investigation of breathing patterns, ventilatory consumption index and tissue oxygen saturation in exercises of various power level and maximum duration.

**Methods.** Forty athletes (34 men and 6 women), middle and long distance runners, level of sport achievements from 1 senior degree to international level athletes took part in research procedures (table 1).

<table>
<thead>
<tr>
<th>Characteristics of subjects</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Male (n=34)</strong></td>
</tr>
<tr>
<td>Age, years</td>
</tr>
<tr>
<td>Mean</td>
</tr>
<tr>
<td>Mean</td>
</tr>
</tbody>
</table>

59
| Standard deviation | 3.4 | 6.8 | 5.6 | 2.4 | 0.4 | 0.8 |

Each athlete performed 2 running distances from offered range – 200, 400, 600, 1000 and 2000 meters on the track with the race pace [14]. Among that, all athletes passed the standard aerobic and anaerobic tests. Incremental treadmill test was used for VO$_{2\text{max}}$ and peak power definition [4, 8, and 9]. Maximum anaerobic power test and Wingate-test were used for anaerobic alactic-glycolytic power and capacity definition [2, 10, 11, 12, 13, and 15]. Metalyser monitoring system (“Cortex”, Germany) was used for gas volume and inhaled air measurement. Tissue oxygen saturation (StO$_2$) was determined by tissue oxygen saturation monitor (“InSpectra™”, USA). Respiratory minute volume was measured by portable volumeter SV3000 (Russia) [5, 6, and 7].

**Results.** Tissue oxygen saturation and respiratory minute volume dynamics during maximum anaerobic power test showed that the highest values of respiratory minute volume were registered in period of 15-20 seconds after finishing the exercise. Besides, ventilatory debt value increases during recovery after each other repetition of exercise. Tissue oxygen saturation breakdown is registered in first seconds after starting the exercise, and recovery of this index starts rising right after ending the exercise.

Most noticeable changes of tissue oxygen saturation and respiratory minute volume are marked during performing the Wingate-test. Highest values of glycolytic anaerobic capacity were reached compared to maximum anaerobic power test values. Noticed, that the fast recovery of tissue oxygen saturation appeared in first 2 minutes after ending the exercise and stabilization till baseline level - in next 3 minutes of recovery.

Increase of running speed in incremental treadmill test reflects the effective balance between respiratory minute volume ($V_E$) and oxygen consumption ($VO_2$) and remains till reaching the ventilatory threshold point, which is characterized by visible increase of respiratory minute volume ($V_E$) compared to oxygen consumption ($VO_2$).
Field tests assumed that the maximum indexes of ventilatory consumption were registered on 2000 meters distance and equaled 753 liters, value of ventilatory uptake on this distance – 594.9 liters, the highest value of ventilatory debt was noted on 400 meters run – 270.9 liters. Index of ventilatory debt was slightly decreasing with increasing the running distance (fig. 1).

**Conclusion.** Simultaneous registration of ventilatory consumption and tissue oxygen saturation allows us to get an accurate evaluation of anaerobic and aerobic capabilities, and also helps us to get a full picture of athlete’s metabolic condition in exercises on a maximum power and duration.

**References**


CONTEMPORARY TECHNOLOGIES OF BIOMECHANICAL CHARACTERISTICS IMPELLENT ACTION REGISTRATION

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Moscow State Academy of Physical Education

Experimental research in different areas of science have become more and more technically better equipped due to the modern information technologies and technical devices. Researches in the field of sport have been conducted as well.

In many experimental labs of Sports Universities there are devices, transmitters, hardware and software complexes made on the basis of modern technologies investigating motion by photo or video, electromechanical measuring angles in joints, registration of strength applied to the body, movement, velocity and acceleration of apparatus, muscles work registration (electromyography) and so on.

Referring to the sports activities its final outcome is a sports achievement which is the result of long hours of training. A success of fulfilling a motion depends a great deal on understanding the changes in biomechanical characteristics (kinematic, dynamic, energy), which consist of different kinds of data used for the quantitative analysis of biomechanics of impellent activity of a sportsman. In its turn the quantitative indices estimation as a rule is connected to its registration with the use of up-to–date information technologies and technical devices. The purpose of the present work is to present a review of the modern technologies of registration in demand of biomechanical characteristics owing to which a great number of researches are held, doctoral thesis and Ph.D. thesis are defended in the field of physical education and sports.

Dynamometrical hardware and software complex has been widely spread to conduct the analysis of the biomechanical indices developed by AMTI Force Motion Company (figure 1). It serves for physical and technical evaluation of athletes at different stages of physical preparation. That particular complex is able to fulfill the following tasks: quantity and direction of supporting force registration, power of supporting force moment determination while moving in different kinds of sport, aerodynamic center on support alteration of state registration, quantity of impulse supporting force estimation, its capacity and an athlete’s total center of body mass.
Hardware and software complex Muscle Lab developed by Ergo test Innovation (fig.2) is a modular telemetering system, configuration of which is able to change depending on problems set by an investigator. The given complex comprises the following components: electromyography (bioelectrical working muscles potential registration) (Fig.3), electro goniometry (joints angles registration) (Fig.4), accelerometer (acceleration biaxial registration) (Fig.5), dynamometry (maximum power display registration) (Fig.6).
Fig. 2. Hardware and software complex Muscle Lab Ergo test Innovation

Fig. 3, 4. Components of the hardware and software complex: electromyography and electro goniometry

Fig. 5. Accelerometer sensor of the hardware and software complex Muscle Lab
Optic-electronic and dynamometric hardware and software complex “Qualisis”. It serves for performance technique estimation on the basis of building a three-dimensional model of a moving body conducting a mathematical analysis of the basic movements aspects. The given complex can define the main kinematic indices (angles, velocity, joints moments) body motions and total body mass center of an athlete while performing voluntary motions. It comprises the following components: Oqus Camera Series (Fig.7), Passive Markers (Fig.8), software Qualisys Track Manager (Fig.9), Visual 3D (Fig.10) and dynamometrical platforms AMTI (Fig.11).

Fig. 7,8 Oqus Camera Series, Passive Markers

Fig.9, 10. Software complex Qualisys Track Manager, Visual 3D
Some scientists use specialized hardware and software complex V-Scope VS-120 (Fig.12) for impellent motion research during the competitions or training sessions of the weightlifters which allows to measure kinematics of the barbell lifting taking into account additional operation factors to count other kinematics and dynamic parameters such as velocity, acceleration and power.

In conclusion of the review it’s worth mentioning that the use of the modern technologies facilitates greatly the biomechanical parameters of the impellent motion registration. However, lots of scientists have an opinion that in spite of the impellent motion data collection simplified procedure there is a lack of finished computer-based methods in physical education and sport. As a result, there are no computer-based systems offering particular recommendations to improve exercise performance. Thus, while not difficult for researchers to collect the information they need, unfortunately, at the present moment there is no definite on how to process and interpret the information received as applied to physical education and sport.
BIOTYPICAL VALUE APPROACH FOR THE QUALITY OF DANCING PROGRAMS FOR LATIN AND BALLROOM DANCERS

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Zakhar'eva N.N., PhD, DSci, professor

The aim of the research to identify the individual-typological features of the psycho-physiological status, functional status, and regulation of the key elements of the RGDS (heart, blood vessels, breath) at rest and its dynamic changes during functional loads in ballroom dancers of high qualification.

Methods: surveying of coaches, the analysis of training and competitive progress according to athlete registers SAKR - spiroarteri cardiodynamics (spectral analysis of indices of respiration and hemodynamic system). The investigations of ANS cardiohemodynamics conducted in accordance with the recommendations: «Standards of measurement, physiological interpretation and clinical use of heart rate variability, "developed by" Expert Group of European and North American Association of Cardiologists and rhythmologists" in 1996 method of spectral analysis of heart rate variability, blood pressure and respiration.

We analyzed the following parameters: TP(Total Power)- in the spectrum of rhythms of heart rate variability_ADDS - an indicator of heart rate variability in blood pressure; LF/ HF - an indicator of vegetative balance. We investigated loads: wedge - orthostatic test and test with imposed breathing .PWC170- bicycle exercise test; spirometry; stabilometry includes - stability index; percent time spent in the various parts of the target, Psychic and physiological testing: (apparatus Neurosoft), psycho test: taping – test (Ilgin 2008); reaction of a moving object; simple visual-motor reaction; mental working capacity(test URA Sonkin V. Sonkin V.Zaetseva V. 2002). Investigations were held at the chair of physiology of the Russian State University of Physical Education, Sport, Youth and Tourism (SCOLIPE) Moscow since December 2010 till March 2014.

Our results we defined initial autonomic tone in the various parts of RGDS and provided a method of typology autonomous regulation of hemodynamic and respiration of dancers qualifications based on a comprehensive assessment of vegetative tonus of four key elements of RGDS. Regulatory process of RGDS dancers qualifications with different typological characteristics of autonomic regulation characterized by different voltage relationships between regulatory structures RGDS units, ensure coordination of breathing and circulation in dancers with the differences in the regulation of RGDS distinctions of physical performance of coordination properties of the nervous system and psychophysiological characteristics.

We established the relationship between the lf and hf parameters in the regulation of heart rhythm, systolic pressure, diastolic pressure and of the respiration system. In the regulation of the heart rhythm we have more than 50% have normatonic autonomic balance, and by approx. 20% each of vagotonic and sympaticotonic autonomic balance. Further the dynamic changes of the types of
 autonomic balance in the regulation of systolic pressure shows a notable 65% of normatonic autonomic balance, only a 4% of vagotonic and a 30% of sympathicotonic. In the regulation of the diastolic blood pressure we have the dominance of a 95% of sympathicotonic autonomic balance, no vagotonic and a low 4% for normatonic. At last in the regulation of the respiration system we note the dominance over 65% of vagoyonic autonomic pressure, an 8% of sympathicotonic and a 26% of normatonic.

Investigated the structure of the spectra of different rhythms links of RGDS dancers at rest. In the heart rate variability spectrum the different types of athletes have a variant composition of waves. The systolic and diastolic spectrums show normal variation of the waves with a slight intensity of VLF waves. A very interesting position on the spectrum of the respiratory rhythm variability where in normatonic and vagotonic balance we have the HF fast waves dominance as in the sympathicotonic the complete opposite, the domination of Lf slow waves. We came across that the subjective feelings of respiratory failure in normatonic and vagotonic balance is almost at minimum value where in the sympathicotonic in an active 50%! During functional tests we reported that in the lying and standing position the increase of LF slow waves and in the imposed breathing spectrum an acute position of the slow waves in all, normatonic, vagotonic and sympathicotonic autonomic balances. In the parameters of the PWC170 test we have the active result of the vagotonic autonomic balance, second of normatonic and last sympathicotonic. We reported the detailed description of the relationships of the tapping test and data spectral analysis of the dancers, in the tapping test parameters we can take account the domination of normatonic autonomic balance.

Conclusions Highly qualified dancers who have vagotonic type of vegetative balance of the heart rhythms, blood pressure rhythms and respiration rhythms have higher adaptive capacity. These dancers are less susceptible to disruption of the respiratory rhythm while dancing and counter the deterioration of the quality of dance.

THE COMPARISON OF EMOTIONAL INTELLIGENCE LEVEL IN TEAM AND INDIVIDUAL SPORTS

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Velikie Luki state academy of physical education and sport, Russia

Introduction. The emotional intelligence influences on the feelings of happiness and just as much as intellectual ability does. Emotional intelligence helps you build stronger relationships, succeed at work, and achieve your personal goals. The term has become increasingly popular all over the world. Emotional intelligence is the ability to identify, use, understand, and manage emotions in positive ways to
relieve stress, communicate effectively, empathize with others, overcome challenges, and defuse conflict. Emotional intelligence impacts many different aspects of your daily life, such as the way you behave and the way you interact with others. If you have a high level of emotional intelligence you are able to recognize your own emotional status and the emotional statuses of others and communicate with people in a way that attracts them to you. You can use this understanding of emotions to lead a more fulfilling life.

Goleman described five essential elements of emotional intelligence:
- Emotional self-awareness, self-regulation, motivation, empathy, social skills.

It is a well known fact that not the smartest people are the most successful or the most fulfilled in life. We probably know people who are academically brilliant and yet are socially inept and unsuccessful at work or in their personal relationships. Intellectual intelligence or IQ isn’t enough on its own to be successful in life.

Emotional intelligence affects:
- Your performance at work, your physical health, your mental health, your relationships.

The purpose of the present research was a comparison of emotional intelligence of athletes in team sports and individual sports.

Research methods:
- analyses of the literature;
- diagnostic of athletes on the base of the test of Emotional Intelligence Scale by N. Hall;
- diagnostic of athletes on the base of the Bar-On Emotional Quotient Inventory;
- analysis of the test results.

90 athletes were tested, including 30 in an individual sport (IS), 30 in team sport (TS) and 30 non-athletes using the method of Emotional Intelligence Scale (EQ) developed by Dr. Nicholas Hall. This method detects the ability to understand the attitude of personality, which represented in the emotions, and manage the emotional sphere on the base of making decisions.

Here are 30 statements and 5 scales in this method:
- emotional awareness;
- control emotions;
- self-motivation;
- empathy;
- recognition of the emotions of other people.

Next method of the research is the Bar-On Emotional Quotient Inventory (EQ-i). This questionnaire includes 15 subscales: problem solving, happiness, independence, stress tolerance, self-actualization, emotional self-awareness, reality testing, interpersonal relationship, optimism, self-regard, impulse control, flexibility, responsibility, and empathy which on the whole assess emotional intelligence. There were also tested the same athletes in this test.

Results and discussion. According to the results of the test of Emotional Intelligence Scale (EQ) by N. Hall.
The analysis of the test showed that the non-athletes’ results in each scale are equal or lower, than athletes’ results. As the results of the test suggest, athletes have higher emotional intelligence in comparison with non-athletes.

The results of analysis showed that the subscales of problem solving, happiness, independence, stress tolerance, self-actualization, emotional self-awareness, interpersonal relationship, optimism, self-regard, impulse control, and empathy were significantly higher in athletes than non-athletes.

Although an inconsiderable difference was observed between different sports in emotional self-awareness and flexibility, between-group comparisons revealed that there is no significant difference between team and individual sports athletes in terms of overall emotional intelligence. In contrast to the non-athletes that showed a significant difference from all the athlete groups in the happiness subscale. Emotional self-awareness of the swimmers and gymnasts was significantly different from that of the non-athletes, and football and basketball players.

**Conclusion.** As a result it has been determined that EI is essential in both individual and team sports and can be the key factor in an athlete’s functioning within a team setting. It means that, Emotional Intelligence is a critical factor allowing to achieve any success.

Considering the above findings, we can say that emotional intelligence is higher in athletes than non-athletes, since they must constantly control and manage their emotions under different conditions of training and competition. Since emotional intelligence can be learned, it seems that participation in sports activities can be considered as a factor for developing this feature. In general, research findings suggest that Coaches in different disciplines of sport and applied sport psychology must recognize different aspects of personality because it will help them in selecting players for the important responsibilities.

Thus, the development of emotional intelligence is a very actual problem for top athletes.

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**GENDER DIFFERENTIATION OF A PERSONALITY AT WOMEN – WEIGHT-LIFTERS OF HIGH QUALIFICATION**

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Romanina E.V., Candidate of Psychological Science, Professor

*(Moscow, Russia)*

There is an assumption that the sport, being one of the highly specialized areas of human activities, facilitates the formation of a personality, in particular, its psychological sex. And that gender roles are always related to the specificity of the normative system recognized in a certain sociocultural area that a personality adopts and deflects in its behavior (1, 2).

However we think it important to note that there is no unified opinion with regard to the substantiation of the masculinity-femininity formation issue. Some
scientists (representatives of the differential psychology) advance an opinion that the masculinity/femininity – are inherited qualities (2), though they do not exclude a social constituent of these qualities formation. Others (representatives of the gender psychology) postulate the opinion that personal and behavioral differences between men and women occur, first of all, as a social phenomenon, which is not determined by natural elements in the same degree as morphological and physiological differences.

According to the unanimity of personality and activity stated in the works by Rubinstein S.L. and Leontiev A.N., it is in the activity where the personality is formed and manifested. Accordingly, while the sport is one of highly specialized areas of human activity, and being the institute of socialization, it facilitates the formation of personality’s gender qualities.

It should be noted that above-mentioned experimental computations are made without consideration of the sports activity peculiarities that reduces their value essentially.

Moreover, the question of what types of sports activities promote to greater degree the formation in athletes of masculine or feminine features of a personality is studied fragmentarily leaving representatives of many sports beyond the scope of modern researches in this area. In particular, researches in the area of gender differentiation of women – weight-lifters of high qualification were not found. In this connection, this research is up-to-date.

The objective of the research – is to reveal the degree of manifestation of masculinity-femininity at highly qualified sportswomen going in for weight-lifting, and to find out the influence of the psychological type on the qualification of sportswomen.

**Research methods.** In order to determine the gender type of respondents, a standardized testing in accordance with the methods of S.Bem “Masculinity – Femininity” was conducted. 18 sportswomen – weight-lifters of high qualification took part in the research, among which 4 Honored Masters of Sports, 10 International Masters of Sports, 4 Masters of Sports.

**Results and discussions.** During latest years, many scientists express the opinion that sportswomen have the evident signs of masculinity in greater degree than women not going in for sports (6). These, first of all, are morphological signs: somatotype (the shoulder width is more than the width of pelvis, the change of the balance between the fat and muscular tissue in favor of the latter), hirsutism (male pattern of pilosis, i.e. appearing of hair in zones not typical for a woman), hypoplasia (arrested development) of the mammary gland, etc. There is also functional impairment related to the change of the menstrual period. All this can testify the increased concentration of male hormones in the organism of sportswomen (3).

However, in the course of our experiment we found out that neither above-mentioned somatotype, nor hirsutism, nor hypoplasia has the direct effect on the psychological gender of a sportswoman, because external morphological signs by above parameters were practically identical, and results of femininity-masculinity received were different, on these grounds, we can draw a hypothetical conclusion that
there is no evident direct correlation observed between external signs of a sportswoman and her femininity/masculinity.

During the research, it had been found out that 55.5% of participants belonged to the masculine type, 38.9% - the feminine type, and only 5.6% to the androgynous type.

It should be noted here that most sportswomen of masculine type (55.5% hereinafter from the total number of respondents) have prominent masculinity, 44.4% of them are sportswomen of different qualification (MS, IMS, HMS). While among sportswomen of the feminine type (38.9% hereinafter from the total number of respondents), 27.8% have prominent femininity – among them sportswomen of different qualification (IMS, HMS). Therefore, direct correlations between the levels of skills of sportswomen and their femininity-masculinity were not found.

**Conclusions.** Generally, we can speak about a little quantitative prevalence (by 16.6%) of masculine-type sportswomen over feminine-type sportswomen. However one cannot state it with absolute accuracy, because the difference is so small that one can see a necessity of further researches of the gender differentiation of sportswomen – weight-lifters, and the comparison of these readings with indicators of masculinity-femininity of women – sportswomen going in for other strength sports, and women out of sports.

Results of this research state that the level of masculinity-femininity of sportswomen does not depend on the level of their sports qualification. In this connection, it is important to note a high interest rate of sportswomen-weightlifters of a feminine type (38.9%) that, in its turn, makes it possible to make a hypothesis that going in for weight-lifting, contrary to patterns set, does not promote the formation of a masculine type of a personality. As a consequence, the following researches in this area seem especially important for the confirmation or refutation of the hypothesis made. Data obtained during the research can be used by teachers, psychologists, coaches while working with sportsmen, and confirm the necessity of further researches in the area selected.

**References**

PECULIARITIES IN SWIMMING STYLE SELECTION OF YOUTHS ON THE STAGE OF PRIMARY SWIMMING TRAINING

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At present, there is enough information for the initial training of swimmers of different age categories. Most experts recommend starting training with one-two (similar in structure) swimming styles (N.J. Bylgakova, I.L. Ganchar). However, in the course of mastering a trainee is predisposition to a particular style of swimming is not considered. This is explained by the difficulty of teaching children by various swimming styles.

Despite this, taking into the individual characteristics of feet and hemispheric asymmetry of movements bring a positive effect expressed in swimming style mastering time reduction that demonstrates it is value in small groups.

Studies by a number of scientists and scientific psychologists research have shown that individual asymmetry profile is the basis of the individual characteristics of motor activity, regulates the age characteristics of its organization and management (E.M. Berdichevskaia)

The question arises, which one is the most objective and convenient for a teacher application in a swimming pool. The answer to this question is not represented in the special literature.

In connection with the above, the following tasks of the research were singled out:

1. To define hemispheric asymmetry of MSAPE according to standard tests in the poll classes;
2. To identify the connection between the choice of leg movements structure and the individual brain asymmetry peculiarities of MSAPE students.
3. To compare the results of inter-hemispheric asymmetry and their choice of footwork movement pattern of MSAPE students and 6-8 year-old children/

The following methods were used to solve the tasks mentioned above:

1. The analysis of special literature.
2. Testing of individual asymmetry profile. Special groups of tests according to V.P. Letunin methods were held to determine inter-hemispheric asymmetry. To detect motor asymmetries (leading hand, foot) and sensory asymmetries (eye, ear).
3. Pedagogical experiment, in which 21 student-athletes (10 boys and 11 girls) of the Moscow State Academy of Physical Education (at the age of 19-21) took part. All students under test were poor swimmers.
4. Mathematical statistics was used to detect average values and their percentage in our studied rates.

The results of the study. Table 1 shows the average values of test rates of sensory and motor asymmetries of students under test.
Table 1

Testing to determine the asymmetries of MSAPE students

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Group of tests to determine the leading: hand, foot, eye, ear</th>
<th>Results of tests of motor asymmetry (hand, foot), pers. (%)</th>
<th>Results of tests of touch asymmetry (eye, ear), pers. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>lefties</td>
<td>righties</td>
</tr>
<tr>
<td>%</td>
<td></td>
<td>L* %</td>
<td>R* %</td>
</tr>
<tr>
<td>hand</td>
<td></td>
<td>21</td>
<td>8 (38,1%)</td>
</tr>
<tr>
<td>foot</td>
<td></td>
<td>61</td>
<td>8 (38,1%)</td>
</tr>
<tr>
<td>eye</td>
<td></td>
<td>47</td>
<td>8 (38,1%)</td>
</tr>
<tr>
<td>ear</td>
<td></td>
<td>652,3</td>
<td>8 (38,1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>45,2</td>
<td>8 (38,1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>738,1</td>
<td>8 (38,1%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>61,9</td>
<td>8 (38,1%)</td>
</tr>
</tbody>
</table>

Note. * - Percentage of "lefties" ("righties") respondents according to the test

Table 2 shows the results of testing of motor and sensory asymmetries and the choice of structure of leg movements patterns of the students under test while teaching them to swim.

Table 2

The results of test defining motor and sensory brain asymmetries and the choice of leg structure movements of respondents

<table>
<thead>
<tr>
<th>Respondents</th>
<th>Choice of leg movements structure in water (people %)</th>
<th>Motor asymmetries</th>
<th>Sensory asymmetries</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alternate Simultaneous symmetric Simultaneous asymmetric</td>
<td>righties in total</td>
<td>righties in total</td>
</tr>
<tr>
<td></td>
<td>choice Alternate s.l.m.</td>
<td>in total</td>
<td>in total</td>
</tr>
<tr>
<td>21</td>
<td>8(38,1%) 9(42,9%) 4(19%)</td>
<td>11</td>
<td>8 из 11 (72,7%)</td>
</tr>
</tbody>
</table>

Note ** simultaneous structure of leg movements unites a simultaneous symmetric and asymmetric structures of leg movements.

The main idea at this stage of the research was to define the connection between the choice of the leg movements structure of students and inter-hemispheric motor and sensory asymmetries.

In previous works related to training 6–8 year-old children, certain connection between footwork and hemispheric asymmetry of the respondents was revealed Table 3.
Table 3
Choice of alternate or simultaneous footwork structure of 6-8 year-old children

<table>
<thead>
<tr>
<th>leg movements structure</th>
<th>Number of children</th>
<th>Motor hemispheric asymmetry</th>
</tr>
</thead>
<tbody>
<tr>
<td>alternate</td>
<td>11</td>
<td>1 righties</td>
</tr>
<tr>
<td>simultaneous</td>
<td>7</td>
<td>9 lefties</td>
</tr>
</tbody>
</table>

Conclusions
1. According to the test results defining motor asymmetry the majority of the students had a marked asymmetry in the detection of the left hemisphere (righties) - 11 people, representing 52,38%, «lefties» - 8 people, representing 38,1% and 2 «ambidextrous» (9,52%). According to the results of the tests determine the sensory asymmetry: «righties» – 57,1%, 5 «lefties» – 23,8%, 4 «ambidextrous» – 19,04%.
2. The results of testing of motor inter-hemispheric asymmetries showed a higher connection with the selection of footwork pattern in the water, in comparison with the results of sensory inter-hemispheric asymmetries tests.
3. Student-athletes preferred to a higher degree the structure of simultaneous working leg movements (61,9%) and only a third of students (38,1%) chose the alternating leg movements. Children are usually to prefer alternating leg movements when choosing a swimming (61,11%) and lesser extent - simultaneous movement of legs (38,89%).

THE DYNAMICS OF PSYCHIC STATES AMONG HIGHLY-QUALIFIED SHORT-TRACK ATHLETES WITHIN THE MAIN RELEVANT PERIODS OF THEIR SPORTING ACTIVITIES

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Introduction. Our paper is devoted to the study of the dynamics of the psychic state among highly-qualified short-track athletes within the main relevant periods of their sporting activities. We are of the opinion that the study of the three contributing factors (levels) of a psychic state: elevated psychic activity, elevated activity of the autonomic nervous system and the motor skill, will allow us to determine which of these factors plays a greater role in influencing the performance of highly-qualified
short-track athletes within the main relevant periods of their sporting activities [2]. At
the same time the principle of an optimal response zone will help us to establish a
strong connection between the stable dynamics of the state of highly-qualified short-
track athletes within certain limits during the 3–5 weeks at the final preparation stage
and the following successful performance in competitions [1].

**The objective of the research:** to study the specifics of the psychic level in
the general state of highly-qualified short-track athletes within a limited period of the
annual training cycle.

**The goals of the research:**
1. to study the dynamics of the level of psychic state among the highly-
qualified short-track athletes;
2. to establish a strong connection between the stable dynamics of the state and
the successfulness of highly-qualified short-track athletes.

**Discussion.** Our research was conducted in 2013 from April to the end of
October with 16 highly-qualified short-track athletes (Masters of Sport, International
Class Masters of Sport—these are the titles awarded to athletes in the former Soviet
Union and in Russia for a certain high level of achievement—) from the Russian
National Team. The athletes went through the offered tests which had been designed
to identify the three levels of the psychic state. The tests were administered 2 times a
week - on the day before the athlete’s day off and on the first day after the day off.

In order to determine the psychic, motor and energy factors we asked them
to fill out a Spielberg’s State-Trait Anxiety Inventory (STAI), to
measure the level of their bio-potential with a bio-potential measurement device and to measure their
time-awareness (3 attempts lasting 3 seconds each) with a CASIO™ timer accordingly.
All measurements were conducted in identical conditions.

The participants in the experiment were divided into 3 groups (successful,
athletes with mid-level achievement, unsuccessful athletes) according to their results
in the Russia's All-Round Speed Skating Championship for Men and Women in
2013. The results of the research were processed in accordance with the division into
groups and based on the results from every training camp trip. In all the short-track
athletes took part in six TCTs (training camp trips), which we then divided according
to the periods of preparatory training within the annual cycle, in order to establish the
connection between the stable dynamics of the athlete's state and his competitive
successfulness.

At the end of the 4th training camp trip they held the qualifiers for the National
Team, according to which competition we once again divided the participants of the
experiment into 3 groups for a greater accuracy of our research.

**Conclusions**
1. It was determined that the level of anxiety of the successful short-track
athletes was optimal over the five training camp trips. This indicates that the athletes
were confident in their abilities. The level of the bio-potential over the first three
training camp trips was low and was in the parasympathetic area. This indicator was
linked to the residual fatigue from the previous competitive season. The bio-potential
level during the fourth, fifth and sixth training camp trips were optimal, which
indicated that the successful short-track athletes began to handle the training tasks well correspondingly to fully recover. Time-awareness in the successful short-track athletes was optimal over the whole period of the six training camp trips, but with minor fluctuations in the results (97.42–101.56%).

The level of anxiety of the short-track athletes with mid-level achievements was optimal during the first and the sixth training camp trips, during the second trip it was low, it was high during the third, fourth and fifth trips because these athletes began to lag behind the group of the successful short-track athletes and were unable to handle the workload. The bio-potential level among the short-track athletes with mid-level competitive achievements was low over the whole period (10.81-16.35 mmAm). This indicates that the athletes were unable to recover in time. Time-awareness in the short-track athletes with mid-level competitive achievements was optimal over the whole period but just as with the successful short-track athletes there were minor fluctuations in the results (98.71–101.83%).

The level of anxiety of the unsuccessful short-track athletes was low during the first, second, fifth and sixth training camp trips which could be attributed to these athletes' expectation that they are weaker than the successful short track athletes. The bio-potential level among the unsuccessful short-track athletes tends to slide from the first training camp trip to the sixth (20.61-13.40 mmAm). This indicates that the athletes were unable to handle the workload and to recover in time. Time-awareness in the unsuccessful short-track athletes over the six training camp trips was optimal but had sharper fluctuations unlike the values with the successful athletes and the short-track athletes with the mid-level achievement.

2. It was determined that the unsuccessful short-track athletes have their motor skills factor (time-awareness) in the optimal response zone during the sixth Training Camp Session in the competitive cycle while the motor and energy factors entered the area of hypotonus, which indicates that the athletes were not handling the workload did not recover and could not compete as equals with the successful short-track athletes and with the short track athletes with the mid level achievement.

2 factors of the psychic state entered the optimal response zone in the short-track athletes with the mid-level competitive achievement. These were the psychic factor (Anxiety) and the energy factor (the bio-potential). We believe that this fact provides an advantage for this group of athletes over the unsuccessful athletes.

Within the competition cycle and at the end of the 4th training camp trip all three levels: psychic, energy and motor enter the optimal response zone among the successful short-track athletes which created the basis for the successful performance at the qualifying competitions and for the further tenure in the National Team.

References
Introduction. Olympic Games are the greatest sporting event which ever the wars can’t prevent. The history of the Olympic Games should be studied at every level of education. But we should know not only the history of the Olympic sports events but the history of Olympic Arts Contests which were held from 1912 to 1948. That phenomenon was considered to be interesting and unusual.

Having a desire to combine art with sport the founder of the modern Olympic movement Baron Pierre de Coubertin suggested in 1894 to include in the program of the Olympic Games the contest of art. He believed that not only winners in sport must be awarded with the Olympic Games Medals but they should be got for the art works related to the sport. In 1906, the 4th Olympic Congress was organized in Paris by the initiative of Baron Pierre de Coubertin. The Congress had an aim to study and establish the extent and the form in which art and literature could be involved in the Olympic program and to reflect the Olympic ideas in artistic images. The Congress decided to organize arts competitions in architecture, sculpture, painting, literature and music. The main requirement for the participants was the Olympic Sports theme.

The works of the winners supposed to be exhibited during the Olympic Games and their authors to be rewarded with the Olympic medals.

A few weeks after the Congress in Paris, Pierre de Coubertin sent a letter to all presidents of National Olympic Committees, sports associations and sports clubs. He wanted to inspire them to organize musical and literary competitions in conjunction with sporting events. Artists could participate in the Olympics in five categories: Painting, Sculpture, Architecture, Music and Literature.

All entries must have been directly related to the sport and be original. They were not allowed to disclose in advance before the Olympics anywhere. Participants could represent several of their works, but the number was limited. The first three places were awarded with Olympic medals. Gold medalists registered in the lists of Olympic winners as official Olympic champions.

The study aims to describe and analyze the art contests at the Olympic Games from 1912 to 1948.

Research objectives.
1. To carry out the analysis of the history of origin and development of art competitions at the Olympic Games.
2. To show the statistic of the winners and medalists of art competitions at the Olympic Games.
**Methods.**

1. The analysis of different literature including the official documentary and historical analysis.

**Results and discussion.** The first contest as a demonstration event was organized at V Summer Olympic Games in Stockholm. During the Olympic Games Baron Pierre de Coubertin won a gold medal in the domain of literature for his poem “Ode de Sport”.

Since IX Summer Olympics in 1928 (Amsterdam) arts contests were held in 13 nominations in the categories of architecture, literature, music, painting and drawing, sculpture.

From 1912 to 1948 art competitions were held at all summer Olympic Games except the games of VI, XII and XIII Olympiads (1916, 1940, 1944) because of Chain-Japanese War, World Wars I and II.

The first post war Games in 1948 were held in London. It was the last Games with art contests.

In 1949, at the 44th session of the International Olympic Committee a report was discussed, according to which almost all the participants of art competitions were professionals. They got money for their works. It didn’t correspond to the amateur status of the Olympic Games.

The 50th session of the International Olympic Committee in 1954 held in Athens, made up the decision of replacement of art contest to the fine arts exhibitions.

**Conclusion.**

Olympic Art Contests were held from 1912 to 1948. 147 persons were awarded with medals. If the judges decided that there was no worthy work in the domain, the medals were not awarded. 45 gold medals, 53 silver and 49 bronze were presented. In 1952, there were no Art Contests in Helsinki because the Finnish organizers refused this idea explaining it by insufficient preparation time. In 1954, at the IOC Congress it was finally decided to replace the artistic contests to the exhibitions. Some attempts to reconsider this idea were unsuccessful. But in the Olympic Charter the additional obligations for organizers were prescribed. All organizers are to include in the program of Olympiads cultural events in order to “enhance mutual understanding, friendship and harmonious relations between the participants and spectators”.

**References**

The purpose of this work is to analyze the role of dancing in psychological adaptation for visually impaired children.

Research problems are:
1. Identifying visually impaired children's features.
2. Summarizing the role of dancing in physical, intellectual, psychological development of visually impaired children;
3. Analyzing the conditions for achieving effective psychological adaptation.

A man gets 80% of the information of the world through vision. In case of vision impairment the quantity and quality of information dramatically reduces. This may create great obstacles in association with others. Especially these issues are difficult for children to overcome. Becoming a grown up person is a long process. A child learns about the world and other people, about himself and how to communicate with others. Children play, become friends, quarrel and make peace. Communication with others is a basis for building a child's self-esteem. Unfortunately, visually impaired children often suffer from a low self-esteem. A child compares himself to others to be able to understand his own strengths and weaknesses. Children experience difficulties while studying because they are less informed in comparison with those have good eyesight. They have difficulty with dimensional orientation. Poor eyesight is a consequence of inappropriate posture.

These children lack managing communication distance. They find it difficult to see the face of another person and evaluate his emotional state by his or her facial expressions. Therefore, facial expressions are inadequate and may not always convey their feelings and emotions. They often do not get accepted by their peers, become reserved, anxious, insecure and even aggressive. These features turn into habits, then a person's character is formed throughout life. Therefore, psychological adaptation of visually impaired children is important for their socialization. Psychological adaptation (from the Latin «adaptare») means adaptation to the society demands in accordance with the internal needs of a person.

There are many ways to provide adaptation for visually impaired children. We are interested in dancing as a method of psychological adaptation. A dance is aimed to expresses the inner personal feelings by means of gestures, postures (positions), movements to the musical rhythm. Also a dance conveys an emotional state (joy, passion, love, sadness, anger) by facial expressions. Dance classes enrich (develop) facial expressions of children, strengthen their physical health - train muscles, breathing, correct posture. Hearing and optical attention are trained as well while a child observes dancing poses, new rhythmic movements, partner's facial expressions. Dance helps to feel the space, to coordinate one's
movements and control the distance in the communication process. Children learn to work together in pairs, in groups to solve tasks, to compromise, they get and develop essential communication skills. They pay more attention to their appearance. Dance classes also encourage intellectual development of children. They learn about their native history and as well as about other nations, they learn about new styles of music, learn to appreciate the beauty. They become more outgoing, kinder, more sociable and self-confident. Fear to be rejected tends to be reduced. Their self-esteem increases. A proper training and educational organization is required. Individual approach to each child is necessary and important as well as taking into account a child's psychological characteristics, physical health, the degree of eyesight loss. Building a friendly social environment where children can feel comfortable and protected is of much importance too. It implies self-fulfilling, not being afraid of mistakes. Didactical environment is supposed to be organized properly: a dance hall, mirrors, balletbar, gymnasticmats, good lighting. Dancing for sure is not the only remedy in psychological adaptation of visually impaired children. It complements other ways and methods of psychological and correctional education, expanding their capabilities.

In conclusion, dancing expands the psychological adaptation of visually impaired children complementing other forms of psychological and educational work with them. Proper organization of dance classes develop intellectual, physical, communicative abilities of children, increase their self-esteem, encourage their self-fulfilling. Children become more outgoing and self-confident.

NEW FORMS AND METHODS OF THE ORGANIZATION OF THE BASIC OLYMPIC EDUCATION AMONG PRESCHOOL CHILDREN
(5 – 7 YEARS OLD)

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Introduction. The role of Olympic education as an important component of the modern Olympic movement is constantly growing up. Due to the vigorous activity of the International Olympic Committee, the IOC commission on Olympic education and the National Olympic Academies in many countries, a considerable practical experience in the field of Olympic education has been accumulated and summarized.

In the Russian Federation Olympic education is included in the program of the comprehensive schools within the framework of a subject “physical training”. Schoolchildren get acquainted with the basic knowledge about the History of Olympic Games. It gives positive results and makes a real contribution in the patriotic education of the young generation.
Problems of Olympic education in Russia were researched, analyzed and described by Vladislav Stoljarov, Vladimir Rodichenko, Galina Polikarpova, Nataliya Melnikova, Varvara Petrakova and some other scientists.

Involvement of the young people in the process of physical training and sports is rightly considered today as a real alternative to resist the negative phenomena in the modern society.

**The importance and significance of research:**

The forms of Olympic Education which were worked out and introduced in our research contribute to development of motor function of children of preschool age, formation of base knowledge about the Olympic games, the International Olympic Committee, and the role and place of our country in the Olympic movement.

**Novelty of research:** is that, for the first time it is presented the original forms of Olympic education designed to children at the age of 5 – 7 years.

**The purpose of research:** to work out new forms and methods of Olympic education for children of preschool age.

**Methods.** According to the purpose, following problems have been raised:

1) To work out a complex of the educational forms, which could give a basic Olympic knowledge for children of preschool age.

2) To conduct an experiment in the preschool center of Olympic education, taking into account that a child acquires new knowledge through playing definitely better.

**Results.** The following forms of «Olympic education» have been presented for children of the specified age group:

1. Books
2. Play-cubes
3. A lotto
4. Puzzles
5. Colouring Books

We introduced the presented new forms of Olympic education in the Moscow kindergarten № 2082.

The experiment included the following:

1. The experimental and control groups have been formed.

2. The Olympic education in the control group was limited by conversation and oral information on the Olympic movement.

3. In experimental group simultaneously with conversational lessons were suggested puzzles, lotto and play-cubes connected with Olympic subjects.

**Concluding part.** The results of experiment have shown that children in experimental group not only better knew history of Olympic games, but they also could use successfully their knowledge in the process of playing with puzzles and play-cubes.

**Conclusions.** At the beginning of experiment we have estimated an average level of knowledge of the control and experimental groups, in the first group it was 7% and in second - 13%. At the end of experiment the level of knowledge in first group has increased approximately to 50% and in second group up to 75% that
proves the real positive effect. As we think it is the result of introduction of the new forms of preschool Olympic education.

1. Results of experiment.

METHOD OF INTERVAL EXOGENOUS AND RESPIRATORY HYPOXIC TRAINING

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Relevance. Important place in middle distance runners sports training take additional ergogenic means. They have a wide range of effects and increase functionality of the body and thus the effectiveness of training process. The most popular additional means used in preparation of athletes are different hypoxic exposures. Training can be carried out in conditions of high and normal atmospheric pressure, it may be continuous or interval, different types of hypoxia can also be applied (N.I. Volkov, 2003; M.M. Bulatova, 2008). The main type of hypoxic means used during middle distance runners training is exogenous, which is characterized by reduced oxygen in the inspired air. However, to date there is very little data on the use of other types of hypoxic devices in training, as well as there is little data on their complex application. Also, little is known about the methods of hypoxic means application on the plains. This provision in question actualizes the problem of using different types of hypoxia and hypoxic systems under normal atmospheric pressure in training of runners.

The novelty of our study lies in development of middle distance runners training technique based on the use of hypoxic means of two types - exogenous and respiratory, which are applied with the help of «Elevation training» mask and hypoxicator "Vershina (Peak)". Also there is a developed system of integrated control
of body adaptation to the effects of hypoxia on the basis of monitoring devices such as pulseoxymeter "Oxy pulse" and "Garmin 310 XT for runner".

Organization of the study. Development and experimental study was conducted on the basis of interdepartmental laboratory of NF VPO "Volga GAFKSiT" in the city of Naberezhnye Chelny, Tatarstan. The study involved 30 1st grade middle distance runners.

Research methods. In the course of our study the following range of methods adequately reflecting the matter under consideration were employed: analysis and synthesis of scientific-methodical literature, functional testing, pedagogical experiment, analysis of sports records, methods of mathematical statistics.

Discussion of results. A survey was carried out during the stage of ascertaining experiment in order to get information about different hypoxic effects in middle distance runners training, and in the preparatory period to determine the frequency and methods of hypoxic devices application during the annual cycle.

40 young men from Tatarstan Republic took part in the survey, including middle distance runners and coaches. We found out that the range of hypoxic training means used in middle distance runners training depends mainly on the availability of material, technical conditions and the availability of supplies.

Hypoxic training means offered to the runners were used mainly to adapt to the conditions of medium altitude. Questioning revealed that in practice different types of hypoxic training means are not used in the preparatory period of middle distance runners training.

We have developed an experimental technique for the training of middle distance runners through the application of exogenous respiratory interval hypoxic training means.

The main objectives of techniques are: optimization of the training process; increasing of cardio-respiratory system reserves; developing skills of devices usage, implementing IERGT; increasing the intensity of training loads; monitoring adaptation to different hypoxic means.

The experimental technique involves the use of such training means as «Elevation training» hypoxic masks and hypoxicator "Vershina (Peak)".

«Elevation training» mask can be used in three modes: 1 – 25% of the resistance; 2 – 50% of the resistance; 3 – 75% of resistance. The scope of application of diaphragmatic mask is 10–25 % of the total amount of special work for the training session. The use of masks is cyclical with rest intervals – 1–2 cycles per training session.

Hypoxicator "Vershina (Peak)" is used during 40 minutes after the first workout and for 40–60 minutes before the second workout. Application of hypoxicator is carried out cyclically at intervals of 2-4 relieving cycles, during one cycle the amount of oxygen in the inhaled air is reduced from 21% to 10%.

Hypoxic training means were used in conjunction with other major training means in six developing and 2 relieving micro-cycles during the first developing stage of preparatory period.
Application of hypoxic training means in our study was performed in the interval mode. In our opinion this mode is the most favorable for improving adaptation of an athlete to a lack of oxygen during physical exertion.

The use of exogenous respiratory interval hypoxic training means during the first developing stage of the middle distance runners’ preparatory training period will be effective if all the following organizational and methodological principals are performed: provision of continuous pedagogical control and self-control; skills of using hypoxic training means and application of data and their control are developed; ensuring optimal organization of hypoxic events to meet the goals of training and pre-competition micro and mesocycles; ensuring interval mode of hypoxic events.

Conclusions.
1. Hypoxic events in the framework of interval exogenous respiratory hypoxic training should be implemented into the middle distance runners training process in accordance with the purposes and objectives of stage and period of training;
2. The use of interval exogenous hypoxic respiratory training means is approved for one week-long training micro-cycles, where special performance and functionality improvement of the runners is in the most demand. As part of the micro- and mesocycles, application of exogenous interval hypoxic respiratory training is carried out with account of cardiorespiratory adaptation to different hypoxic effects and current functional state of athletes’ fitness.

MARTIAL ARTS: HEALTH BENEFITS IN A CHALLENGING WORLD

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"The best fighter - it's not a boxer, karate or judo. The best fighter – is the one who can adapt to any style, who is free from forms and develops a style that suits his abilities and doesn’t blindly follow the system of an individual style" Bruce Lee.

Since the beginning of time, martial arts has played an important role in the lives of people. From the development of hand to hand combat and weapons training that helped expand nations, techniques that were developed solely for self-defense, martial arts has evolved over the years to become a very important component to both the military and the common man.

In the last one hundred years martial arts has become more mainstream with the well-kept secrets of the past that have made their way into everyday life. However as our global community moves closer to world peace the feudal fighting systems of the past are becoming less and less important. Martial arts are taking a
new turn for the better. And unlocked in the past are systems and technics that can have a positive effect on the current health challenges we face today and tomorrow.

The first matches were held in a mixed style at the Olympic Games in ancient Greece called pankration, and is a hybrid of two other disciplines - fist fight and wrestling. Pankration started their competition on the 4th day of the Olympic Games. The essence of the sport was to have two unarmed athletes fight each other. Competitions were held in a specially prepared site - "Malfo", covered with a thick layer of fine sand. These fights really determined the strongest, most agile and courageous athletes. Being the most original and the most difficult game of the ancient games, pankration combined the methods of hand to hand combat, wrestling, sweeps, locks and strangulation. It was allowed to strike with hands, elbows, knees, legs and the head. Strikes were made to the head and body, legs and arms. You could keep fighting laying opponents and at the same time laying opponents had the right to defend themselves. It is in pankration that athletes first began to perform jumps with kicks and a series of blows in combinations with throws. Pancration’s main feature was that there were almost no restrictions. Only biting, scratching and striking the eyes were prohibited. There were no weight categories (only age categories), matches had no time limit. A judge, however, was always present at the fights. His task was to prevent death or serious injuries in the fight. To be more convincing, he was armed with a stick. Ancient pankration – is combat with minimal restrictions. Even fewer restrictions existed in competitions held in Sparta. In addition, in Sparta existed not only men’s but also women’s pankration.

A modern interpretation, held qualitative changes and is the fastest growing form of martial arts “mixed martial arts.”

Today, the development of MMA in Russia not as active as in the U.S., where interest in fighting «United Fighting Challenge» (Absolute Fighting Championship) rose after making changes to the rules of battle, making them much more entertaining and safe. In Russia, the situation is different because of the prevailing public opinion that this is a bloody sport, fighting without rules. The nation also doesn’t support this sport.

MMA rules have now changed substantially in the direction of tightening the rules to protect the health of athletes. The new rules include weight categories, the use of protective equipment and restrictions on harsh techniques. Currently banned almost everywhere, during combat, are strikes to the eyes, throat, back of the neck and spine, groin, grappling of small joints, bites, grabbing ears, nostrils, and the mouth.

Throughout history, man had to defend their interests. During the formation of civilizations, stronger individuals and communities achieved success. Martial Arts allowed the human body to develop in harmony while at the same time triumph in conflicting situations. As an excellent means of physical fitness, martial arts improved moral qualities of people involved. Self-discipline is the foundation
of martial arts, because the hardest opponent is yourself. If you are able defeat yourself, you will not have ever fight in life again.

**PISTOL SHOTIING AND THE FACTORS INFLUENCING ON ITS SUCCESSFULNESS.**

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**Introduction.** At first glance, pistol shooting shows little resemblance to sport. Fixed readiness. The movements are almost imperceptible, rare, scant. Stillness against. All that is far from the exciting dynamics of struggling. Nevertheless, shooting is sport [7].

The problem of improving of the efficiency and reliability of competitive activity is nowadays more and more urgent. Along with the “physiological factor”, one of the first places belongs to the “psychological ones” [4].

Aim of the study was to identify the factors of success competitive activity of pistol shooters.

The objectives of the research were:
1. Analysis of the scientific literature connecting with the problem of successfulness of competitive activity of pistol shooters;
2. Identification of personal qualities that are the most important in shooting.
3. Examination of the level of development of these qualities of the shooters who took part in the study.
4. Studying the physical status of shooters.
5. To reveal the level of interconnection of these personal qualities and physical preparation with the success of competitive activity of pistol shooters.

The following methods were used:
1. Analysis of scientific and methodological literature
2. The pilot experiment
3. Q-metods of psychodiagnostics

**Discussion.** The majority of authors believe that the main part of the overall athlete’s mental preparation was the development of such qualities as self-control and persistence [1, 2, 5]. Also one of necessary conditions for fulfilment of an exact shot is correct distribution of attention [6].

To diagnose the self-control level, the test by M. Snyder was used. To diagnose the level of persistence, the technique by E. F. Ilyin , E.K. Feschenko ("Perseverance") was used.

The study involved eight pistol shooters, including six athletes with the 1st grade and 2 athletes having the title of the Candidate Master of Sport.
For check of the assumption that growth of sports skill in shooting is connected with the ability correctly to distribute attention, analysis of the encephalogram during an aiming at 2 groups of examinees has been carried out. The physical training was examined through the following parameters:
1. Age.
2. Body weight.
4. Pulse at rest.
5. Speed - strength endurance (arm-pumping exercise for 1 min).
6. Overall endurance (running 2 km).
7. Recoverability rate (measuring heart rate in 10 minutes after running 2 kilometres).

To identify the success of competitive activity of pistol shooters a competition in the exercise of “PP-2” was held.

**Results:**
1. The success of competitive activity largely depends on the physical training of an athlete.
2. The "psychological factor" plays an important role in the preparation of an athlete.
3. The most important person’s qualities in shooting are self-control and perseverance.
4. Successes in shooting substantially depend on ability of the person to concentrate and keep attention on kinesthetic sensations and carry out an exact kinesthetic regulation.
5. In the study, a positive correlation between self-control, persistence, fitness level and success of competitive activity was revealed.
6. The negative relationship between self-control and “the spread” of results (the difference between the minimum and maximum results) was also revealed.

**Conclusion.** Sport shooting is a complex-coordinating sport that requires maintaining a high level of capacity and differs from the greatest mental overload. The psychological qualities in sports activity can be defined as a determined factor. That is why the psychological preparation of a pistol shooter must be used side by side with physical preparation and the ability to use the personal weapon in critical situations.

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ABSTRACT. Since 2001, the Venezuelan National Football Team, best known as La Vinotinto, started having victories and gradually became a winning team in present time. One of the tools that contributed to this change was the use of sport psychology. Nevertheless, there is little evidence in Venezuela about the psychological preparation carried out in this level of national football. The purpose of this study was to analyze which are the methods that have been used for the psychological preparation of the footballers of La Vinotinto, from the 2001-2007 and the 2007-2013 periods. Methodologically speaking, an emergent design was used. The data recollection techniques consisted of in-depth interviews with 2 psychologists that worked with La Vinotinto, 2 footballers that played in La Vinotinto, 2 coaches that worked with La Vinotinto and the documental analysis of print sources and electronic sources of information where the psychological work of the team is mentioned. Taking in account that this research is in its application phase, the results are much updated with the changes that have been occurring with the national football team that in the last years has been improving its international performance. In the past it was not identified as a winning team and at the moment it is becoming a national symbol of prestige. In the 2001-2007 periods, the following content categories in the psychological work were obtained: scientific work and attitude change. In the 2007-2013 periods, the following content categories in the psychological work were obtained: scientific work, tools and routine.

Keywords: La Vinotinto, psychological preparation, sport psychology, football.

I. Theoretical Framework

As a massive sport, it was in 1876 that the first football match was played in Venezuela, where British miners settled in the region of El Callao, Bolivar State, participated. Currently, football is one of the most popular sports in Venezuela, the amount of people that fill the different stadiums and the amount of football practitioners tell about the growing interest of Venezuelans for the most played sport in the world.

Like every sport, inside football psychological preparation is contemplated as part of the sport’s training.
At world level it has been demonstrated that how important the contributions of sport psychology are for the high performance teams and football is no exception. History tells that, approximately, in 1901 appears the first publication of psychology of football, with the book *Psychology of Football* by Jean Jusserand.

Then in Latin-America, specifically in Argentina, the book *Psicología del Fútbol* (Psychology of Football, in English) is published by Carlos Garrot (1937).

Since that time, there is empirical evidence of the existence of psychological preparation in football. First, in the English Premier League authors like Mark Nesti (2010), Bill Beswick (2010) and Costas Karageorghis and Peter Terry (2011) have made works of sport psychology in professional teams in this league.

In Spain, the work of psychological preparation in football is evidenced in authors such as Joaquín Dosíl, Enrique Garcés de los Fayos, Joan Riera, García Barrerio, Alexandre García-Mas, José María Buceta y Miguel Morilla (Roffé, 2007).

In Latin-America, there are two representatives such as the Argentinian Marcelo Roffé (2005; 2007) and the Cuban Carlos Martinó (2009) that have worked with psychological preparation in national squads and non-professional football teams, respectively.

Nevertheless, in Venezuela there is little evidence of the work of psychological preparation made in national football. Currently, it is known that sport psychology started being incorporated in a national football team in 1995, at under 17 and under 20 levels, respectively, by Manuel Llorens (2012).

The Venezuelan National Football Team is popularly known as ‘La Vinotinto’, because of the color the team jersey. That color is vinotinto, which in English means burgundy. This team has experimented successful changes in the last few years.

In these successful changes, the role of sport psychology is highlighted. But, little has been said about it and there are very little texts where there is mention of the psychological work done in *La Vinotinto*.

For example, in a research made by D’Amico (2012), it was found that one of the reasons that the perception of *La Vintinto* is more positive currently for the Venezuelans is due to the actions of Richard Páez, stating that thanks to the victories achieved by *La Vinotinto* under his leadership as coach the perception became positive towards the team. This is accompanied by the statement found in this research that says that psychology is part of the footballer’s training in the national squad. According to this research, the psychological component is said to have occupied more than 50% of the football training and this could have changed the Venezuelan footballer’s esteem.

Besides from the research made by D’Amico (2012), only few books are known where there is mention of the work done by two psychologists that have been with *La Vinotinto*. The books where this is evidenced are: “Therapy for the Emperor: Chronicles of Psychology of Football” by Manuel Llorens (2012) and “It’s not a issue of luck. It’s an attitude issue” (Rodríguez, 2012).

At the same time, there are journalistic print and electronic sources where information about psychology in *La Vinotinto* is outlined. But, there isn’t any
information about the methods used in the psychological preparation during periods 2001-2007 and 2007-2013, respectively. It must be emphasized that these are the only periods of a national Venezuelan football squad where psychological work has been used.

This generates the following **problem situation**: even though there are journalistic sources and texts where information about psychology in *La Vinotinto* is mentioned, the methods used in the psychological preparation during periods 2001-2007 and 2007–2013 are not known.

Once comprehended this gap mentioned, the following **investigation problem** is formulated: ¿Which are the methods that have characterized the psychological work in the Venezuelan National Football Team, during periods 2001-2007 and 2007–2013?

From this point on, the **investigation object** is the historical process of the psychological preparation in the Venezuelan National Team (*La Vinotinto*), during periods 2001–2007 and 2007–2013.

From here derives that the **action field** consists of the methods used for the psychological preparation in the Venezuelan National Team (*La Vinotinto*), during periods 2001–2007 and 2007–2013.

**Research Purpose**

**General Objective**

- To analyze the methods that have been used for the psychological preparation of the footballers of *La Vinotinto*, from the 2001-2007 and the 2007-2013 periods.

**II. Methodological Frame**

The **type of investigation** is qualitative (Hernández, Fernández and Baptista, 2010). This is a qualitative study, because it started with a minimum of suppositions both theoretical and empirical (Taylor and Bodgan, 1994) in an attempt to capture the sense of what was underlying the phenomenon of ‘La Vinotinto’ and its methods of psychological preparation, developing and systematizing the significant of this topic. (Banister, Burman, Parker, Taylor and Tindall, 1994). Finally, flexibility existed in the way this study was carried out. That’s why an **emergent design** was used (Lincoln and Guba 1985 c. p. Wiesenfeld, 2001, p. 147).

The **first recollection method of information** was an *in-depth interview*. The **second recollection method of information** was a documentary analysis, which consisted of analyzing books, newspaper and electronic articles where the phenomenon being studied is mentioned.

The **type of sampling** was an intentional natured one, with volunteer subjects and non-probabilistic (Hernández et al., 2010). The subject of this study consisted of:

- 2 professional footballers that have played in *La Vinotinto*, during periods 2001–2007 and 2007–2013, respectively;
- 2 psychologists that have worked with *La Vinotinto* during periods 2001-2007 and 2007-2013, respectively;
- 2 coaches that worked with during periods 2001-2007 and 2007-2013, respectively;
- Documents of the bibliographic or literature review.
The procedure of analysis of the results was the content analysis. Once the interviews were reviewed and transcribed, with the aim of gathering the best way possible the reality expressed in them, the information was grouped into categories and sub-categories with the purpose to integrate and regroup its meaning in order to make the correspondent analysis (Bardin, 2002; Hernández et al, 2010). This was also done with the documents analyzed.

The theoretical contribution of this study is to enrich the theoretical-practical knowledge body about psychological preparation in football in Venezuela.

The practical contribution of this study and its importance, is to use its results to generate an information booklet as part of the history of sport psychology in Venezuela.

Currently, this study is still in the documentary review phase and in the elaboration of the definite guide questions of the interview. Regarding this last comment, preliminary interviews were carried out with the psychologists that have worked with La Vinotinto.

Results. At the moment a content analysis has been made to two preliminary interviews with two psychologists that have worked with La Vinotinto in periods 2001-2007 and 2008-2013, respectively, and also a content analysis of texts written by the following authors: Rodriguez (2012), Llorens (2012), Correia (2011), Sifontes (2010), Gomez (2011).

Having analyzed these texts and interviews mentioned earlier, the contents have been categorized for each period:

**Period 2001-2007**

![Figure 1: 2001-2007 Period.](image-url)
With the psychologist in this period, as it is observed in figure 1, the following contents were obtained:

- **Scientific work:** This category means that in this period general psychology approaches were applied; approaches like behaviorism and cognitivism. The category also means that the psychologist in this period used knowledge of coaching and high performance teams psychology in business, extrapolating it to *La Vinotinto*.

- **Attitude change:** This is understood as the attitude the players had to learn to assume when they were going to a match, and to act according to their motivation. The footballers understood that they didn’t have to attribute the defeats to superstitions or external elements, but instead to the attitude assumed in each commitment. Working this matter in group sessions was used to work adversity coping and achievement motivation as well. It also had to do with substituting pessimistic thinking for positive beliefs. At the same time, self-appraisal was inculcated in order to enhance the player’s self esteem, so that the beliefs were turned into behaviors and these latter ones into results.

**Period 2007-2013**

![2007-2013 Period Diagram](image)

Figure 2: 2007-2013 Period

With the psychologist in this period, as it is observed in figure 2, the following contents were obtained:

- **Scientific work:** In this period, the sport psychology approach was used. Inside this approach, the psychologist worked with group dynamics, inter-individual work, emphasis in the process of focus, emotional regulation and other sport psychology processes.
– Tools: Here is evidenced the use of audiovisual tools and video analysis in order to get the attention of the footballers and to generate conversation and reflection. Nevertheless, the main tool is the observation of the team.

– Routine: The psychological work is mainly done in pre-match meetings, in each cycle of competition. Each pre-match meeting conforms its own cycle. At the same time, the routine is composed of travelling with the team to the matches, eating with them, individual attention, group sessions and many meetings with the coaching staff.

Conclusions. The national football team of Venezuela (La Vinotinto) has experimented successful changes in the last few years. In these successful changes, the role of psychology is outlined.

During periods 2001–2007 and 2007–2013, the psychological preparation of the team was carried out. The first period was defined by being focused in the use of the procedures of traditional psychology and industrial psychology.

Instead, the second period was defined by the work of sport psychology. It was a period where the work was carried out mainly in the pre-match meetings.

Taking in account that the present investigation is still on course, the purpose of the study is being achieved.

References


THE DISPLAY OF NEGATIVE "TRANSFER OF TRAINING" WHILE WORKING WITH STARTING SPEEDS OF HOCKEY PLAYERS

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Chair of Theory and Methods of hockey SCOLIPE

Introduction. Improvement of specific high-speed qualities of hockey players is one of the tasks that needs to be addressed in the course of long-term skilled players training.

The purpose and methods of research. In the experiment (6 weeks of training worth of micro-cycles) we studied the possibility of increasing skating speed from the start of skilled hockey players at the age from 17 to 19. Contents of a weekly micro-cycle includes: testing of hockey players and two training days (players performed specific work on speed). The testing was carried out once a week (before the start of the experiment, during the experiment and at the end of the experiment). It consisted of threefold skating of a distance of 9 and 27 meters by each of the experiment participants. When evaluating the test results of "27 meter skating" further measures were taken to time the players when they crossed the 9 and 18 meter marks.

The results of research. During the tests players recorded the following results: showed (p ≤ 0,0001) a significant improvement in the average results for the final test (1,95 ± 0,10), for skating the distance of 9 meters - compared to the average results of the initial test (2,36 ± 0,09); showed (p ≤ 0,0001) a significant improvement
in the average results of the final test \((4.23 \pm 0.13)\), for skating the distance of 27 meters – compared with the average results of the initial test \((4.54 \pm 0.12)\). Showed a high degree of correlation with the results of the average time \((t\ (c))\) for skating the distance of 9 meters and 9 meters during the distance of 27 meters – in all tests. Analysis of "equity contribution" for the average results of skating the distance of 27 meters - in 9 meter intervals (starting line) and 18 meters (finish line) revealed: showed \((p \leq 0.0001)\) a significant improvement in the average result of the final test \((1.99 \pm 0.07)\), Compared to the average result of the initial test \((2.43 \pm 0.08)\) – in skating the segment of 9 meters from 27 meters; showed \((p \leq 0.01)\) negative results in the average of the final test \((4.23 \pm 0.13)\), compared to the average results of the initial test \((4.54 \pm 0.12)\) - in skating the segment of 18 meters from 27 meters (Figure 1).

![Fig. 1. Average group results \((t\ (c))\ – the time in seconds) tests "1", "2", "3", "4", "5", "6" and "7" of hockey players – skating the distance of 9 meters («a»), 9 of 27 meters («b») and 18 of 27 meters ("c")]

Findings. Showed significant improvement in the average results of skating the distances of 9 meters and 27 meters due to the effects of the training regime and training loads, we used special high-speed training for players for 6 weeks of the experiment. The same effect and a positive effect for the “transfer of training”, is explained by the high degree of correlation with the results of the average time of three fold skating the distances for 9 meters and the segment of 9 meters (at a distance of 27 meters). The effect of a positive "transfer of training" is due to the fact that at a distance of 9 meters and the opening segment 9 meters from 27 meters is using the same "explosive" technique in skating. A negative effect for the average skating time in the final segment of 18 meters (at a distance of 27 meters) is due to the fact that during the distance players use a technique of long distance skating, the main training tasks in our experiments were based on "explosive" skating which effects starting speed at a distance of 9 meters. The “transfer of training” from one
type of method, “explosive” skating, to another, long distance skating, gave negative results, since they are two different methods.

**Conclusion.** Thus, contrary to popular opinion in sport pedagogy, "speed qualities” as other "physical qualities" in the living organism can be trained not only during the "sensitive periods", but at the age from 17 to 19. In this case, to get the desired result, the body has to be trained in environment which is able to develop its specific "speed qualities."

The results of this study confirm the effectiveness of the law on structural and functional specificity of concrete motor acts [S. E. Pavlov, 2010] and the evidence in favor of the claim is that nonobjective "physical characteristics" do not exist [S. E. Pavlov, 2010; S. E. Pavlov, T. Pavlova, 2011].

Taking into account the opinion of V. Nikonov (2003) - "... A small correlation between the individual manifestations of speed qualities greatly reduces the possibility of "transfer of training" from one exercise to another. So ... between the start and remote speed ... there is no correlation, so to develop and improve them, it needs to be purposefully aimed ... ". Originally it was not expected to have a positive "transfer of training" with "explosive" skating and gliding. But the surprise was that it showed a negative, "transfer of training" from one method to another, which should be taken into account in the construction of the training processes of skilled players.

**MODELLING COMPETITIVE ACTIVITY OF HIGHLY QUALIFIED HOCKEY PLAYERS INTO THEIR TRAINING PROCESSES**

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**Introduction:** Currently in modern day hockey, many coaches are using standard methods of improving abilities and qualities of players. If you want to improve speed, endurance, or strength, coaches are using standard weight lifting techniques, or you could even say “track and field” type techniques, such as shuttle runs, long distance running, and even cross-country type running. These coaches don’t take into account what the players do during games. During games players can have active phases and passive phases. The aim of the study is to show that modeling training programs after a player’s competitive activity on the ice, will improve the overall physical readiness of players for the long and grueling hockey season.

**Organization and methods:** The study was conducted with highly qualified teams and players, teams in the “VHL” (farm clubs of the KHL), “MHL” (Russia’s Junior Hockey League). Video analysis of competitive games were taken, and training programs were adjusted to mimic the things players do during such games. The physical readiness of the players during different parts of the season was then studied.
**Results of the study:** Analysis of the physical readiness of players during the season was taken and compared to past results. All the teams showed positive results and gains in physical readiness during games and different parts of the season. While physical readiness was better, individual techniques stayed roughly the same, this proved that such implementing this model into the training process improves the readiness of players, while at the same time not hindering individual technique (such as stick handling, puck movement and so on).

**Discussion and conclusions:** Thus, we have obtained in the present study data, which proves the improvement of physical readiness of teams/players who implemented this model into their training process for the long hockey season.

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**THE STUDY OF MORPHOLOGICAL AND FUNCTIONAL FEATURES OF THE ATHLETES PRACTICING VARIOUS KINDS OF GYMNASTICS**

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**Introduction.** It is now generally accepted that body build or an - morphtype athletes is an important factor in achieving a high sportsmanship. Such important anthropometric measures as the body length and mass indices body proportions and other characteristics are often the main selection criteria for practicing some sport. Gymnastics belongs to sports where both absolute and relative indices are extremely important. There is a preferred morphotype for athletes in artistic, rhythmic, gymnastics and acrobatics, assuming length and body weight restrictions and some constitutional data. At the same time, if is known that there are local preferences for morphological parameters associated with the exercises specific in various kinds of gymnastics and gymnastics all-around competitions.

**Objective:** To study the morphological and functional characteristics of athletes specializing in various types of gymnastics events, to identify their sex and age variability and dependence on sports training level.

Scientific novelty lies in the fact that the results will be compared with data from previous generations of athletes (such research, in particular, was carried out earlier on artistic gymnasts) to determine the general and special focus of secular trend.

**Research methods.** Anthropometric measurements are planned for the extensive program: study of anthropometric characteristics of artistic and rhythmic and gymnastics, athletes depending on gender, age and sports qualification using standard equipment under the standard program, followed by analysis of all data. Research will take place in specialized sports schools, and schools of Olympic
reserve. In the survey (10–17 year old) practicing, various kinds of gymnastics Young athletes will be included. In the older age groups, it is planned to examine elite athletes candidate master of sport and master of sport.

**Discussion of the problem.** Studies of athletes practicing various kinds of gymnastics were previously held by different authors. Thus, according to Vasilchuk AL [1] "gymnasts does morphotype not best fit the specifics of the motion in the best way, the athlete must adapt to the necessary extent, producing adaptive movements technique and the corresponding structure of the motor characteristics. In this connection, the question of the extent to which this may be reflected in the process of motor learning and what the prospects are presents great interest."

Many authors, studied rhythmic gymnastics, E.V. Pavlova [3] in particular. She believes that the problem of sports selection at the present stage of sports development of does only decrease but increase, due primarily to the fact that the existing practice of selection in sport cannot yet be assessed as sufficiently effective and does not meet modern requirements of a rapidly developing elite sport.

I. A. Wiener [2] writes: «Continued progress in the development of rhythmic gymnastics poses increasing challenges coaches for the creation of virtuoso technique and original compositions that require versatile trained gymnasts, constant search for new and effective methods to ensure high quality implementation of complex coordination motion. And, therefore, requires an increase in the level of training loads. » After analyzing the literature, we concluded that many authors cite the lack of selection and assessment of methodological materials to objectively assess the level of coordination abilities and exercise control over.

Our work involves them expanding of experimental research base by incorporating study of children and adolescents, which will trace the dynamics of the formation of characteristic morphological and functional features of gymnasts during person`s ontogenesis.

**References**


ELECTRICAL ACTIVITY OF LOWER LIMB MUSCLES
DURING HORIZONTAL BENCH PRESS

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Keywords: motion technique, powerlifting, horizontal bench press, sticking region, EMG of lower limb muscles.

Introduction. Horizontal Bench press is one of three competing exercises in powerlifting. It is also a separate event and a very popular exercise. Since 1990 World Championships and Europe Championships in Horizontal Bench Press have been held. Not only the physical strength is important in this sports event, but also the motion technique is.

There are many articles describing electromyographucs of the upper limb and chest muscles during the horizontal bench press[1, 2, 3, 6, 7], yet we have found only the one concerning electrical activity of the lower limb muscles during that exercise and that article was about a non-competitive kind of bench press technique[4].

B.I. Sheiko [5] proposed a hypothesis stating that highly skilled athletes might use the lower limb muscles during the bench press (at the beginning of a barbell lift) in addition to the upper limb and chest muscles. An athlete literally pushed off with his legs from the platform in the direction of the head at the beginning of the initial powerful bar lift from the chest.

The purpose of this study was to examine the electrical activity of the lower limb muscles during the horizontal bench press performed by athletes with a different technical skill level.

Methods. Video shooting at 60 frames per second has been performed in frontal and sagittal planes. The high-contrast marker placed in the middle of the bar end has been tracked in a sagittal plane. EMGs for the long head of the biceps femoris muscle, the vastus lateralis muscle and the lateral head of the gastrocnemius muscle have been recorded synchronously with the video shooting.

Results. Maintaining the pose required for the bench press is only possible with the lower limb muscles contracting in the isometric mode, whose main functions are creating and keeping the rigid support structure.

A candidate for master of sports during 90% of 1 repetition maximum bench press has a significant shin extensor activity in the descent phase, but upon reaching and overcoming the sticking period the shin extensor activity fades rapidly. The hamstring muscles don’t show any electrical activity before the sticking period and the shin muscles show a slight activity which fades on reaching the sticking period. This data implies that during the main phase – the lifting phase – the lower limb muscles of that athlete don’t implement their main function, which is fixating the locomotor system links and maintaining the stiff support structure.
A highly skilled athlete is observed to have a different case. The vastus lateralis muscle is highly active during the whole exercise. The said activity drops a little bit during the ascent phase, but not as much as in a case of an unskilled athlete. After a small increase in the activity during the bar deceleration period, the biceps femoris muscle is observed to be activated rapidly at the end of the bar deceleration period, which matches the moment the chest is pushed towards the bar increasing the bend in the lower back, and the activation lasts till the end of the sticking period. Then, the activity of that muscle lowers. The shin muscles of this athlete show a slight activity, but a constant one.

**Conclusions.** Our study has confirmed the hypothesis of B.I. Sheiko, stating that high-skilled athletes use their legs at the beginning of the ascent phase to apply additional force to the bar.

The lower limb muscles activity of high-skilled athletes provides the bone links with the stiff support structure allowing maintaining the pose during dynamic overloads and diminishing the energy loss during the interlinked motion translation.

A low-skilled athlete is observed to have an insufficient control over the muscle activity to fulfill the support function and to maintain the pose.

The founded pattern implies that additional studies should be carried out to examine this fact in detail.

**References**

The highest point in sport life of every sportsman is Olympic medal. However, there is no way to do this if you have no starting point.

If we want to get the highest sport result in the future, we have to start training right away.

The process of training young athletes from the beginning to the championship is called “Sport reserve training”.

We would like to show you the development of youth sport school system in Russia.

In 1914 there have been 1200 sport organizations in Russia and about 45 000 sportsmen. Nevertheless only little part of citizen had opportunity to have practice in sports.

No doubt, there were several great sportsmen such as Alexander Panshin, Nicholas Panin (figure skating), Vasiili Ippolitov (skating), Ivan Poddubnyi (wrestling).

There was a huge gap between Russia and other big countries.

System of youth sport schools in Russia was founded in the 30-s of the last century. Since that time this system has been such an effective system for training young athletes.

That time the construction of specialized sport facilities for young athletes took place.

First youth sport’s law in Russia was declared in 1935.

First sport school was opened in Moscow, Kiev and Leningrad. By 1940 the first sport schools specialized in Olympic sports was opened.

After these events there have been hard times for the country. The Second World War started.

In 1953 the new law in sport sphere was adopted. The new law declared new principles in the system of youth sport schools. Some of them are:

– mass character of youth sport;
– children’s accessibility;
– social useful;
– taking into account the age and individual peculiarities.

The common program of training was established for all youth sport schools.

The main goal of this system was training of the new Olympic champions.

Since the 30-s of the last century and till 1991 more than 8000 youth sport schools were established. All schools were free of pay.
Particularly every Soviet Olympic medalist started his career in youth sport school.
You can see the development dynamics of this system in the diagram:

In the middle 80-s was declared scientific concept of sport reserve training.
Since that time all youth sport schools including 5 different levels of educations from basic to highest sport masters level. This education form had been using till our days in every sport school. Children start to go in sport at the age of 6-12.

In 2005 in Russia was more than 5000 youth sport schools. About 3 300 000 young athletes have practice and 103 000 coaches work’s in this system.
Athletes can have practice in 110 sports. The most popular is soccer, basketball, volleyball, athletics, wrestling, hockey and swimming.
An actuality problem is:
– coaches salary;
– small budget;
– coaches deficit;
– many sport schools do not have their own sport facility’s;
– responsibility for the event.

Nowadays system of youth sport schools is the main part of youth sport in Russia. Many schools are free of pay. Youth sport schools is a big social institute. It’s like “social lift”.
Of course there are a lot of problems in youth sport in our country but youth sport school system was tested by time. And it will be a grate start point for many young people in a long time.

**SOCIOCULTURAL ANALYSIS OF THE EFFECTIVENESS OF FLASH MOBS AS A NON-STANDARD FORM OF COMMUNICATION WITH THE FANS AT THE PARALYMPIC GAMES IN SOCHI**

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**Relevance.** The mass has always attracted attention, and if it is diluted by large scale, the event will be huge! We can say that the popularity of mass dance
performances have grown to be significant. Today not do without them, none of the opening ceremony of the sports events, conducting of solemn parades and Grand opening of the stadiums.

Like any good idea, mass dance shares manifest themselves in new directions. This innovation was a flash mob. These short sudden actions, capable to draw attention of a great number of people and become a viral video on the network. Dance flash mob is also used as a means of team building, where dancers (Moberly) are employees of the company-organizer.

Object: flash mob as a non-standard form of communication
Subject: the contents of the mobs at the Paralympic games in Sochi
Objective: to analyze the effectiveness of mobs as non-standard forms of communication with fans.

Tasks:
1. To analyze the concept of flash mob.
2. Describe the types of mobs.
3. To identify the features of flash mobs.
4. To show the impact of mobs at fans of the Paralympics.

Flash mob is the sudden appearance of strangers in a predetermined place and in specified time. The participants of the script do certain acts, and then quickly disperse, dissolving in the crowd as suddenly as it had appeared. Flash mob is a bright and a little absurd briefly share. Such a definition is presented on the websites of the main Flash mob communities of Russia. Currently, the flash-mob in its pure form is almost gone - it develops, changes, turns into a kind of community, aimed primarily at all interesting, unusual, original and creative.

The purpose of the flash mob.

The purpose of the flash mob actions is to create a "special situation" and to attract the attention of others. The idea is, as a rule, is more abstract than concrete character. Mostly they directed at combating isolation, inferiority complex, a stereotype of behavior, excessive rationality of thinking that interfere with daily experience vivid emotions and is not shy to show them. Participation in this action - introduction to some of universality and confrontation routine in which we live. Raise the plate and feel great conspirator. And, like you a lot, and it gives strength. And at the same time is a challenge, first of all, yourself. Check its determination: could you in light of recent events - the mass terrorist attacks, not to be afraid to go to a public place?"

Types of mobs.

With the spread of the phenomenon of flash mob, began to appear new scenarios, not corresponding to his previous rules. However, they were playing, and then it became clear that the term "flash mob" is no longer able to satisfy everyone. Today, the community developed a very massive complex variations flash mob, including both classic and social actions, the following types.
1. "Long-mob"
2. "Extrim-mob"
3. I-mob
4. Mob-art
5. Date-mob helps people to get acquainted unusual way
6. Mob-House
Recently, in connection with high efficiency impact of mobs at different target audience appeared such form as Proflash translated as "flash professionals") is a public event organized with the purpose of attracting attention and media. Feature ProFlash is the participation of professionals.
However, there are still many ideas of flashmob: spontaneity, the absence of the commander, depersonification. The appearance of such directions is connected with perfectionistic desire to make a show brighter, clearer, more interesting to others and to its participants.
Practical part
This year in Russia, the first country in the history of the Winter Olympic games in Sochi. I managed to take part in the organization of mobs and Prolesha Paralympic Games with the fans together with a team of professional dancers and entertainers. During the week we managed to organize 28 diverse mass demonstrations with spectators, using all kinds of mobs
Sports charging
1. Fit Mob is a sports exercises. Was conducted in the first half of the day passing by Olympic Park.
2. Purpose: the emotional charge, revival, warm-up
Attributes: the rope travel, music, fitball.
2/ Dance mob battle
Goal: achievement of effect of group psychotherapy, a sense of belonging to a common cause, entertainment
Process: the dancers gather two teams and turn synchronously show each other their ability dance
Attributes: music, colored satin ribbon
Effect: after charging and dance battles participants are charged with positive emotions for the whole day, go away, smiling. And smile - this is actually a powerful force.
The Symbol Of The Paralympics
View: Mob art
Purpose: the feeling of belonging to a common cause, due to large-scale event, the acquisition of new friends
Attributes: chalk, to identify the limits of character, MegaFon for regulation of operations
4. Next flashmob is ogether to the victory!
View: socio-mob
5. Purpose: patriotism, support sports teams before competition
Attributes: whistles, vuvuzela, canvases of Russian flag.
4. Avenue of stars - a very interesting and popular among fans flashmob at the Paralympics
After all, we all want to capture their names, their native city at memory
Appearance: long mob - requires preparation and time to conduct
Purpose: self-affirmation, fun, making friends
Attributes: chalk, stars.
After the huge Sochi Avenue of stars was completed, the team of plasmabeam, loud chorus announced city! And people found in a crowd of his fellow countrymen. It was great! and says that the Paralympics brings
5. Sochi: enter the portrait in history
View: Art-mob
Goal: entertainment,
Attributes: color envelopes, flipchart, markers
FlashMover suddenly stopped on the square with coloured frames. By the master they die, and all run together to the person who is photographed. They surround it and create mass on pictures.
After this flashmob, we got a huge number of reviews in social networks, by heshtegam in instagram
6. Sochi - desires are fulfilled
View: Mob-game these action involves some interaction between the participants and, where permissible contacts between them, the agreed actions.
Goal: entertainment
Action: on the area of plasmopara was salicales between ordinary passers-by. Unexpectedly on the square appears and speaks loudly phrase about Sochi, then from the crowd and is joined by a second, third, twentieth, and all speak different phrases about Sochi. It turns out verbal chaos. People zainteresowany in the continuation, as the final is always unexpected.
6. The Sinking
7. Essence: FlashMover get a snake, catching passers-by to his order, vitorya various actions, and the passers-by repeating them without unlinking hands, creating a whol
8. Conclusion
The meaning of mobs, most of the event, aimed at combating isolation, inferiority complex, a stereotype of behavior in the modern world, excessive rationality of thinking that interfere with daily experience vivid emotions and is not shy to show them
At the beginning of the 21st century there has been a breakdown of gender stereotypes, a redistribution of male and female roles in professional work. Female boxers began performing men’s sports: boxing, kickboxing, taekwondo. According to some scientists, through boxing practice specific motives and motivation are formed and men’s character traits develop in women's characters.

A comparative study of gender differences in boxing examined (a) 44 highly skilled boxers (22 male and 22 female) (b) 44 low-skilled boxers (22 male and 22 female). Subjects aged from 19 to 35 years old. To study the athletes’ motives and motivation for practicing boxing such wing techniques as «Motives for sports activity» (E.A Kalinin), «Risk tendency» (G. Schubert), «Motivation for success» (T. Ellers) were used. The t-criterion was used to process the obtained results. What follows are the results of the research in which significant distinctions in studied qualities between four groups were found.

1. The technique – «Motives for sports activity» (E.A Kalinin)
Comparing male boxers of low qualification and female boxers of high qualification reliable distinctions on indicators «need for fight» (t=2,167; at p<0,05) and «need for communication» (t=3,665; at p<0.01) were revealed. Sport passion (competitive motivation) and orientation on acquisition and expansion of a circle of friends were revealed too. They have a preference for notoriety and honor, prone to sharp feelings, expressing aggression during sports. They most fully experience the feeling of satisfaction of overcoming adversity, increasing their self-perception as individuals. Boxing helps to ensure that female boxers start acting and behaving like boxers/fighters.

2. When comparing male boxers and female boxers of low skills, differences in terms of “need for self-improvement» (t=3,383; at p<0.01) have been identified. We can assume that female boxers, at the initial stage of their professional formation, make greater efforts than male boxers. Their motives for training are: a desire to develop a strong character and a need to resolve personal problems and to define the conditions of athletic growth, etc. They believe that only men's sports will help them become stronger, both physically and spiritually, and improve their mental state. Women boxers get a sense of satisfaction from boxing training, from the
opportunities to improve their physical qualities, and developing their mental processes and properties. Such feelings are not identified in male boxers.

3. Comparing male and female boxers, significant differences in terms of “need for self-improvement» (t=2.069; if p<0.05) were revealed. Boxing is a man's sport, so women, to a greater degree, need to make efforts for their development, to strive to perfect themselves as prize-fighters. As the female stereotype breaks down, a woman’s inner personal struggle develops. In the process of training and competing, character, will power and qualities of leadership are formed. These qualities are necessary for complete self-realization in men's sports. For male boxers there are other motives, connected with the improvement and further development of male character traits.

4. The technique – «Risk tendency» (G. Schubert)
In comparing high and low skilled female boxers significant differences in terms of «risk tendency» (t=2.088; if p<0.05) were revealed. Highly qualified female boxers are more inclined to take risks in both sporting and non-sporting activities. They are not afraid to act in new, challenging life situations. They are able to take risks and make decisions. They dominate their motivation for success, achievement and competitive motivation. Highly qualified female boxers seek to express themselves as individuals through (extreme) risk and behave, in many spheres of life, as real fighters. Initially female boxers behave like typical females, they don’t have any fighting spirit. They take much fewer risks than the highly skilled female boxers.

Differences in terms of «risk tendency» (t=3.088; at p<0.01) were revealed while comparing the results of studies of high and low skilled female boxers. Male boxers are more prone to risk. This is a natural manifestation of their sporting nature. They like to express their identity and to manifest themselves in such a way. It is important to note that the risk of male athletes is mostly justified. During training they acquire specific expertise, making their risks deliberate after carefully weighing all pros and cons. Only after absolute decisiveness they act, «shoot», «counter-attack». They have dominated their motivation for success and achievement.

Comparing the results of male and female boxers of low qualification significant differences in terms of «risk tendency» (t=2.862; at p<0.01) were obtained. Here gender differences in boxing are also revealed. Males risk more, are active, make decisions and are not afraid to lose. They are motivated by achievements and results. Female boxers act much more cautiously and carefully.

Statistically significant differences between the data of female boxers and boxers of high qualification in terms of «risk tendency» (t=0.621; if p<0.05) were not identified. Boxing promotes the formation of boxer’s qualities - fighters who are not afraid to act and take risks.

When comparing the results of studies of male and female boxers - statistically significant differences in terms of «risk tendency» (t=2.314; if p<0.05) were found, which pointed to gender differences in boxing.

Males display a greater tendency for risk taking than females. Resorting to risky and extreme actions, males prove to themselves and to other people their
strength and masculinity, demonstrate their superiority, and strengthen their aspirations for leadership.

5. The technique of «Motivation for success» (T.Ellers)
When comparing the data of high and low skilled female boxers there were differences in terms of «motivation for success» (t=3.433; at p<0.01). The highly skilled female boxer’s main motivation is to succeed. Perhaps this quality has been developed in the process of training and competing. This level of motivation is less manifested in low-skilled female boxers.

Significant differences in terms of «motivation for success» (t=2.040; if p<0.05) were exposed comparing the results of highly skilled male and female boxers. Highly qualified female boxers are more motivated to succeed than male boxers. Generally, we can say that female boxers make it their goal, and are motivated to achieve high results. They focus only on victory and exclude all frustrations. Now we can assume two situations: either female boxers define themselves as boxers/fighters, showing signs of excessive self-appraisal, or they are confident in themselves, their strength and their high level of skill.

When comparing the results of female boxers of high qualification and male boxers of low qualification, significant differences in terms of «motivation for success» (t=4.078; at p<0.01) were revealed. Highly qualified female boxers are motivated only by victory and success. This is reflected in their courage, determination, initiative, optimism, independence, and manliness compared to lower qualified males.

Based on the research it is possible to formulate the following conclusions: first, motives change as professional boxers grow and a specific motivation boxing training is formed. Second, aspiration to define themselves as fighters, build a strong character, gain confidence in themselves and in their power. Finding and breaking down inherent social stereotypes are also becoming motivations for female boxers to train. Third, gender differences exist in boxing, however, they are less apparent in highly skilled male and female boxers.

MEANING OF ENDOGEOUS CZCLES IN TRAINING PROCESS OF PARALYMPIC ATHLETES

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Experimentally proved 'Consistent pattern of time genetic programme of individual human development endogenous annual cycle (it begins from conception)
and its quantum in ontogenesis’. This comes from ferment activity of blood cells, dynamics of sportsmen personal records, number of illnesses and lethal cases.

Topicality is a new approach to the analysis of the Paralympic sports results based on the account of sportsmen's endogenous cycles. It is assumed that the result of paralympic athletes, depends on their endogenous cycles.

Purpose of the research: Substantiate a relation of the athlet's results to their individual biorhythms at the Paralympic Winter Games in Sochi 2014 and at the Paralympic Summer Games in Beijing 2008.

Objectives of research:

1. Study of the scientific and methodological literature on the topic of research and analyze of the athlete’s results at the Paralympic Games considering to their biorhythms.

2. According to the scientific and methodical literature substantiate a relation of the athlet's results at the Paralympic Games to their biorhythms.

3. Substantiate the effectiveness of the planning of the training process of paralympic athletes guided by results of the research of their individual biorhythms.

Proved that scientific discovery 'Consistent pattern of time genetic programme of individual human development endogenous annual cycle and its quantum in ontogenesis', also applies for analysing of results of sportsmens with disabilities. It can be a new approach of planning training and competitive process of paralympic athletes.

**SOCIAL ASPECTS OF DOPING USE**

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Cultural studies of doping phenomenon and philosophical analysis of the problem of the "ends and means" correlation and compliance in a variety of social activities demonstrate that elite sport is not a unique context where there is an issue of use substances of natural, narcotic and synthetic origins that allow to enhance performance; and point out that the use of doping in the field of sport is directly related to modern society pharmacolisation. Sport not only responds to social problems, but also appears as its specific indicator [1].

This research evaluated modern approaches to the doping phenomenon, types and forms of doping abuse existing in various types of social contexts, some forms of competitiveness within social activities were studied, the role of doping was defined both in competitive and non-competitive social activities via comparative analysis, the core of doping as a social problem was identified and described.

The representation of “doping” concept in the terms of historical and socio-cultural approaches is not finalized and is being studied. The question about doping as a form of cheating in the field of sport, on the one hand, and as practices in various
social activities, on the other hand, acquires the features of a discussion. This subject is actively being developed by researchers from different countries, who focus their attention on various aspects of the question of the social sense, socio-cultural content of doping issues in the modern world.

Arguing about the modern sport phenomenon, I. M. Bykhovskaya considers necessity to develop research of sports in historical and cultural context, as sport as a sociocultural phenomenon and a social institution reflects the features of epoch and culture, social situation and the dominant ideology. The researcher mentions that sport practices related primarily to the manifestation of the maximum performance of a human as “a corporal man” with development, improvement and “competitive presentation” of his corporal and physical natures. And speaking about corporality as a socio-cultural phenomenon, the researcher presents the main groups of factors determining the nature of changes taking place within biological human body, and factors that influence the characteristics of perception and evaluation of the human body [2, 3]. After all, the socially accepted standards and prevailing culture ideals and values cause human body modifications, which indirectly leads us to the doping nature speculation.

Most researchers are intended to admit that doping is unacceptable in the world of sports. However, opinions are divided, some believe that doping - a serious deviant behavior to be fight against, the others think it is an undesirable but inevitable consequence of institutionalization and professionalization of modern sports. It is needed to mention that worth noting that one of the main reasons initiated the prohibition of doping was growing concern about the health of athletes and the image of sports. The use of various substances and methods to improve performance was found unethical only when considering doping from this point of view [13, 16]. If we the extent of this problem development in foreign countries, the contribution of «The International Network of Humanistic Doping Research» (INHDR) should be mentioned (created in 2002).

V. Moller has carried out a cultural analysis of doping phenomenon based on the discrepancy between the use of the performance-enhancing substances by cycling sport and the outrage the revelations engendered among the public calling the shots. Entering into scientific circulation such term as “anti-doping fundamentalism”, the author describes his research as the "an interest in in the connection between doping and the nature of elite sport ". Being safe not to advocate for the legalization of doping, the author builds his argument on the idea that "the Devil " may be in the sport itself. Doping requires a deeper approach than just a representation of the arguments against the use of performance-enhancing drugs, it is necessary to start a debate, rejecting common negative perception of doping in culture and society [12,14].

One of the network members, G. Spitzer, writes about the necessity of humanistic enquiry of doping, as medical and legal approaches give the supporting role to the research about social aspects of doping. At the moment we can talk about doping as a global social problem. The author talks about distribution of the various doping methods among the wide public - from amateurs to representatives of certain
professional areas (military service, fire fighting, etc.), thereby showing the diversity of doping agenda as a social phenomenon.

Empirical studies of the prevalence of doping in Germany and Europe reveal that number of abusers in commercial fitness clubs as well as clubs that are not covered by the sports system exceeds the number of dopers among competitive elite athletes. Recently, our society has seen an increase in number of adolescents and middle-aged people that are not involved in sports on a professional basis who, however, use steroids for physical development of their bodies, although there is still no evidence that steroids help building muscles without training [1, 15].

Public sentiment towards the use of doping agents in various activities is quite ambiguous: in some activities the use of performance-enhancing drugs can be excused and morally acceptable, in others – is unacceptable and immoral. How to assess and position doping from this point of view?

J. Hoberman argues that “doping – is unconventional, or at least unusual method of increasing mental or physical abilities. It's part of a lifestyle in which the highest value is the maximum performance, and the meaning consists in raising them”. Elite sport and society with its inherent forms of competitiveness are similar in content which reveals “the dominant principle of the highest achievements and the basic idea of competition” [7].

Doping is widely used and being taken outside the world of sports in various social contexts, including various forms of competition. For example, doping in the world of classical music is becoming quite common. Beta-blockers help calm musicians down and steady hands, enabling better delivery of a piece more likely to receive positive reviews and larger audiences, and moreover, the use of stimulants may give an advantage in winning the first place or gaining commercial success career [12, 18].

Doping in the academic context also quite real [4, 7, 12]. Many researchers have even introduced a term called “academic doping”, raising questions about how to determine the effect of “drugs that increase cognitive performance”. High level of competition in universities and stress are increasingly becoming the reasons for which students and applicants tend to use stimulants. Any student can use different combinations of modafinil and methylphenidate, for example, taking a couple of caffeine tablets in order to be able to study longer before an important exam or focus on the content of lectures and seminars. This student may win a scholarship or a prestigious internship over another, “clean” student. French researchers indicate the increased consumption of psychotropic drugs that cause serious public concern: 30% of students are resorting to drugs use at least once a year, and every fifth student takes stimulant medications before the exam. Among the popular medical agents that students and schoolchildren take, we can distinguish vitamins and anti-asthenic medications. Often, students even use cannabis to relax (20%), and sometimes they use even stronger substances, such as tranquilizers and beta-blockers (10%).

While this kind of doping is considered legal (except, of course, drugs and potent medications that can be obtained only by prescription), it is not approved by society, but also is being initiated by the current state pharmacologization. This
phenomenon provokes quite a paradoxical situation when teachers recognize use of stimulants such as caffeine and amphetamine valid in preparation for important exams, but the use of similar structures and effects methods during sport competitions is considered fully unacceptable [4, 7].

The question that our society needs to ask relates to implementing ethical and moral principles: does the desire for social progress allege the means which people may use to achieve them? J. Hoberman says that “modern society, focused on performance, has not solved this paradox yet” [7].

If I am referring to non-competitive activities, the use of doping in extreme contexts should be mentioned, for example, the well-known cases of the use of various stimulants by military and emergency services [7, 10, 12]. In this context, the negative connotations of “doping” might be reconstructed as “self-sacrifice”. J. Mazanov also describes another social aspect associated with self-sacrifice; it is military service. If you think about the historical background of doping in sport, since World War 2 soldiers were given cocktails of drugs to keep them fighting, and it is known that German soldiers were provided with amphetamine as “pep pills”. Moreover, amphetamine derivatives, as pervitin, also were used by pilots during the Vietnam War and the Gulf War [7, 12, 22]. Researchers develop this idea by saying that it is naïve to think that this aspect of the military has given way to social mores around doping in sport. The use of some or other substances from the rational approach perspective of their use is directly related to the perception peculiarities prevailing in society. In this context, the negative connotations of doping might be reconstructed as a duty of care to front line soldiers. Although government and public organizations rather condemn such practices which leads to the fact that the military continue to conceal the use of doping agents. That unmistakably evokes actions of sports teams members.

Doping acquires features of a wide social issue, there is a question about various approaches: a therapeutic need for doping drugs and the use of stimulants to improve performance. No one would be surprised if it is reported about the use of drugs at the workplace. Truck drivers take amphetamines, miners in the Andes chew coca leaves, classical music performers use beta-blockers, and military police, prison officers and doormen - steroids [7, 10, 12, 18, 22]. Society pharmacolisation leads to uprise of doping culture, and athletes do not play key roles here and, indeed, are not responsible for its occurrence. Møldrup and colleagues argue the penetration of doping into a society can be explained by “medically enhanced normality” [13], where marketing and other social pressures constantly reinforce that people are inadequate or missing out and that doping can help people achieve these norms.

Therapeutic aims of drugs use among professionals outside the world of sport were long ago replaced in the minds of people to a pragmatic purpose of achieving high performance. Then the question arises - what is the difference between elite sport doping culture and the use of anabolic steroids by ordinary people? J. Hoberman thinks that the world of labor, focused on high performance and working ability, is very little different from the world of sports; the workplace level of performance is a critical factor at work places, and its level boost is considered a sign
of success. The use of a number of doping methods which are successfully used in various social contexts to improve the results is strictly prohibited among athletes.

Solution to such paradoxes of modern society requires a wide range of studies, including research of doping as a phenomenon in the context of cultural and historical analysis. The study of the historical antecedents, various cultural concepts and approaches to this phenomenon might help to understand and uncover what causes gave rise to various forms of doping in the world of sport. Furthermore, doping and performance-enhancing in sports and its influence to society might require a cross-disciplinary approach that integrates research from three different domains of academia - natural sciences, social sciences, and humanities - to shed new light on the issue of doping and performance enhancement in sports.

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ROLE OF FUNCTIONAL ASYMMETRY IN TIME AND SPACE PERCEPTION IN TOP-LEVEL ATHLETES QUALIFYING IN TABLE TENNIS

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Actuality. The time and space are basic science and culture notions. Studying time and space biosystems is one of the most important actions of modern theoretical biology-chronotopobiology [7]. Lately sports physiologist pay attention to the problem of the man’s ability to time and space characteristics perception. This problem considerably influences on the achievement of the success in the sports activity. In such sports types where quickness is the most important motor quality latent time of the simple sensomotor reaction (LTSMR) is widely used for the revealing the sports latent [8]. It is well known that the visual motor reaction asymmetry depends on the accentuation of the time as the factor of the preliminary tuning, which is the possibility to manage manual asymmetry aimed at the optimization of functional systems [2]. Maximum frequency of is also one of the indices of the psychomotor activity speed aspect [4]. It is also known that persons with the different asymmetry profile are adapted to the sports activity in a different way. The combinational game is typical for right-handed tennis players: they can effectively act both in the attack and defence. An explosive and attacking game style is typical for left-handed players. The left individual profile of the inter-hemispherical asymmetry (IPA) in tennis players makes them uncomfortable competitors for right-handed players [9]. Left-handed persons make complex actions which appear unexpectedly more efficiently and at a higher level of multi-faced provision and the time deficit; on the contrary, right-handed persons make common actions [9]. It has been proved that the IPA and firstly the degree of the motor asymmetry influences on the latent time of the motor reaction on the sound and light stimula and tepping-test parametrs [3].

Thus, the research of the role of an individual’s functional inter-hemispherical asymmetry in the process of the perception of time-space qualities in different sports type’s athletes including sportsmen specializing in the table tennis is really actual.

The research aim: studying peculiarities of the time and space perception accuracy in athletes specializing in the table tennis taking IPA into account.

Tastes. 30 tennis-players of Masters of Sport and Candidate to Masters of Sport qualification, and also 30 youths who don’t in for sport were examined. All of them were of 17-25 aged young people.

Methods of the research: the computer programme «A researcher of man’s space and time qualities» was used (Omsk, 2008) to evaluate man’s space-time characteristics. LTDR for the light and sound tepping-test for 10 sec (T10), 30 sec
(T30) and tiredness coefficient (CT, %) for the leading hand were analyzed. The results received were worked out with the application of the computer statistical programme «Stadia 7.0». Ethical norms of a man research were observed.

**Research results discussion.** It is established that space-time characteristics of tennis-players with the different IPA and first of all with hands motor activity asymmetry and that of untrained right-handed youths differ considerably in LTMR indices for the light and sound.

Thus, tennis-players independently of in IPA have authentically shorter LTMR time for the light and sound in comparison with untrained persons (fig. 1; p>0, 05). It testifies to high agility of nervous processes in persons practicing table tennis [6].

The LTMR dependence for the light on the asymmetry profile is revealed. In this way, left-handed tennis-players reacted to the light irritant quicker than right-handed persons (0, 131+0, 0009 and 0, 141+0,001 sec; p<0, 05). On the contrary, left-handed tennis-players reacted slower to the light irritant than right-handed persons (0, 128+0, 004 and 0, 121+0, 0009 sec; p<0, 05). So, the fact, that people whose right hemisphere dominates perceive the visual information better in comparison with those people when the left hemisphere is the dominating one, is confirmed. It means that the right hemisphere answers for the carrying out the space-visual information [9].

![Fig 1. Latent time of motor reaction to the light and sound in untrained youth’s tennis-players](image)

Sportsmen practicing table-tennis have independently from the IPA, authentically better indices of the tepping-test for 10 sec, 30 sec, and tiredness coefficient, than untrained youths (Fig 2). All this characterizes speed qualities and the special endurance.

The dependence of maximum frequency of movements (MFM) in the tepping-test on the asymmetry profile has been revealed. Thus, for the first 10 sec of testing while carrying out the tepping-test speed indices in left-handed tennis-players for the leading left hand were analogous to right-handed tennis-players for the leading right hand (71+2 and 69+1; p>0,05).
However, results of the tepping-test for 30 sec showed that left-handed sportsmen managed with the task for the speed endurance better than right-handed sportsmen (213±5 and 200±2; p<0.05).

The coefficient of tiredness showed that left-handed and right-handed youths managed with the task equally well (70±2 and 68±1 %, but P>0.05).

Conclusion. Qualified tennis-players differ from untained youths with the quicker simple sensomotor reaction to light and sound irritants independently from the profile of interhemispherical asymmetry. They also differ with better results in the tepping-test.

The dependence of space-time characteristics from the asymmetry profile reveals itself in the fact that left-handed sportsmen perceive the visual information better the sound information. Moreover, left-handed sportsmen characterize themselves also with higher speedy endurance of the leading hand in the tepping-test (T30).

Thus, table tennis practice increase one’s ability to the perception and the time evaluation and then it depends on the asymmetry profile. All the regularities revealed should be considered in the sports selection and the individualization of the training process.

References


**EXTREME SPORTS AT THE OLYMPIC GAMES**

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For any sport to become an Olympic - means going to a new level , a more prestigious and rewarding . However, in order to be included in the Olympic Games , an Olympic sport must meet the following criteria:

A sport or discipline may be included in the Olympic program if the IOC determines that it is widely practiced around the world, that is, the number of countries and continents that regularly compete in a given sport is the indicator of the sport's prevalence. The requirements for winter sports are considerably lower than for summer sports since many fewer nations compete in winter sports. The IOC also has lower requirements for inclusion of sports and disciplines for women for the same reason.

Many sports are not recognized as Olympic sports although their governing bodies are recognized by the IOC. Such sports, if eligible under the terms of the
Olympic Charter, may apply for inclusion in the program of future Games, through a recommendation by the IOC Olympic Programme Commission, followed by a decision of the IOC Executive Board and a vote of the IOC Session. When Olympic demonstration sports were allowed, a sport usually appeared as such before being officially admitted. An International Sport Federation(IF) is responsible for ensuring that the sport's activities follow the Olympic Charter. When a sport is recognized the IF become an official Olympic sport federation and can assemble with other Olympic IFs in the Association of Summer Olympic International Federations (for summer sports) or Association of International Olympic Winter Sports Federations (for winter sports). A number of recognized sports are included in the program of the World Games, a multi-sport event run by the International World Games Association, an organization that operates under the patronage of the IOC.

The governing bodies of following sports, though not contested in the Olympic Games, are recognized by the IOC

Currently popular are the so-called extreme sports. According to a U.S. research sites (http://www.scienceline.org/) at the end of 2013 the number of people seriously keen on extreme sports in the world is growing very rapidly: the number of extreme statistics for the last 30 years in the U.S., some European countries, Australia has tripled, and in Russia (in the last 20 years) increased by almost 1.5 times. And growing number of extreme sports themselves.

Air sports
The term Air sports covers a range of aerial activities such as:
– Aerobatics;
– Parachuting;
– Paragliding etc.
The World Air Sports Federation, is the world governing body for air sports, aeronautics and astronautics world records. It have 86 active members

Motorcycle racing
Motorcycle racing (also called moto racing and bike racing) is a motorcycle sport of racing motorcycles. Federation of International Motorcycling is the global governing/sanctioning body of motorcycle racing. It represents 111 national motorcycle federations.

Mountaineering
Mountaineering or mountainclimbing isthe sport, hobby or profession of hiking, skiing, and climbing mountains.

International Mountaineering and Climbing Federation is the organization that represents several million mountaineers and climbers, world-wide, on international issues. It now has over 88 member associations from 76 countries.

Roller sport
Roller sports are sports that use human powered vehicles which use rolling either by gravity or various pushing techniques. The international governing body is the International Roller Sports Federation (FIRS). The FIRS gathers almost 100 national federations, including countries from every continent and they are affiliated with the International Skating Union.
Sport climbing

Sport climbing is a form of rock climbing that relies on permanent anchors fixed to the rock, and possibly bolts, for protection.

The International Federation of Sport Climbing (IFSC) is the international governing body for the sport of competitive climbing, which consists of the disciplines lead climbing, speed climbing, and bouldering. It have 64 active members.

Surfing

Surfing is a surface water sport in which the wave rider, referred to as a surfer, rides on the forward or deep face of a moving wave, which is usually carrying the surfer towards the shore. The International Surfing Association (ISA) is the world governing authority for surfing and all its waveriding disciplines, including bodyboard, kneeboard, longboard, tandem, skimboard and bodysurf. There are 51 full members.

Underwater sports

Underwater sports is a group of competitive sports using one or a combination of the following underwater diving techniques—breath-hold, snorkelling or scuba including the use of equipment such as diving masks and fins.

World Underwater Federation was officially established on 9–11 January 1959. Its membership consists of at least 130 national federations from 5 continents.

Waterskiing

Water Skiing is a surface water sport in which an individual is pulled behind a boat or a cable ski installation over a body of water, skimming the surface on two skis or one (slalom) ski.

International Waterski and Wakeboard Federation (IWWF) is the international regulatory body promoting water skiing, wakeboarding and other water sports, setting the official rules of water skiing and official tournaments, coordinating the work of national federations.

The IWWF currently has 84 Member Nations.

ONGOING PROFESSIONAL DEVELOPMENT FOR PE TEACHERS

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Introduction. "Physical education is the study, practice, and appreciation of the art and science of human movement" (Harrison, Blakemore, and Buck). While movement is both innate and essential to an individual's growth and development, it is the role of physical education to provide instructional activities that not only promote skill development and proficiency, but also enhance an individual's overall
health. Modern life puts up new tasks to the training of physical education teachers. Technological progress, new ways of teaching, new equipment for PE lessons require new levels of knowledge for PE teachers.

The object of the present study is to define contemporary educational programs for PE teachers. We are studying different educational programs available for American PE teachers to bring ideas to the educational system of the Russian Federation.

Methods. We did a scientific analysis and studied professional American literature.

Discussion. Most states in the USA require some sort of ongoing accumulation of continuing education credits for PE teachers to retain their licensure. Most school districts create opportunities for continuing education related to topics relevant to the purposes of schools and needs of students in their community. Unfortunately, these opportunities are often too generic to address the specific needs of physical educators, and are often perceived to be ineffective.

We consider that it should be not only the responsibility of a single school but also a personal PE teacher responsibility to develop their professional skills on an everyday basis. In the USA there is a wide variety of tools and opportunities to study for teachers in the internet. Websites like http://www.pecentral.org/, http://www.shapeamerica.org/, www.LetsMoveInSchool.org are developed by professionals for professionals. PE teachers can find every day newsletters, links, share experiences, watch educational videos and pictures. Being a member of listed organizations and paying a very small fee every month a PE teacher can receive all information needed via his/her personal e-mail.

Things that can be done on a month basis are conventions, conferences and exhibitions for professionals. There are a lot of organizations which organize professional meeting in different states.

What a teacher can also do to increase his/her level of education is to take online educational programs. These programs are designed for those who are certified physical education teachers or those who hold a teaching certificate in another content area. Course content and experiences are focused on preparing individuals to plan, implement, evaluate, and conduct research in physical education program and curriculum development and instructional strategies in school settings.

Many gym teachers are asked to teach other subjects as well as their physical education responsibilities. This is especially common in smaller school districts where there might not be a need for a full-time physical education teacher. Getting a degree that allows to teach another subject makes a teacher more desirable to potential employers.

Conclusions.

The key factor which affects the quality of physical education at school is a certified PE teacher who receives ongoing professional development. Depending on the state and school district, teachers may be required to clock a certain number of hours studying continuing education. These courses will teach the latest methods and
practices in the physical education field and may run the gambit from nutrition to new exercises that can be incorporated into class.

On-line courses are designed to advance individual instructional skills, develop contemporary curriculums, and increase the quality of community and school based physical education programs.

It is important to create professional websites, organize contemporary seminars, conventions along with official governmental continuing education programs for PE teachers in Russia. In our current studies we are trying to create, manage and apply a contemporary educational program for PE teachers at state secondary school.

ABOUT NEEDS OF SPORTS CLUB CREATION FOR DISABLED PEOPLE WITHIN THE NABEREZHNYE CHELNY BRANCH OF VOLGA REGION STATE ACADEMY OF PHYSICAL CULTURE, SPOTRS AND TOURISM

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Relevance. According to World Health Organization in 2011 there were about 15% of disabled people in the world and their quantity increases every year.

The attitude towards physically disabled people serves as the indicator of development of public consciousness. In recent years this relation improved a little in our country.

The main objective of involvement of physically disabled people (PhDP) to regular occupations by physical culture and sport - to restore the lost contact with world around, to create necessary conditions for reunion with society, participations in socially useful work and health rehabilitation. Besides, physical culture and sport help mental and physical improvement of this category of the population, promoting their social integration and physical rehabilitation.

Sports and improving activity in such cases is an effective prevention and restoration of normal activity of an organism, and also promotes acquisition of that level of physical readiness which is necessary, for example, for the disabled person in order that it could use a carriage, an artificial limb or the orthosis. And it is a question not simply of restoration of normal functions of an organism, but also of restoration of working capacity and acquisition by people of labor skills.

As of 01.10.2012 the total number of disabled people makes 316,84 thousand people in Tatarstan, from them about 10% live in Naberezhnye Chelny. During the period from 1994 to 2002 4 medical-social centers for people with deviations in a
state of health were opened in Naberezhnye Chelny: "Sun" – the rehabilitational center for children and teenagers with limited opportunities, "Asyltash" – the social and rehabilitational center for minors, AUSO "The Naberezhnye Chelny House Boarding School for Aged and Disabled People", SBI “Center of Rehabilitation of Disabled People Izgelek” in which conditions for accommodation and rehabilitation of disabled people, veterans of the Great Patriotic War and work are framed. The full range of services is rendered: improvement and rest of veterans; rehabilitation of disabled children aged from 4 till 18 years and the medical and pedagogical help to their families; temporarily living and social rehabilitation of the minors which have appeared in a difficult situation, citizens without a certain residence. Stay duration in these centers from 15 days to three weeks.

At the moment in branch of academy 25 disabled students on all nosological groups (to hearing, vision, with ODE pathology) study. It is planned that the Naberezhnye Chelny branch Volga Region State Academy of Physical Culture, Sport and Tourism becomes the scientific and methodical center of development of mass adaptive sports in the region. Disabled athletes will have opportunity not only to train on the basis of branch, but to get higher education with a further work arrangement as adaptive sports coaches in Sports Schools for Children and Juniors, and as within additional education in various youth centers and the organizations for a residence.

Due to above, it is actual creation on the basis of the Naberezhnye Chelny Branch Volga Region State Academy of Physical Culture, Sport and Tourism sports club of disabled people.

Its tasks will be:
1) rising of a physical activity of physically disabled people;
2) promotion of physical culture and adaptive sports among disabled people;
3) development of adaptive sports movement of disabled people and persons with deviations in a state of health of Naberezhnye Chelny;
4) strengthening of friendly communications among athletes with the limited motive opportunities, living in the territory of Tatarstan;
5) involvement of Volga Region Academy students to organizational and sports work with disabled people.

Sports club will work on three main types of sports: volleyball sitting, for persons with disturbance the ODE; goalball, for persons with vision disturbance, and bocce, for people with the diagnosis of paralysis infantilis cerebralis.

It is necessary the standard gym with a marking, volleyball balls and a grid (volleyball sitting), bandages for the eyes, the sounded ball, protective equipment (goalball), sets of balls for bocce (Bocce) for realization of this idea.

As a result of implementation of this project we plan:
1) to promote of adaptive sports development in Naberezhnye Chelny and in Tatarstan;
2) to enlarge number of disabled athletes;
3) to improve indicators of health and physical qualities engaged;
4) to dilate possibility of disabled athletes participation in city and regional competitions;
5) to increase level of students competence of specialty and the direction adaptive physical culture of NB "Volga Region GAFKSIT" in the field of adaptive sports.

Monitoring of a functional condition of an organism of clubmen will take place in a type of complex hardware and test inspection in educational and scientific intercathedral laboratory of academy. It will develop rehabilitational programs with use of the equipment of the medical center for restoration after exercise stresses.

We consider that active sports and sports occupations, participation in sports competitions and rehabilitational programs will allow physically disabled people to restore mental equilibrium, to take off effects of isolation, will return feeling of confidence and respect for, will give the chance to return to active life.

We are convinced that application of agents of physical culture and sport is effective, and in some cases the only method of physical rehabilitation and social adaptation of physically disabled people.

THE USE OF ADDITIONAL PHYSICAL ACTIVITIES FOR TRAINING PROCESS IN INCREASING MOTIVATION OF AN INDIVIDUAL AND GAINING SOCIAL EXPERIENCES OF SCHOOLCHILDREN

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**Topicality.** In theory and methodology of physical education principles installations for changing the system of physical education have been formulated long ago. The main installation directs this process to implementing the principles of humanistic pedagogics and psychology.

The main purpose of changed those conceptual basis of pedagogical process is the formation of physical education. First, projecting of PE lessons at school. Along with traditional PE lessons they have been used additional physical activities of the young generation.

In literature, on the problem of physical education organization out of PE lessons, most authors follow the traditional base of education, where traditional forms of practice are considered as physical training, and only some of them are means of forming interests interest, needs and motivation in physical perfection.

In my opinion, additional physical activities have got greater pedagogical potential, in which it is possible to influence to gain social experiences in the process of forming personal physical culture. It is not well investigated. The necessity of scientific substantiation of organizing additional physical activities is quiet actual.
The hypothesis of our investigation assumes pedagogical technology additional physical activities at schools, based on interaction with sports schools and institutes and universities of physical education, allowing by means of participation in training, sport events, social experience in sports, masssports events to get social experience and facilitate efficient development of their physical culture, contribute to increasing motivation to taken part in physical activities and sport, thus it will increase the level of knowledge and skills in this direction.

**The subject of our research** is additional physical activities of different aged schoolchildren with technology of interaction with sports schools, physical education institutes of higher learning.

**The object of our research**: the process of physical training schoolchildren out of school.

The aim is to define pedagogical technology of additional physical activities at schools, providing effective development of their physical culture.

The tasks are:
- To substantiate the expediency of using interaction of higher schools according to additional physical activities in practice;
- To worked out technology of additional physical activities providing effective forming their physical culture.
- To confirm theoretically and experimentally the importance and expediency of modeling pedagogical process at additional physical activities classes to increase efficiency of physical education to raise motivation and gain social experience.

**The methods of our research:**
1) Theoretical analysis and survey of scientific literature;
2) Generalization of author's experience of PE teachers and coaches;
3) Analyzing of documentary materials (notebooks passing sports standards during the academic year);
4) Pedagogical modeling;
5) To study programs on specialization "theory and methods of physical education";
6) Pedagogical observation with using photo and video lessons;
7) Questionnaireing;
8) Tests (tests);
9) Pedagogical experiment;
10) Computering (Methods of logical modeling, image analysis and mathematical statistics).

Experiment are being conducted at school № 320 Primorsky district (Saint-Petersburg) together with the Department of Theory and Methods of physical education The Lesgafit National State University of Physical Education, Sport and Health, St. Petersburg (Russia), from 17 January 2011 up to now. During the summer period the experiment is being continued at children's camp.

The novelty of research consists of substantiation of a new theoretical and methodological approach to organizing of different physical activities out of school.
We have defined factors of expediency attending training sessions, competitions at sports schools;

The classification of additional physical activities has been worked out on basis of which the functional features to form successive stages of their physical culture.

We have created system-formed factor (interaction with sportsmen of high grade) organization of additional physical activities and have substantiated technique of its using.

Results. Using pedagogical technology of interaction with sports school and physical education institutes of high learning, visiting training sessions of high qualified teams and different events will allow not only to increase the level of motivation involved, but also will gain social experience in the process of visualizing experience athletes, positive transferring knowledges, abilities and skills as well as changes in motor activity and progress as at PE lessons and at section and competitions.

Conclusions. Knowledge, experience and exercises learnt at PE lessons are perfected at additional physical activities. To do physical education as a process of continuous action during a short period of time, as the daily cycle, week, or month; to create better conditions for getting a habit to regular activities, and, consequently, to promote the physical culture in students life, to contribute self-expression, self-realization, self improving, personal qualities; to achieve maximum results during training process and out of it, sports adaptation and socialization. All these are primary function of additional physical activities.

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Introduction. Nowadays infantile cerebral paralysis is considered to be one of the most widespread children diseases affecting central nervous system. This alarming statistical data poses many challenges for socialization and integration of this kind of children to the modern community. The inclusive education can be suggested as a possible solution of this problem. It ‘is an ongoing process aimed at offering quality education for all while respecting diversity and the different needs and abilities, characteristics and learning expectations of the students and communities, eliminating all forms of discrimination’ (UNESCO, 2009, p.126).

However the idea of inclusive education doesn’t have widespread social acceptance in today’s Russia. As one of the main drawbacks they mark is the psychological and communicative problems which a child with special needs have to put up with.

The object of our research is: Adaptive physical education of the cerebrally-palsied children of primary school age.

The subject of our research is: Psychophysical development of cerebrally-palsied children in inclusive class.

Hypothesis of our research includes: Psychophysical development and psychical state of the cerebrally-palsied children are better in the inclusive educational system.

The aim of our research is: To compare psychophysical development and psychical state of the cerebrally-palsied children, studying at the special school versus the children with the identical background included in the comprehensive classroom. And confirm the promoted hypothesis.

The main tasks of our research:
1. To analyze and generalize the scientific literature about Inclusive education.
2. To compare the development of physical qualities in both groups of children.
3. To compare the mental development of children from both groups.
4. To determine and to compare the psychical state of children in both groups at the PE lessons.
Methods:
1. Close review of scientific literature.
2. Analyzes of the medical records.
3. Testing of physical conditions (Physical development tests elaborated by "The Turner Scientific and Research Institute for Children's Orthopedics."
4. Testing of mental conditions (the verbal reasoning test, the short-term memory test, the eye-mindedness test)
5. Testing of psychical state (Kunin physiognomic test, Prokhorov-Gening color-drawing test)
6. Statistical processing of data

Results. The research has revealed some differences between the levels of physical development of the children from control and experimental groups: the level of physical qualities development of children from special school was a little higher. We can explain these results by the fact that school for cerebrally-palsied children are provided with special advantages such as equipment and sessions of physiotherapy and massage.

Research of the children’s mental conditions in both experimental groups didn't reveal any significant differences and showed the average level of development. However the results of the test found out that the development of higher nervous activity among cerebrally-palsied children studying in the inclusive class is closer to that of their healthy peers from control group.

On children’s drawings from the first experimental group (from special school) the pink, green and lilac colors prevailed, that shows such character features as concentration, dreaming, imagination, sincerity. Whereas in the drawings of the second experimental group (children from inclusive class) there prevailed red and yellow tones. It indicates that at these children’s leading character traits are interest, activation and joy.

Conclusions
1. The main idea of the inclusion is giving students a chance to build relationships with one another and fully participate at the school activities.
2. The research has revealed some differences between the levels of physical development of the children from control and experimental groups.
3. The research of the children’s mental conditions in both groups didn't reveal any significant differences and showed the average level of development.
4. There were revealed some differences in children’s psychical state during the PE lessons. The prevailed character features among the children from special school were concentration, dreaming, imagination, sincerity. And children’s leading character traits in the inclusive class were interest, activation and joy.

We can state that the emergence and the expansion of the inclusive educational system the parents of the children with special needs will be given a chance to choose the development path for their children: either following the medical model, represented by special schools, or the social model, provided by all the inclusive schools.
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