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PSYCHOLOGICAL PREDICTION ALGORITHM OF SUCCESS IN PERFORMANCE OF ATHLETES

The relevance of research. At present, there are such socio-economic conditions that make it very desirable to build individual long-term forecasts of athletes’ performances. For the preparation of highly qualified athletes a long period of time is required. The duration of this period was initially determined not only by external circumstances, but also by internal conditions. These conditions are the individual sports important qualities (ISIQ). In this case, it is very important to carry out scientific and practical forecasting of the sports potential success of the students.

Even if prediction of the success of sports activities is conducted in the present, it is ineffective. The question is the selection of children to practice a particular sport, often carried out on the basis of either physical development or success (based on the results of any physical exercise). It is clear that this is ineffective because, as a rule, no connection between the results of such tests and the growth of sports results.
In addition to the characteristics of preparedness of beginners in a particular sport, the properties of their body and mind are relates to the qualities of SIQ. If in relation to the body of the future athlete, the coach has sufficiently clear criteria for predicting the success of the performances of this athlete, then there is no clarity regarding his psyche. Why is this situation? The main answers to this question are the following three circumstances: the features of the body of the future athlete are either obvious (especially morphological) or easily measured (anatomical and physiological), and then the psychological characteristics for the coach conducting the recruitment or selection of athletes are hidden; meaning to the sports activities of certain biological ICS are known to the coach (this is taught in high schools of physical culture), the value of psychological qualities he does not always know (except for the most obvious, such as hard work, diligence, volitional qualities); physical qualities are important components of the composition of the SIQ of novice athletes (mostly teenagers), but they are dynamic and develop in the process of doing sports, and PSIQ that are relatively stable in their qualities can serve as more reliable criteria for the selection of athletes.

At this time, in most sports there is no clear composition of SIQ that could act as selection criteria for sports. As a rule, the question of the PSIQ is not even raised. If for most sports there are no PSIQ compositions for athletes, then, all the more, their mental traces are also not defined (indicating the best for the rapid growth of sports results, their severity). Actually, the pedagogical experience of the coaches to some extent compensates for the absence of these psychiatric programs. As regards the composition of the PSIQ, they can be found only in separate psychological articles and, accordingly, only trainers who are focused on attracting and using scientific data in their activities can use them.

This situation forces practicing psychologists to do the work themselves. The coach, if he is inclined to scientific and practical search, can also conduct a similar research. It can be concluded that an algorithm is needed to predict the competitive success of athletes, and at the different stages of their preparation.

Explanation: it should immediately be recognized that the inclusion of psychological qualities in the list of criteria for the selection of athletes is more a scientific problem than a practical one. Why? There are three answers to this question: firstly, it is necessary that the number of candidates for admission to a sports organization significantly exceeds the number of seats (to have the choice from whom to select), since the results of psychodiagnostics are mostly used for selection; secondly, due to a certain inertia, some coaches who are not ready to implement everything that is scientific and do not feel any need for something new; and, thirdly, there is a certain unpreparedness of the psychological service in sports, when the advanced, scientifically-practical coaches themselves, studying the psychological literature, are forced to look for PSIQ and methods for them.

However, even if all these three conditions would be met, then it would be difficult to achieve forecast accuracy due to the lack of the possibility of formalizing the obtained data, which is necessary in cases of “disagreement” of psychodiagnostic data.

It would seem that such a forecast can be made based on the result of the activity, in other words, to start conducting classes with all candidates for athletes, and then get rid of those who are lagging behind in sports results. However, firstly, it is not humane, and secondly, it will no longer be a prediction, but an assessment of success, which may have not a smooth, but an abrupt growth.

The proposed method of psychological forecasting the success of athletes’ performances (calculating the individual index of prognostic sports success – IIPSS) erases the problem of making decisions regarding the selection of future athletes after psychodiagnostics. The results of the prediction of the sporting success of the upcoming performances are aimed not only at the selection of future athletes. There are also “side effects” from such psychodiagnostics, there are five of them: for a scientifically based sports orientation (to offer advice to parents of future athletes for choosing a sport that it is advisable for a child to do); for an individual approach in the process of training athletes; for a differentiated approach in the process of this preparation; for the organization of educational work in work with children who are athletes; and, for the most important, the fact that the prediction results orient the athlete or his parents (or representatives) to the characteristics of self-improvement, because knowledge of the sports-significant psychological qualities of athletes and their role in sporting achievements contributes to the activity of each of them in improving these qualities.

The structure of the article includes four parts – about the primary selection of PSIQ; an algorithm for psychological prediction of the performance of athletes; an algorithm for formalizing the data obtained from such prediction; and experience in using the proposed algorithms for psychological prediction of sports and competitive success.
Primary selection of PSIQ to predict the results of performances.
To determine the potential of the future athlete (and sometimes the entire sports career) you need to know the composition, the optimal measure of severity and integration of the main PSIQ.
1. You need to refer to the electronic library search and find the necessary information about the composition of the PSIQ. There are quite a few of these qualities, although often in fragmented form, and not always obtained on the basis of empirical data.
2. If such data is not found, then they can be obtained independently, with the help of expert estimates. The experts should be psychologists working in the field of any labor activity.
3. When using any of these 2 methods, those properties that are not very stable should be immediately excluded from the list, and will be developed in the process of training activities.

Algorithm of the procedure for predicting the success of performances of athletes at various stages of their preparation.
4. A group of athletes who have experience in sports performances, using the techniques proposed by the authors of this kind of research, measured the severity of the main PSIQ. You can also refer to various collections of methods for psychodiagnostics, [for example, Marishchuk V.L., Bludov Yu.M., Plakhtienko V.A., Serova L.K. Methods of psychodiagnostics in sport. St. Petersburg: Enlightenment, 1990.]. Methods for measuring the success of sports activities can be both objective assessments and subjective, with the help of experts: “fellow athletes”; administration representatives; fellow coaches; and the athletes themselves.
5. The numerical values of all psychological qualities and the rate of competitive activity must be converted to standard points (to stans) with decimal digit (for this: the dimension of one stan is determined when the maximum possible value of a particular quality expressed by the method is divided by 10; all the values obtained by the methods are divided by the size of the size of one stan).
6. Calculate the coefficients of communication (correlation) between the selected qualities. It is desirable not to include those properties that are loosely connected with each other. Indeed, in the process of long-term training sessions in any kind of sport, a dynamic structure of mental phenomena takes shape, providing high sports performance [2] (the procedure for calculating the correlation coefficients is widely presented on the Internet).
7. Calculation coefficients of the relationship (correlation) between each of the qualities – on the one hand, and the success of sports relationships – on the other.

Algorithm of formalization of the data on the psychological prediction of the success of performances of athletes.
8. The actual prediction is carried out. Here, only calculations are performed according to the formula proposed below.

Having a list of PSIQ and coefficients of their interrelations, it becomes possible to calculate the index of individual prognostic sports success according to the formula:

\[ IIPSS = \frac{(K1 \times r1) + (K2 \times r2) + ... (Ki \times ri)}{n}; \]

where

- \( K_i \) – the numerical value of the psychological quality (in stans);
- \( r_i \) is the correlation coefficient between indicators of the severity of psychological quality and success of the activity;
- \( n \) is the number of qualities that are included in the forecasting process.

Then the average value for this group of athletes is calculated by the formula:

\[ M \pm 0.5 s; \]

where

- \( M \) = arithmetic average;
- \( s \) = standard deviation.

9. And, finally, IIPSS of each athlete is correlated with the average value of the group (if the standard values for the athletes of this sporting specialization are not determined). If an athlete’s IIPSS exceeds \( M + 0.5 s \), then it can be assigned to a group of potentially successful athletes.

Thus, the algorithm of psychological forecasting the success of sportsmen’s performances includes the following 9 steps.
1 and 2. The preliminary selection of such psychological qualities that positively and significantly affect the dynamics of growth results of athletes in competitions. This can be done using scientific literature or using the method of expert assessments.
3. Exclusion from the list of relatively unstable qualities.
4. Measuring the severity of selected qualities and sporting success with each of the members of the training group.
5. Translation of “raw” numerical indicators of both psychological qualities and success in the walls.
6. Finding the coefficients of rank correlation between the indicators of the severity of selected qualities.
The following results were obtained: achievement motivation – $\chi^2 = 11.92$ ($p < 0.001$); strength of the nervous system – $\chi^2 = 8.33$ ($p < 0.01$); mobility of the nervous system – $\chi^2 = 8.64$ ($p < 0.01$); plasticity – $\chi^2 = 7.81$ ($p < 0.01$); the accuracy of perception of space – $\chi^2 = 8.95$ ($p < 0.01$).

**Conclusion.** The algorithm for predicting competitive success presented here can be used not only by sports psychologists working with athletes, but also by trainers who are oriented toward scientific and practical activities, as well as by scientists studying the effects of predicting the success of athletes’ performances.

Speaking about the work of sports psychologists, it can be noted that, as experience has shown as a psychologist of sports teams of higher sportsmanship, coaches do not specifically engage in the psychological preparation of athletes, unlike physical, technical or tactical training. It is assumed that the psychologist of a sports team should be responsible for the psychological preparation of athletes. However, in recent years, there have been almost no psychologists in the teams. However, psychologists were in demand for individual psychological support of athletes. In this case, the proposed method of psychological prediction of the competitive success of athletes can be very useful.

**Literature**

DIVERGENCE OF THE SELF-ASSESSMENT AND LEVEL OF ASPIRATIONS AS IMPORTANT VARIABLE OF THE SUCCESSFUL PERFORMANCE AT COMPETITIONS

COОТНОШЕНИЕ САМООЦЕНКИ И УРОВНЯ ПРИТЯЗАНИЙ КАК ВАЖНАЯ ПЕРЕМЕННАЯ УСПЕШНОГО ВЫСТУПЛЕНИЯ НА СОРЕВНОВАНИЯХ

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Keywords: sports activities, the magnitude of the mismatch, self-esteem, level of aspirations, motivation, anxiety, self-regulation, self-organization.

Abstract. Global trend is becoming a tremendous growth of interest in the sport of the highest achievements, the Olympic sport and elite athletes. This article describes an empirical study of the relationship between the levels of self-esteem and the claims of highly skilled athletes, covering various interrelations between the mismatch of these measurements of self-esteem and personal characteristics. The data obtained by us in the study underscore the significance of the ratio of self-assessment and claims as important variables of successful performance at competitions.

The relevance of research. Victory and defeat in sports are always accompanied by a subjective assessment, which is the result of achieving the goal, motivation, level of attraction and certain personal characteristics, it regulates the behavior of a person and determines his goals. Self-esteem is one of the...
significant personal factors that influence the efficiency and reliability of an athlete’s professional activity [9].

Existing studies do not fully disclose this phenomenon, since they take into account self-esteem and level of attraction as separate formations [3, 4, 6], in some cases even identical with each other [7]. This is due to the need to ensure success in sports.

**The goal** is to investigate the factors that cause a mismatch between self-esteem and the level of aspirations, in fact limiting the growth of athletic achievements among highly qualified athletes.

**Organization of the research.** The study was done at the training bases of the Russian Olympic Center, 101 sportsmen from different sports, aged from 17 to 28 years old, who are members of the national teams, and have sports qualifications MS and MIS of Russia.

**Research methods.** The scale of the interval assessment of sports athletes preparedness “Thermometer” Yu. Ya. Kiselev [5]; the Big Five questionnaires (Costa, McCrae, 1985) and SSS (Sensation, Seeking, Scale) M. Zakerman, (adaptation by A. G. Shmelev, 2010); the questionnaire “The level of subjective control” (LSK) E.F. Bazhina, E.A. Golinkina, A.M. Etkind (1993); questionnaire “The motives of sports activities” (MSA) E. A. Kalinina; a version of method “Motor test” of Schwarzlander, V.I. Buyanova and I.B. Buyanova; psycho-consultative conversation, allowing to determine the arguments of the demonstrated positions of self-esteem; expert assessment revealing the level of sports preparedness.

**The results of the research.** Mismatch is a term used to denote the phenomena of discrepancy, or the divergence of self-esteem and the level of claims in various parameters of measurements (level, adequacy, etc.) [1, 2]. Therefore, there are various types of combinations of self-assessment and claims, due to the divergence of these parameters in terms of level and degree of adequacy, in particular, it is recognized that the situation of mismatch between these parameters on the one hand, can speed up the process of self-organization, forcing a person to mobilize all capabilities. And, on the other hand, excessive divergence of self-esteem and level of aspirations is a situation of intrapersonal conflict and can harm the personality, causing discomfort, an increase in the level of tension [8] and, as a result, a decrease in the productivity of activity.

Comparison of medial indicators according to Kiselev’s methodology in a sample of sportsmen showed the presence of 4 groups, differing in the magnitude of the divergence between self-esteem of sports preparedness and the claims of sportsmen [10]. Thus, the strongest divergence of parameters was found in the fourth group (32.50 cu), and the weakest (7.25 cu) in the first group (Table).

We assumed that certain psychological indicators correspond to the factors associated with the growth of sportsmen’s skills, so the consistency of self-esteem parameters and the level of aspirations often leads to an increase in emotional stability, the ability to perform self-regulation in activity based on internal criteria, and a reverse dilution in the form of a significant breakdown of the parameters studied to the motivational complex in the form of increased anxiety, deterioration in the quality of self-organization activities.

Using factor analysis, the signs that make up the model of the self-assessment component of highly skilled athletes, taking into account the typology of the divergence of the parameters of the specified component, were identified. Namely, significant factors were selected according to the success and failure of highly skilled athletes. In total, four models of the self-assessment component have been built, taking into account the individual psychological characteristics of the personality of highly qualified sportsmen.

In this article, it is reasonable to present the results obtained for one of the most significant models – “strong divergence model”, as the obtained factors describe the determination of the transition from success to failure (the growth of results at the first stage of the study, and their regression after two years), as well as parameters accompanying the decrease in the performance of a highly qualified sportsman.

Thus, in group 4 with a strong divergence of self-assessment parameters, three significant factors were identified with a total completeness of factorization of 67.286% (Table, Figure).

Among the factors being the basis of this model, factor 1 – “Determination of transition experience from success – to failure” reflects a decline in the implementation of competitive activity over the study period, and includes low levels of self-assessment of psychological readiness and self-assessment parameters.

**Table – Distribution of respondents by divergence of self-esteem and level of claims**

<table>
<thead>
<tr>
<th>Group</th>
<th>1 (n=14)</th>
<th>2 (n=34)</th>
<th>3 (n=29)</th>
<th>4 (n=24)</th>
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<td>The parameters divergence (y.e.) value (x̄)</td>
<td>Weak (x̄=7,25)</td>
<td>Moderate (x̄=16,75)</td>
<td>Strong (x̄=30,00)</td>
<td>Strong (x̄=32,50)</td>
</tr>
</tbody>
</table>
They also contribute to clarifying the understanding of the phenomenon of self-esteem and the level of claims.

**Literature**


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FEATURES OF THE COMFORT ZONES IN SPORTS ACTIVITIES

ОСОБЕННОСТИ ЗОН КОМФОРТА В СПОРТИВНОЙ ДЕЯТЕЛЬНОСТИ

Keywords: the comfort zone, training area, external comfort, internal training zone comfort, zone comfort foreign competition, domestic competition comfort, zone precompetitive discomfort.

Abstract. Based on the analysis of sports activities and the use of an interdisciplinary approach identified and described the comfort zone of sports activities. Two basic comfort zones and one discomfort zone are defined. The basic ones include zones of training and competitive comfort, which in turn are divided into zones of external and internal comfort, and the stage of pre-competition preparation is presented in the zone of discomfort. Disclosed substantial components zones of comfort sporting activities.

Relevance. The desire of a sportsman to achieve high results, mastery of sportsmanship, preparation for competitions, performance at high-level competitions with full dedication is determined by many factors, among which the main place is occupied by the athlete’s motivation.

Motivation is the most important mechanism of any activity that performs the functions of goal-setting, planning necessary for the activity of an athlete. A high level of motivation is relevant at different stages of the development of a sports career.

Much research has been devoted to the study of motivation, both in the field of general psychology and in the psychology of sports [1, 3, 4], both domestic and foreign scientists agree that motivation in sports depends on both internal and external determinants.

In the scientific literature and in practical work, the attention of researchers usually focuses on the definition and use of factors of constructive motivation, that is, on the motivation of activity that is useful for achieving success. At the same time, factors that determine undesirable, harmful or even destructive behavior for an athlete, contrary to goals and values, remain little studied. The causes of destructive motivation in sports are usually considered in a general

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Keywords: зона комфорта, зона внешнего тренировочного комфорта, зона внутреннего тренировочного комфорта, зона внешнего соревновательного комфорта, зона внутреннего соревновательного комфорта, зона предсоревновательного дискомфорта.

Аннотация. На основе анализа спортивной деятельности и использования междисциплинарного подхода выявлены и описаны зоны комфорта спортивной деятельности. Определены две базовые зоны комфорта и одна зона дискомфорта. К базовым относятся зоны тренировочного и соревновательного комфорта, которые в свою очередь делятся на зоны внешнего и внутреннего комфорта, а этап предсоревновательной подготовки представлен в зоне дискомфорта. Раскрыты содержательные компоненты зон комфорта спортивной деятельности.

UDC 159.96
form and are not studied in detail, meanwhile, it is their identification, systematization, detailed analysis and consideration in practical work that are the most important condition for increasing the effectiveness of sports activities.

In recent years, quite comfortable conditions have been created for practicing sports, especially such a kind of sport as football has succeeded. At the same time, we see that comfortable conditions are not a reason for achieving high results.

The purpose of this article is precisely the identification of comfort zones in sports activities and their analysis.

The term “comfort zone” is considered as a complex of conditions of external and internal environment that are most favorable for the subject, including psychological factors. Thus, the comfort zone can be considered as an established world, to which a person has become accustomed, where everything is stable and predictable. Being in such a state is pleasant, but not always being in such a state can succeed [2].

Being in the comfort zone, a person stops in the development on certain positions and achievements, and does not want to achieve anything further, since this person is satisfied with everything. It would seem that this is really good, as stability indicates the reliability of the situation. But sportsmen who decided to engage in professional sports should make every effort to achieve high results. One of the main tasks of the coach is to solve long-term tasks of training sportsmen in professional sports. This task is quite complicated, since the training of highly qualified sportsmen is based on taking into account a number of features such as: ideological, social psychological, psychological, neuropsychological, anatomical, physiological and genetic. Despite this, the coach has a relationship with an integral person, for which it is necessary to create favorable, comfortable conditions in the process of achieving a high result. Each person is unique in his own way and in order to achieve the desired result he forms his own individual comfort zone, independent of others.

Why does a person go into a comfort zone while playing sports?

The comfort zone in sports is an area of the necessary favorable conditions of the external and internal environment for sports, which includes psychological factors.

Sport is a rather complicated kind of activity, which consists of such activities as training and competitive, on this basis, we can distinguish the comfort zone of the training activity and the comfort zone of the competitive activity. Moreover, each of these zones has zones of internal and external comfort. The figure shows a diagram of the comfort zones of a sports activity.

In recent years, in our country, we can see the rapid commercialization of sports, which makes it possible for athletes to earn big money a vivid proof of this is football.

It is possible that everything that surrounds a sportsman can be attributed to the zone of external comfort of training activities, namely, a set of such necessary conditions as financing of athletes, equipment.
of the stadium, arena, gym, climatic, temperature conditions, humidity, light, planning of sports loads in the training process, the influence of parents, teachers, trainers, attendants, officials and much more.

Why, doing sports, a person gets into the zone of inner comfort?

It is known that after training sessions a person experiences a surge of vigor and strength, usually this condition is described by a lengthy phrase: “physical activity stimulates the production of happiness hormones – endorphins” [7, 9]. David J. Linden’s work [5] showed that modern science cannot yet answer exactly the question of exactly which biochemical changes in the brain are generated by physical exertion, but some experiments have shown that training is accompanied by an increased release of brain opioids. These substances play an important role in the formation of emotions, affection and motivation.

The transition to the zone of competitive comfort is carried out through the zone of discomfort. In order to realize the goal and enter the zone of competitive comfort, the athlete must pass through the zone of discomfort. How does this zone differ from the zone of training and competitive comfort?

The precompetitive discomfort zone is a transition zone, which is associated with increased stress, since the sportsman must completely restructure the mode of life and activity, focusing on those climatic and temporal features in which the competition will take place. In the area of precompetitive discomfort, the mode of work performed also changes, since at this stage of preparation, the central place is given to full modeling of the upcoming competitions, which involves the holistic reproduction of competitive exercises, competition mode, and its external conditions [6].

The main component of sports activities is competition, which aims to achieve results. The goal of the competition is to achieve the best result, regardless of the level of fitness of the sportsman.

The zone of competitive comfort (Figure) has a zone of external and internal comfort, since the achievement of a personal result can be influenced by the athlete’s stay in these zones. In the event that the zone of external discomfort at the pre-competitive stage is identical to the zone of external competitive comfort, then the athlete in this zone is likely to have no difficulty and he will feel comfort in this zone. If, in the zone of external discomfort, the training conditions were far from the conditions of the competition, then the sportsman may experience problems in the external zone of competitive comfort. The competition area (the factor of “own” and “foreign” field), geographical and climatic position of the competition venue (altitude of the location of the competition above sea level, temperature, humidity, atmospheric pressure, level of solar radiation, hourly belt, etc.), equipment of venues and attitude of the audience

Getting into the zone of internal competitive comfort, the sportsman displays vivid emotional experiences, high internal mobilization. Due to the high intensity of the competition, a person experiences even stronger physical and psychological stress. The thrill experienced by the sportsman during the competition, the associated emotional overload, stress and anxiety contribute to excessive adrenaline production, which is comparable to the extravaganza of pleasures of the addict. This hormone helps not only to mobilize and get additional physical and psychological capabilities to overcome the situations that have arisen, but also gives the athlete the opportunity [9, 10] to feel that surge of energy to cope with all sorts of difficulties and to feel like a superhero for a while conditions of competitive activity, which is unlikely to cope in the normal state.

This article is mainly based on assumptions and personal experience with sportsmen. Research on the problem of studying comfort zones in sports has practically not been done, although work in this direction is not only of scientific interest, but is also quite relevant, since many sportsmen who are in comfort zones stop increasing athletic performance and changing behavior.

**Literature**


Литература
THE PHENOMENON OF THE STYLE IN SPORTS: HISTORY, RESULTS AND PROSPECTS OF RESEARCH

Ключевые слова: стили деятельности спортсменов, функционально-структурная организация, подобие структур стиля и его частей, эффективность стилей деятельности, факторы успешности спортсмена.

Аннотация. Рассматривается и анализируется история изучения проблемы стилей деятельности в спорте, результаты эмпирических исследований, сохраняющиеся «научные лакуны» и нерешенные «проблемы», эффекты внедрения результатов эмпирических исследований в практику спорта высших достижений, феномен стиля, научно-практические задачи психологического сопровождения деятельности спортивной. Обсуждаются варианты поиска альтернатив (как пример, приводятся результаты исследований автора – структурно-функциональной организации, самоподобия структур и др.), перспективы и горизонты новых поисков и исследований.

The study was carried out within the framework of the state assignment of the FASO, subject number 0159-2018-0001 “Psychological problems of the professional mentality in terms of organizational and technological innovations”

THE PHENOMENON OF THE STYLE IN SPORTS: HISTORY, RESULTS AND PROSPECTS OF RESEARCH

The relevance of research. The problem of styles has been widely studied in psychology since the mid-1950s in various scientific traditions (as cognitive styles, behavioral and life styles, leadership styles – in foreign psychology, as individual activity styles – in domestic psychology). Later, in the late 1960s, domestic psychologists also began to turn to different approaches to the problems of style.

In the early 1960s, systematically study of the individual style of activity (ISA) on a model of sport is started under the guidance of E.A. Klimov in Kazan [8, 20 others], under the direction of V.S. Merlin in Perm [10], since the beginning of the 1970s – under the guidance of EA Ilyin [3, 4] in Leningrad, A.V. Rodionov [11] – in Moscow. At this time there are many researchers who work actively in other regions – N.K. Volkov, A.V.
Yeganov, Yu.G. Martemyanov, V.I. Morosanova, O.A. Sirotin, V.A. Hustle and others, in one degree or another “exciting” different sides of the problem of style. The first dissertation, in which the phenomenon of style on the model of acrobatics was studied, was defended by B.I. Yakubchik in 1965 (a little later, the trainer-researcher became the Honored trainer of the Russian Federation). As a rule, the results of “field” research and psychological-pedagogical experiments are quickly being introduced into the practice of training young and highly skilled athletes and there has been a quick positive effect of such introductions [1, 2, 4, 7, 8, 9, 11, 12, 13, 14, 15, 18, 19]. A kind of “renaissance” lasted from the mid-1970s to the end of the 1980s (the number of cognitive styles described and widely studied exceeded twenty, emotional styles, self-regulation, management decision-making styles, etc. were studied), after which interest in the problem began to fade.

Since the end of the 1980s, the priorities and scientific interests of scientists shifted from studying individual success factors to studying the holistic process of training and performance of athletes [5, 6, 11, 12, 13]; well-established effective system of scientific support for the training process of preparing national teams of the country is destroyed; In high performance sports only certain specialists worked actively. Gorskaya, E.P. Ilyin, A.V. Rodionov, V.F. Sopov and others.

At present, it can be stated that the accumulated vast positive experience (including in high performance sports) has been largely lost; the real problems faced by the pioneers faded, are forgotten; understanding by young scientists of the problem and the possibilities of practical work in this segment fluctuate between the poles “idealization and simplification – neglect and misunderstanding.” Reflecting on the phenomenon of “style” and its study in sports, it makes sense to return to history, to make an attempt to summarize both the factors of past successes of sports psychologists and the reasons for sometimes modest results and failures.

Empirical studies of the “style” phenomenon: results, “scientific lacunae” and “problems” of study, problems of introducing the results of empirical research into the practice of high-performance sports. In the 1970-1980s, in scientific and practical research (SPR) pragmatic tasks were more often set and then were successfully carried out. The scientific tools were quite similar; at that time, in all sports, apparatus methods were widely introduced, effective systems of transcripts of duels in combat sports and situations in team sports were developed; most scientists followed the activity approach. The results of such studies were comparable, confirming both the validity of scientific tools, and the similarity of manifestations of styles of activity in different types, in athletes with different complexes of individual psychological characteristics.

In general, the accumulated experience was successful and cross functional, easily adaptable in the organization of the training process of adolescents, senior-level athletes, including members of the national teams of the country. The typical structure of the organization of the SPR was as follows:

1) several groups of variables correlated – individual psychological characteristics (properties of the nervous system, temperament, personality, sensomotorik) and features of the performance of technical and tactical and technical actions;

2) similar assessments were made on excerpts of sportsmen of the highest categories, senior and young athletes with an official rating;

3) the peculiarities of styles were compared in subgroups of more and less efficient athletes.

Despite extensive and productive research, “scientific lacunae” and “problems” of studying the problem of style remain. Paradoxically, but it is the methodological unity of scientific approaches, the similarity of tools, the “brightness of empirical facts” in the manifestation of styles, did not contribute much to the formulation of new scientific problems, understanding the possibilities and limitations of styles, their typology of styles, their functional and structural organization, limits of variation, the role of psychological features in a number of different determinants, the possibility of change, development, correction of styles, factors of success of athletes, etc. [14, 15, 16, 17]. Among the constraints were scientific: the possibilities and limits of the methodology, the measure of its adequacy to this subject area; problems of sampling (they are not great in the high performance sports; there is no tradition in the native science for conducting mass research, longitudinal research).

Among the many insufficiently studied aspects of the problem, we will single out some. In real work with highly qualified athletes, the funnel effect is consistently manifested. If there are clearly distinguished parameters in which the athlete loses (“common to all”), then the parameters of successful activity are characterized by high individual variability. If it is clearly possible to determine under what conditions the performance of an athlete was or will be with a high probability of failure, then success factors are less amenable to a clear assessment (as a result of situational variations of conditions, the dynamics of relations of partners of joint activities, the presence of many unaccounted factors,
and the very nature of athletic competition like a big open dissipative system). Practically, this means the following: the orientation of a scientist and practice are unproductive only on the magnitude of the correlation of individual parameters of activity and the individual characteristics of athletes, even those identified in a representative excerpts. Separate connections play a small role in the style correction program of each individual athlete. (With regard to psychological variables, such connections rarely exceed the value of $r > [0.400–0.500]$; taking into account not the “probability that the changes in the variable” $x$ “depend on the changes in the variable” $y$, but the coefficient of determination – $R^2$, i.e., $r^2$, or a measure of the variance explained, we can estimate how little practically we are given by factors explaining no more than 16–25% of the variance.)

The main way to solve the above difficulties would be to change the vector of research – from “atomic” to “systemic” approaches. As it is noted above, the typical organization structure of the SPR was the diagnosis and subsequent correlation of large groups of “variables”, on the one hand, individual psychological characteristics (properties of the nervous system, temperament, personality, sensomotorik), on the other hand, characteristics of technical and tactical-technical performance by athletes’ action. Due to the reality of the phenomenon, for any methodological reference points, the researcher received enormous informative groups of intercorrelations. This was enough to confirm the hypotheses of a scientific study, to formulate recommendations for the implementation of these results in practice; the introduction of results into practice gave the expected effects in increment of results for individual athletes. At the same time, when trying to implement an individual approach to a high-end athlete, when trying to form his individual style, we are faced with the fact that the individual correlations are not productive enough. Both the connections of the individual characteristics of a person among themselves, and the connections of the individuality of an athlete with the characteristics of his activity are not statistical in nature, but are subordinated to some deep-seated patterns, which are referred to by system properties, systemic relationships.

Based on the author’s concept of style (its structural and functional organization) [14, 15], we assumed that between different subsystems of style there are similarity relations (self-similarity, or fractal relations) that determine both the optimal trajectories of the genesis of the style and the effectiveness of the athlete’s competitive activity. In other words, the measure of consistency of the three hierarchical style substructures ("subjectively convenient conditions of activity", "operational structures", "ideal regulators / type of organization of activities" – SCCA, OS, IR / TOA) can explain the effectiveness of individual episodes and successful career of an athlete as a whole. (By “structure” we mean the invariant, stable part of the “system”, while preserving which preserves the properties of the system as a whole, despite changes in its individual components and parameters.)

**The purpose of the study:** to identify and assess the connection of the structure of the activity styles of highest level athletes with the success of their activities (for example, wrestling judo and free-style).

**Objectives of the study:**
1) To identify and evaluate the measure of connections between the structures of activity styles (as a whole) and style substructures in representatives of free-style wrestling and judoists.
2) To identify and evaluate the measure of connections of the substructures of activity styles (among themselves) among representatives of free-style wrestling and judo wrestlers.
3) To assess the role of the structural consistency factor in the success of wrestlers’ sports career.

**Research hypotheses:** The components of the activities of sportmen of the highest levels are not random combinations, not freely selected individual combinations, but some object-determined groups of technical and tactical-technical actions. The greater correspondence of the structures of the styles of activity of athletes to the object determination of groups of technical and tactical-technical actions will be reflected in the greater success of their sports career.

Relationships of structures and substructures of wrestlers’ styles of activity can have relations of self-similarity (relations of fractals).

The methodology for solving the tasks we have set can be called the structural approach [14, 15].

**Research methods:**
2) Studying the features of the wrestlers’ activity styles (the author’s method of “Styles of activity”).
3) Observation and transcription of competitive activities of athletes in major international tournaments.
4) Survey of experts (trainers).

In accordance with the hypotheses about the fractal connection of the substructures of the activity style (AS) among themselves, about the fractal connection of the substructures and the structure of the style as...
a whole, the empirical material collected in 1986-1989 was subjected to a series of new statistical calculations. Survey data of the best and promising athletes, members of national teams of the country – adolescent, youth, the basic composition – “adults” – wrestlers-ju

do wrestlers (48 people aged from 17 to 24, x = 19.2 years.) And members of the national country team in free-style wrestling (32 people aged 22 to 28 years, x = 26.5 years) were supplemented with expert estimates. In preliminary studies, it was shown that the wrestlers’ assessments of the features of their activity styles (AS) closely correlated for the most part the variables (r = 0.450–0.800) during test retest checks, closely corre

lated with the expert evaluations of the coaches (r = 0.300–0.650), with observations of their competitive bouts (r = 0.350– 0.740) [15; sixteen; 17]. In 2012–2014, sports biographies of previously examined wrestlers were restored. (The article discusses only the data ob

tained by the method of “styles of activity” [15]).

The results of the study. In the process of studying the phenomenon, several series of statistical calculations were carried out. This article discusses the option of “phenomenological analysis” (the choice of optimal solutions for the inclusion in the analysis of all the variables presented in one metric scale, obtained by our research methodology). In all series and in all excerpts, 6-factor solutions were the best by formal and informative criteria.

To study the connection between the structures of activity styles (AS) and the structures of their subsystems (IR / TOA, OS, SCCA), we used the coefficients of the values of the object factors (subjects) calculated in the process of conducting factor analysis and identifying well-interpreted factors. Such coefficients re

flected a measure of the severity of the factor for each wrestler. Consequently, on the basis of the calculated coefficients of the values of the objects (subjects), it was possible to judge how “typical” (corresponding to a given factor) are those or other fighters in the excerpts. Each subject received several assessments – coefficients of factor values: a) for each of the six iden

fied factors (reflecting typical styles in general); b) for each of the six factors of the three style subsystems with a separate factor analysis of the variables of each of the three subsystems. All the identified coefficients of the factors of the objects for the styles as a whole and their substructures were subsequently correlated. Subsequently, the results of the coefficients were compared with the individual performance of the fighters.

In fact, in our study there were three stages and three “circuits”: 1) typical empirical data collections were carried out; 2) in 25 years the sports biographies of our respondents were studied; 3) step-by-step statistical calculations were carried out, allowing to approach the identification of “internal variables (latent factors)”, explaining the greater or lesser success of the wrestlers’ completed sports career. The final results of the study confirmed the working hypotheses.

On excerpts of wrestlers judoists, the correlation of six style factors with six factors of (IR / TOA (taking into account the effectiveness of factors, i.e. their connections with the success of subjects) were as follows: 0.332; 0.709; 0.226; 0.322; 0.508 (in three cases, the correlation tightness reaches the threshold p = 0.001, in two – p = 0.05). The correlations of the six style factors with the six factors of “methods for solving problems” (taking into account the effectiveness of the factors) are as follows: 0.199; 0.219; 0.279 (p = 0.05); 0.052; 0.629 (p = 0.001); 0.120. Correlations of six style factors with six factors of SCCA (taking into account the effectiveness of factors): 0.710; 0.520; 0.770; 0.648; 0.900 (p = 0.001); 0.256 (p = 0.05); (for n = 48 people, the level of statistical significance is p = 0.05 for r = 0.240, p = 0.01 for r = 0.335, p = 0.01 for r = 0.425).

Among the six style factors, two more effective ones are markedly different – the 1st and the 2nd; three ineffective – the 3rd, 4th and 6th, and one non-correlating with the criteria for the success of wrestlers – the 5th. (Recall, we analyze the styles of champions and prize-winners of the country championships among teenagers and among juniors; they are all the best in their age group; nevertheless, their styles were more or less coordinated with previous results and success in future performances. The style is only one of the conditions for the success of the subject; in sports, in addition to style, an important role is played by the physical talent of the athlete, health, “school”, etc.).

Let us single out and consider separately the correlation of two effective style factors (1st and 2nd) with effective factors of the parts – two IR / SJF factors, two “solutions” and two SCCA: 0.332 0.709; 0.201, 0.219; 0.710, 0.520 (in four cases, relationships are statistically significant). The correlation of three ineffective style factors (3rd, 4th, 6th) with the factors of their parts – three factors IR / TOA, three – OS and SCCA: 0.226, 0.532, 0.508; 0.279, 0.052, 0.120; 0.770, 0.256, 0.900 (in four cases, the relationships are statistically significant) are also quite close. Thus, both with regard to more effective style factors and relatively ineffective factors, we state their close links with similar factors of parts of styles. Consequently, there is reason to talk about the phenomenon of the similarity of their organizations, or about the similarity of the structures of style and its parts.
On excerpts of free-style wrestlers, the correlations of six style factors with six with six factors of IR / TOA are as follows: 0.277, 0.598, 0.602, 0.282, 0.797, 0.810 (in four cases, p < 0.001). The correlations of the six style factors with the six factors of the “problem solving methods” are as follows: 0.417, 0.424, 0.551, 0.713, 0.452, 0.497, 0.096 (in two cases, p < 0.001, in two – p < 0.05). Correlations of six style factors with six factors of SCCA: 0.676, 0.647, 0.705, 0.782, 0.227, 0.422 (in four cases, p < 0.001, in one – p < 0.05. For n = 32, p = 0.05 for r > 0.290; p = 0.01 for r > 0.390; p = 0.001 for r > 0.525). Both with regard to effective style factors (i.e., with positive correlations of a factor with criteria for wrestlers’ success) and ineffective (non-constructive) factors, we state their close connections with similar factors of style parts, their subsystems.

Discussion of the research results. In two data arrays obtained from excerpts of free-style wrestlers and wrestlers-judoists, we obtained similar values of all primary statistics, meaningful and formal characteristics of distinguished factors, which confirms the validity of using our data for comparative analysis. The structures of the three hierarchical levels of the AS for top-level fighters who successfully participated in major international tournaments (winners of the European championships, the world and the Olympic Games) were more coordinated among themselves (r = 0.600–0.900) than those of the less productive (winners of the country championships) (r = 0.300–0.500). (The table shows the generalized average values for the two most effective styles of wrestlers’ activity and the two least effective, conditionally ineffective, “closed” the way for athletes to success in international tournaments.)

Comparative analysis of the measure of similarity of the structures of the AS and its parts of the AS of free style wrestlers (more successfully and consistently performing in the 1980–1990s) and the AS of wrestling wrestlers (who rarely took prizes at the European, World and Olympic Championships) our hypothesis is confirmed. As for the consistency of the structures of the two most effective styles of the six (as they are expressed by the wrestlers), so for the consistency of the structures of the two least effective styles, the structure of the wrestler wrestlers is approximately 0.100 more closely correlated with each other than similar judoists (table).

From the results of the calculations it followed that the approximation of the similarity of the structures of AS and the similarity of the structures of their parts to some “ideal” only at r = 0,100 was associated with an increase in the success of an athlete 5-8 times (the success criteria were prizes – the number of medals won by wrestlers at major international tournaments).

Findings:
1. On the excerpts of fighters of the highest levels, six styles are also clearly distinguished. In the styles of activity (AS) of high-level fighters, there is a similarity or similarity of style structures (as a whole) and their subsystems (parts) by the type of fractals: “ideal regulators / type of organization of activity”, “operational

Table – The ratio of the measure of the similarity of style structures and their parts to the success of performances at major international tournaments of wrestlers-judo wrestlers and wrestlers of freestyle («phenomenological analysis»)

<table>
<thead>
<tr>
<th>Parameters: statistics and success criteria</th>
<th>Free-style wrestling</th>
<th>Judo wrestling</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Correlation structures of effective styles and their three parts *</td>
<td>0,563</td>
<td>0,447</td>
</tr>
<tr>
<td>2. Correlation structures ineffective styles and three parts *</td>
<td>0,500</td>
<td>0,405</td>
</tr>
<tr>
<td>3. Correlations of structures of parts of effective styles</td>
<td>0,319</td>
<td>0,222</td>
</tr>
<tr>
<td>4. Correlation of the structures of the parts ineffective styles</td>
<td>0,315</td>
<td>0,131</td>
</tr>
<tr>
<td>6. Number of medals won by wrestlers at European, world and Olympic Championships</td>
<td>64</td>
<td>12</td>
</tr>
<tr>
<td>5. Excerpts</td>
<td>32 people</td>
<td>48 people</td>
</tr>
<tr>
<td>7. Athletes’ success in the international arena (number of medals/sample size)</td>
<td>2,0</td>
<td>0,25</td>
</tr>
</tbody>
</table>

Note: * Here and below there is average of three correlations: the structure of the style and structure of IR / TOA; structures style and structure of the OS, the structure of the style and structure of SCCA.
systems”, “subjectively convenient conditions of activity” (IR / TOA, OS, SCCA).

2. The success of the performance of athletes at the Olympics, World and European Championships is connected with the optimality of their style structures and the consistency of style structures and their sub-systems among themselves.

3. Spontaneously formed styles of even the most talented and successful athletes are often not standard and harmonious. Opportunities for improvement and development of subjects remain open at all stages of their professional development.

Conclusion. Looking through the “horizons” of the further study of the style problem, let us highlight the following urgent tasks and horizons of new searches: 1) Studying the issues of the genesis of styles throughout an athlete’s sports career. 2) The study of the connections of different styles (cognitive, emotional, motor, styles of activity). 3) Solving the problems of the joint activities methodology and the subsequent study of styles in sports in the paradigm of joint activities. 4) The study and subsequent management of style interactions in the “trainer – athlete” system. 5) Management of style interactions of subjects in sports teams. 6) The study of the phenomenon of self-similarity in the organization of substructures of styles in different sports. 7) Study of the configuration of the actual activity spaces formed by athletes. 8) Study of the interaction of athletes in contact groups (the phenomenon of “psychological niche”).

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ON THE QUESTION OF SOMATIC EXPERIENCE PRODUCTIVITY AS A METHOD OF PSYCHO-EMOTIONAL AND PSYCHOSOMATIC REGULATION OF THE STATE IN HIGHLY QUALIFIED ATHLETES

К ВОПРОСУ ПРОДУКТИВНОСТИ ИСПОЛЬЗОВАНИЯ SOMATIC EXPERIENCE КАК МЕТОДА ПСИХОЭМОЦИОНАЛЬНОЙ И ПСИХОСОМАТИЧЕСКОЙ РЕГУЛЯЦИИ СОСТОЯНИЯ СПОРТСМЕНОВ ВЫСОКОЙ КВАЛИФИКАЦИИ

Keywords: athletes, somatics, stress disorder, motivation.

Abstract. The article is devoted to the working out of the new method of psychoresonance for professional athletes. Worked out the new method and recommendations for its implementation into athletes training practice.

UDC 159.9

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Ключевые слова: спортсмены, соматика, стрессовое расстройство, мотивация.

Аннотация. Статья посвящена результатам разработки новой методики психорегуляции профессиональных спортсменов. Разработана методика и рекомендации по ее внедрению в систему подготовки спортсменов.
The relevance of the study. Nowadays it is necessary to speak about relevance of the organization of the qualified psychological and pedagogical maintenance (further – PPS) of sports activity not in the mode of academic speculations, but in the context of the solution of urgent problems. We see how tacitly taken as a basis, the “pharmacological approach” to optimizing the performance of athletes in competitive practice does not justify itself, compromising athletes and putting in a difficult position sports federations at the highest level. In this situation, the need to form a comprehensive system of psychological and pedagogical assistance to the sports process comes to the fore, in which an effective method of self-regulation of psycho-emotional and psychophysical well-being of the athlete becomes one of the key tools, along with the reasonable use of medical and biological approach and other measures of sports support. However, it is not enough just to declare the relevance of such a task, it is necessary to analyze the readiness of the environment to translate the actual and in-demand into real and effective. In this article, we partially share the annoyance of one of the brightest modern researchers of sports psychology Safonov V.K., when he states the following: “it can be stated that in the 21st century, as 30 years ago, there is a dismissive attitude to the psychological provision of training of athletes by sports functionaries. A striking example of this is the last Olympics of our century, when the task of psychology in sports was formulated unambiguously – to set the athlete to win. This ignores the fact that the psyche has the ability to regulate the somatics of the body. Functional injury is always associated with the manifestation of inadequate mental reactions to stressful situations of sports activities. Sports loads lead to psychological overstrain and, as a consequence, reduce the adaptive (primarily mobilization) capabilities of the psyche. As a result, there is an increase in functional costs for the performance of activities, a decrease in the functionality of the athlete, the probability of functional injury increases” [14].

In this quotation, Safonov not only indicates a lack of attention to professional and systemic psychological and pedagogical assistance to sport, but also, in fact, describes the mechanism of psycho-somatic communication, showing how omissions associated with working out complex mental states of an athlete can lead to negative somatic consequences. Thus, the first question that we should ask is whether there are any complex systems of psychological and pedagogical support for sports today, and if, yes, then have special techniques been developed in their context that take into account all the subtleties of the psycho-somatic processes of the human body and are aimed at harmonious regulation? Certainly, in the framework of one article, we will not be able to conduct a full literary analysis of Russian and foreign sources claiming to solve the problem of organizing an integrated PPS sports activity. However, in order to make the task easier for ourselves, we will try to give our own basic definition of the conditions under which it can be argued that the psychological and pedagogical support is truly complex. To this end, we will identify three basic blocks of the diverse activities of the sports psychologist within the framework of the faculty structure. With the cardinal difference of tasks, these blocks are closely interrelated and complement each other. Let us describe them in brief:

1. Diagnostic-prognostic (set of diagnostic programs developed by the program-targeted or other method, methods of prediction of variable objects: from the effectiveness of training plans to the performance of an athlete in a competition, specific methods for implementing diagnostic and prognostic procedures and work with the data)

2. Psycho-pedagogical (upbringing and motivation, implementation of psychological work in the triad of a psychologist-trainer-athlete, observation and maintenance of an athlete in the context of a training cycle, pre-competitive preparation and post-competitive rehabilitation, lecturing, interviewing, assistance in solving social and psychological issues)

3. Correctional-developing (usage of the system of psychocorrectional measures of influence on an athlete: individual counseling, training, development and implementation of methods of psycho-emotional and psychosomatic regulation of athletes, work with extreme situations (trauma, withdrawal from competitions, experiencing grief or loss), etc)

Thus, within the framework of our article, we will consider the techniques of self-regulation as the main element of the correctional-developing unit in the sports teaching staff system.

Now let us turn to one of the classic works – “Psychopedagogy of Sport” Gorbunov G.D. [3], as, of course, matching the criteria proposed above, and we will try to understand what methods of correctional and developmental impact are proposed by this work. The monograph was chosen by us not by chance. The
fact is that the main thesis of the author is a refrain that sounds throughout the work, is the statement that “theoretical psychology uses sport to obtain the necessary data, but does not give athletes anything to get results” (Gorbunov G.D.). It is precisely the “influencing" technologies, in this way, where, if not here, to seek an exhaustive answer to our question?

So, in his work, the author identifies such structural elements of the psycho-pedagogical complex as:
- psychodiagnostics
- psychological training of an athlete
- the process of education in the system of psychological preparation of an athlete
- the process of self-education in the system of general training of an athlete
- psychoregulation, as a recovery method
- correction of mental states in order to strengthen the athlete’s ego defenses at the final stage of preparation for responsible competitions

The author’s conviction affects the substantive part of the work, where Gorbunov mainly describes the diverse ways of pedagogical, psychological and psychocorrectional impact on the athlete. And in the field of his interest, both classical methods of pedagogy: “suggestion”, “conversation”, “motivation”, “advance payment”, and methods of “hypnosis and autogenic training” fall into the field. Describing the actual psychological arsenal of technologies, Gorbunov pays attention even to such non-trivial methods as the “psycho-energetic trance” used to restore an athlete after heavy training loads or competitions.

It would seem that the answer was received, we reviewed the complex system of PPS sports and found in it a significant list of techniques for influencing the psycho-emotional state of an athlete.

However, we will not be in a hurry, let’s carefully read what the author is offering us. First, his main desire to saturate the faculty system with “acting technicians” forces him to constantly increase the degree of intensity of exposure: for example, you can see hypnosis in the pedagogical and upbringing techniques section. With all due respect to the author, to consider hypnosis as a “pedagogical" tool is not only incorrectly, but also rather risky. Hypnotherapy is indeed an effective method and one of the schools of directive psychotherapy (and the phenomenon of hypnosis has a centuries-old history since the "mystical experiments" of Anton Mesmer, from which the original name of the method came out – “mesmerism"), but mastering this method requires a long training where the student receives not just technical instructions and mechanically performs certain manipulations, but also learns about the special patterns of the psyche and the brain in a state of hypnosis, gets acquainted with “with the ethics and safety conditions) of the method and undergoes personal therapy.

Further, most of the methods proposed by Gorbunov absolutely correspond to the imperative, which Safonov ironically said in his article – “set up an athlete to win". This subject – an objective or instrumental, if you will, approach, in our opinion, does not correspond to the spirit of humanization of modern sports, ignoring of which gave rise to the “pharmacological crisis".

It is necessary to be objective and pay tribute to the work “Psychopedagogy of Sport”, where the author still devotes quite a few chapters to helping the athlete overcome stressful and crisis situations, talking about relaxation and rest technologies, but even here we will not find explanations for the deep psychodynamic problems that often affect the performance of an athlete is no less than “overtraining", “pre-start anxiety" and other factors limited solely by the specifics of sports activities.

And, finally, it is extremely important to pay attention to the fundamental difference between the concepts of the holistic method and individual techniques, as different structural-hierarchical levels of work of the psychologist and the practitioner. The method is a set of techniques connected by a single conceptual representation and structured in a sequence that solves various tasks on the way to the realization of the main goal of the method. Thus, it would be incorrect, speaking of the method, to cite separate psychological exercises or modifications of various trainings, which, unfortunately, is often done even in the specialized literature, is not free from this confusion and “Psycho pedagogy of sport". Such an error leads the reader to the illusory feeling of a huge variety of methods of psycho-emotional and psychosomatic self-regulation in modern sports, which does not correspond to reality. However, this is not only a matter of theory, but, first and foremost, practice: no spontaneous or even superficially structured sequence of techniques will ever be equal in its effectiveness to a well-developed method: an athlete can randomly tackle various projectiles in the gym, make an arbitrary number of sets and reps. The result may be some strengthening of muscles or injury, as a result of unbalanced loads, and only when an experienced trainer offers a beginner a method of training his progress will be much more significant, and the probability of injury will decrease.

Now that we have found some obvious deficiencies in the theory and practice of the teaching staff of the sport, it’s time to make a reasonable proposal.
In 2018, within the framework of the research and development project “Developing and Implementing Scientifically Based Proposals for Creating a System of Comprehensive Psychological and Pedagogical Support for High-Qualified Athletes by the Program-Target Method and Prognostic Analysis”, a group of specialists from HB-Assistance (St. Petersburg) carried out work with high-qualified athletes. In total, it was attended by 120 athletes representing: wrestling, cycling, rowing and canoeing, hockey and sailing. The aim of the project was the development of scientifically based recommendations for optimizing the teaching staff of highly qualified athletes. Among the complex of tasks that were solved by specialists, there was also the task of developing the author’s method of self-regulation of the psycho-emotional and psychosomatic state of athletes. Such a technique has become the technique of Somatic Experience (Somatic Living), which is discussed below.

**Somatic living: a method of physical therapy in the history of psychology.** Any scientific knowledge develops by accumulating and then overcoming the experience contained in the current scientific paradigm. In the present situation, “grassroot invention” immediately gives rise to suspicion, since any of the scientific fields has already accumulated a number of fundamental ideas that, one way or another, must be taken into account in the new development and although the practical psychology and psychotherapy of the field are still quite young, but here there are already some solid empirically proven ideas and theoretically grounded points that need to be taken into account when talking about the development of an “innovative methodology”. So, the first thing we need to point out is the “genealogy” of our methodology in the history of psychology and psychotherapy. This pedigree begins with the teachings of one of Sigmund Freud’s first students and colleagues, Wilhelm Reich. Wilhelm Riech (1897-1957) was Freud’s first clinical assistant from 1922 to 1927. Then he had theoretical differences with his leader, since Reich believed that every neurosis is based on the absence of sexual satisfaction, while Freud saw this is reductionism and simplification of its own method. Reich focused his research on the question of how a person retains libidinal impulses and soon came to the conclusion that a specific muscle group is involved in any act of “retention”. Over time, muscle fixation becomes chronic. So we acquire our “muscular armor”, which forms and originality of our neurosis or character, which is absolutely identical in terms of Reich’s teachings (which is why researchers of Reich often use the concept of “characterological-muscular shell”). Reichian therapy was aimed at consistent release from typical muscular clamps and release of vital energy. During the session, the client had to perform a number of manipulations with his own body, as in the European tradition, the first “body therapy” was born.

Since then, quite a lot of specialists (Alexander Lowen, Ida Rolf, Peter Levin) have passed in the direction set by Reich introducing their concepts and methodological arsenal, but the essence of physical therapy has always remained unchanged – the discovery of the “physical blocks” of various genesis and the discharge of mental stress associated with them.

The Somatic Experience technique (Somatic Living) takes as a basis the “Somatic Trauma Therapy” by Peter Levine, who asserted that in the course of our life we meet with a special type of psychosomatic experiences – “traumas”. Trauma is the “environmental impact that is greater than the body’s ability to resist” (Levine, 2006). Levine pointed to several types of injuries, among them: shock, medical, birth trauma and psycho-emotional trauma. For the scientist, the most important consequence of the trauma was the nervous excitement locked in our body and psyche, connected with the mobilization of the body to the basic instinctive responses: “flight” or “struggle” and unresolved due to the impact of the traumatic factor. A classic example of a “shock” injury can be a sudden attack on a person: at this moment the endogenous processes in our body dramatically change their character, causing the psyche to instantly mobilize. Now imagine that in this state of peak excitement someone hits a person from behind and he instantly loses consciousness. Mobilized energy does not find relaxation (as it involuntarily occurs in many animals through neuromuscular convulsions, after consciousness returns) and gradually generates psychopathological products. Among the diverse symptoms of an incomplete traumatic reaction, Levin called: disturbed sleep and appetite, apathy, decreased general tone, the occurrence of regular pain of obscure genesis, uncomfortable experience changes in bodily sense of mind (unnatural ease or vice versa heaviness in limbs, chest, stomach or genital area) etc. The most serious consequences which are indicated by a scientist who has worked part of his professional biography in rehabilitation clinics for war veterans is – PTSD (post traumatic stress disorder) with psychotic manifestations, in fact, disabling the person.

Based on the concept of Levin, we were guided by the following considerations:
1. Sport – extremely traumatic sphere (shock, medical injuries)
2. That is in the sport of records an athlete needs to maximally fully mobilize his musculoskeletal potential, which is simply impossible with the presence of active traumatic experiences.

3. Intensive training process makes an athlete extremely susceptible to the bodily process associated with specific motor loads and assessing his own functional state in the context of the implementation of specific training tasks, but, paradoxically, dulls the sensitivity to subtler processes associated with the diversity of his own somatic experience.

4. Very often, where it is necessary to work out and resolve a traumatic experience that manifests itself through a number of symptoms familiar to a specialist working in the paradigm of bodily therapy and SBT in particular, supporters of the medical-biological approach use pharmacology, which leads to the extinction of symptoms, but also chronicles injury that not only does not give the athlete a chance to mobilize latent psychosomatic resources, but also, in the long run, leads to a decrease in his productivity, up to a complete inability to manage sporty tasks without constant pharmacological correction.

5. Even in the absence of severe traumatic symptoms in an athlete, the technique provides a whole range of useful skills, which are usually the methods of self-regulation (concentration, relaxation, the ability to accurately and deeply assess your functional state, use bodily resources in training and competitive processes).

“Somatic Experience”: the sequence of tasks, the correct understanding of the procedural aspects of work and their ultimate meaning. When we work according to the method of “Somatic Experience” (hereinafter referred to as SE) of trauma, we need to master several special skills that are not available in everyday life and without which substantial progress in this work will simply be impossible.

1. Formation of the basic consciousness of the somatic experience

2. Obtaining an experienced understanding of the traumatic and resource somatic experience of one’s own body

3. Titration: the use of resource somatic experience to resolve the traumatic experience

It is important to note that in this case we will consciously avoid the psychotherapeutic aspect of this method, since regular psychotherapy requires a specially organized context, which is absolutely irrelevant for the situation of the training process of highly qualified athletes. Thus, we will focus on those elements that can be used in a procedural and training format, without intensive immersion in group psychotherapy and psychotherapy in a group, which will allow athletes to develop skills for self-regulation and constantly progress in them.

Below we will look at each of these skills sequentially.

1. The formation of the basic consciousness of the somatic experience (CSE). To most of us, athletes seem to be over-competent in matters related to the awareness and development of their own physicality, but this is not entirely true, and often things are quite the opposite.

Above, we have already said that regular and intensive training makes athletes sensitive to a particular way of psychomotor behavior, directs reflection on certain muscle groups and related motor tasks, and an athlete may be completely insensitive to various somatic experience that takes place in the body.

Very often, in the course of practical work with a group of athletes in response to the question “How does your body feel now?”, we get the invariable answer “Normally”, and when specifying the question: “What is happening in your body now?” – athletes usually lead rough “peripheral sensations”: “I want to sleep”, “I want to go to the toilet”, “I’m tired”, or they find it difficult to answer at all, since these questions have no connection for them with a practical motor task and expose complete incompetence in the matter of somatic experience, cl sequences and block any possibility for the development of somatic self-control, so necessary for the optimization of the training process.

1. Getting an experienced understanding of the traumatic and resource somatic experience of your own body. The concept of "psychological resources" and resource experiences is not new in psychology. Very often, the concept of positive coping is synonymous with psychological or personal resources. One way or another, this concept reflects the ability of an individual to overcome internal or external discomfort with the help of certain skills, qualities, abilities, etc.

Often resources are divided into external and internal. To the internal we refer: temperamental, characterological, personal and behavioral characteristics of a person, and to external: objects, situations, conditions and other people (the latter, in our opinion, raises a number of problems and requires the introduction of an idea of “intermediate resources, that is, resources related to interpersonal relationships that can not be uniquely attributed to either external, nickname internal)

In the context of the work of P. Levin, resources are most often considered as a special somatic experience that allows one to cope with one or another traumatic
experience. The basic carrier of such resources are sensations. That is why, in order to master this effective work with resources, it is necessary to go through the first step described by us above and to work out the awareness and tracking of sensations.

We know that sport is one of the most traumatic activities in which people can be involved. However, working according to the methodology of the joint venture with athletes, incl. the most highly qualified, we will definitely face a simplified understanding of trauma, trauma experiences and traumatic consequences.

For example, for a fighter athlete, the “traumatic experience” will be exhausted by the idea of getting a specific physical injury, pain, motor discomfort, recovery process and its final result, which, again, will be considered through the presence of pain and freedom of motor activity.

However, this approach completely ignores the “subsurface part of the iceberg.” Thus, in the course of our work, we need to expand our understanding of the traumatic experience, give a detailed description and make an experimental demonstration of a particular somatic experience that indicates the incompleteness of the traumatic experience of this or that athlete.

Let’s make a symptomatic structure of this experience and divide traumatic experience into negative somatic experience and the external expression.

1. Somatic experience indicating the incompleteness of a traumatic experience may include:
   – decrease or loss of sensitivity in a particular area of the body when you try a mental scan of your own body
   – feeling of “freezing”, “obstacles”
   – feelings of “separation of the body into parts”
   – feelings of “alienation” of one or another part of the body (“a leg as not your own”)
   – sensations of constriction or unpleasant stress
   – spontaneous occurrence of pain
   – change in the nature of the sensations

2. External manifestations of a continuing traumatic experience can be expressed in:
   – sleep disturbance
   – increasing alarm
   – mood lability
   – decrease in training motivation
   – reducing professional self-esteem

It is very important to note that even when experiencing and realizing some of the anomalous manifestations from the above list, an athlete may not consciously discuss them with the trainer and medical staff, because of fear of falling into the category of not sufficiently reliable for health reasons, falling out of the training process, skipping competitions, etc. This fact further reduces the likelihood of successful study and exit from a traumatic experience.

3. Titration: the use of resource somatic experience to resolve the traumatic experience. Initially, the term “titration” existed only in the context of experimental chemistry and meant the determination of the content of a substance by gradually mixing the analyzed solution (for example, acid) with a controlled amount of reagent (for example, alkali). The end point of the titration (the completion of a chemical reaction) was set by changing the color of the chemical indicator.

Nevertheless, Levin often uses this term in his work, giving it a metaphorical hue and indicating that the psychic dynamics unfolding when working through a traumatic experience with the help of resources is very similar to the description of a given chemical process.

The following postulates are extremely important for a correct understanding and implementation of psychological titration:
   – In the course of this practice, we introduce into interaction, both traumatic experiences and resource experiences.
   – The balance between negative somatic experience and positive body resources should be strictly observed and always be in favor of the latter. Incorrect forcing the residence of a traumatic experience with a lack of resources can lead to the effect of retraumatization and consolidation of negative experience.
   – Traumatic experience cannot be understood as the totality of all injuries and failures that occurred in a person’s life; each experience must be worked out isolated until complete resolution.
   – A complex traumatic experience must always be viewed as a set of elements of experience (dividing an injury event into fragments) and for each of these elements a corresponding “titrating” resource must be found.
   – The same symptom can be worked out several times until the patient has not found a complete change in the nature of the sensations.

   – During the work of an experienced psychologist and his client, the first tries to turn to the internal bodily resources of a person, sometimes assisting him in case of certain difficulties, but in this work it is possible to attract a “social resource”, that is, close colleagues (community members or also undergoing or undergoing similar training). To manage the social process, it is necessary to create special conditions for group work, which must be agreed in advance with all participants in the psychological process, as well as with the administrators of such work.

**Recommendations for the implementation of the methodology in the system of training highly**
qualified athletes in the context of complex psychological and pedagogical support. First of all, it is necessary to point out the temporal, structural and format-forming aspects of such work, which are obligatory to perform, if we want to get the maximum therapeutic effect from the above method.

Stages of work:
1) Information: (total duration 3 hours), format – lecture, discussion, answers to questions. Number of classes: 2-3 (depending on the possibilities of integrating work into the fabric of the training process)

2) The first practical unit: (total duration 4 hours) procedural diagnostics of the functional state of athletes, identifying the individual specifics of negative psychosomatic and psycho-emotional experiences. Format: 2 process groups (1.5 hours) + 1 group (summarizing the experience, using individual self-assessment questionnaires of the state).

3) Second practical unit: (total duration 5 hours) “Formation of basic consciousfulness of the somatic experience (CSE)” Format: 5 training meetings for 1 hour, between meetings, athletes receive individual “homework” from the host, aimed at replenishing the deficit zones (“gaps”) in awareness

4) Third practical unit: (total duration 10 hours) “Resources and Trauma”: athletes gradually master the experience of using somatic resources and learn to recognize traumatic symptoms. Format: 10 procedural groups for 1 hour. Athletes begin to keep diaries of self-observation, which are used both in groups and outside of them.

5) Fourth practical unit: (total duration 15 hours) “Titration”: relying on the support of a trainer, athletes learn to work through traumatic experiences using the resources of their own body. Format 15 procedural groups, each for 1 hour. 10 groups the therapy process is carried out exclusively by the coach, 5 final groups he carries out his work with the help of involved assistants from among the most interested athletes in order to maximize the effect of mastering the process by the group, stimulate independent work and rally the team, covering it with a single process of mutual assistance.

6) The fifth practical unit: “Maintenance and maintenance.” Individual psychological correction work with “difficult cases” and individual counseling for athletes in the process of self-mastering the new experience of self-regulation. It is carried out throughout the work and “on request” of any of the participants of the work.

The necessary conditions:
1) The group should not exceed 15 people. If the number of athletes involved in the work is much larger, 2 or more parallel groups can be formed.

2) Practical work should take place in a room large enough to accommodate all participants in the process. At the time of work the room should be as isolated as possible from any external intervention: the sudden appearance of people not participating in the work, annoying noises and so on.

3) The necessary stimulus material and material support of the process are discussed by the host and the representative of the team in advance

Somatic work aimed at improving the skills of self-regulation, of course, has a number of features that must be taken into account in order to achieve completeness of the therapeutic effect and minimize any kind of risks associated with this method.

Among these risks are the main ones:
- lack of effectiveness or low efficiency of the method
- catalyization and “incompleteness” of complex experiences in the training participants

As we see, the main risks are, in fact, polar in nature: from the likelihood of the absence of any effect to the probability of excessive affectation. However, in both cases, the same reasons often lead to undesirable consequences.

1. The lack of effect is usually associated with the negligent attitude of athletes to participate in psychological work. There is no regularity, consistency, understanding and seeking competent support in the work, in case of need clarification of the purpose and tasks of independent work. It is possible and opposition from the coaching staff, for one reason or another, who consider the work of little value or “taking too much useful time.”

Also, problems may also be related to external disorganization of the work process: training participants are not provided with enough information for independent work, assistants of the leading psychologist from among the most interested participants of the sports team or coaching staff who are able to motivate athletes to undergo independent work are not prepared and specially trained basic somatic therapy skills.

2. The lack of competent psychological support for independent work of athletes can also be the cause of “stuck” training participants in unpleasant experiences. Often, starting an independent practice and confronted with an unpleasant somatic or psychological symptom, the training participant “drops” the work, believing that advancement will only cause an increase in discomfort. Such a sharp interruption of work is extremely undesirable in itself, but if, at the same time, there is no competent specialist of the psychological
and pedagogical support system or a trained assistant (with whom the athlete can report his experience), then the delayed consequences can be much more negative: the practitioner risks significantly undermine the development motivation in the field of self-regulation or even lose it, which cannot but affect the effectiveness of the entire training process and, as a result, the results of sports change.

It is important to understand that the occurrence of strong negative experiences:

- growth of the general psychoemotional tension
- the occurrence of unpleasant sensations (burning, pain, weakness, tension, etc.)
- the occurrence of bright negative emotional reactions (fear, anger) etc. testifies to the fact that this person has relevant traumatic experience, which impedes the process of self-regulation and in one way or another influences the metabolic processes of the body and the psychological state. The manifestation of “unpleasant” symptoms in this case is a traumatic “activation”, that is, a manifestation of unconscious destructive processes in the body unconsciously, which in turn makes it possible to “deactivate the injury”, that is, to work out negative bodily experience and complete the traumatic reaction. Thus, these manifestations should be viewed as evidence of the effectiveness of self-guided work, and the immediate tasks of the psychologist or assistant at this stage are:
  - working out of fear and doubt related to the occurrence of unpleasant experiences and strengthening of motivation to continue independent work.
  - assistance in the catalysis of sufficient resources, the passage and “detente”, the completion of the traumatic experience.

Thus, based on the considered risks and their causes, we can offer the following recommendations on the organization of an effective and safe procedure for introducing the SE methodology into the process of pre-competitive preparation and rehabilitation of athletes:

- Conducting a primary diagnostic study to identify the temperamental and characterological characteristics of athletes and anamnestic research to assess the individual traumatic experience of each athlete
- Conducting introductory theoretical and practical classes by a qualified specialist to describe the principles, goals and objectives of the work, practical demonstration of the method and clarification of tasks for individual work (already mentioned in the general plan of work)
- Motivational work with the coaching staff, since this technique can not be effectively implemented outside the productively working triad “psychologist-coach-athlete”
- Preparation of a qualified psychologist “assistants”, that is, the group of the most interested members of the sports team in order to motivate and help their colleagues in the event of difficulties in the passage of individual work. Also, assistants are advised to constantly keep in touch with a professional psychologist to obtain (if necessary) timely advice on individual cases (already mentioned in the general plan of work).
- Regular procedural and diagnostic monitoring of the development of athletes of the SE method by the method of diagnostic planned cuts and conducting group classes with demonstration works by the professional psychologist, answers to questions raised by ordinary participants of the training and “assistants” in the course of work.
- An important recommendation is also the provision of comfortable conditions for group work, the main ones being the availability of sufficient space for free placement of all participants of the training, isolation from other rooms (at least for the duration of the classes), ensuring the integrity of the group (no one comes and does not go away in the process of work) and a time frame sufficient to carry out full-fledged work. Also, it is advisable to provide in advance all the necessary inventory and stimulus materials from both the psychologist and the receiving party. (Already mentioned above in the necessary conditions)

Pre-approbation of the SomaticExperience method within the project. As part of the pre-approbation of our methodology, HBAssistance specialists conducted practical work with 110 athletes representing various sports (wrestling, canoeing, hockey, sailing and cycling).

The pre-approbation included an introductory lesson divided into two successive blocks aimed at informing athletes about the meaning of the method used and procedural diagnostics of the functional state of athletes in the context of the Somatic Experience method:

Block 1: (theoretical) – the athletes got acquainted with the basic concepts of the SE methodology, asked their questions and received feedback from the leader

Block 2: (practical) – athletes received practical experience in mastering basic techniques of SE, under the guidance of an experienced psychologist, conducted the final “Sharing” (discussion of personal experience), where athletes gave feedback on their experiences and shared other impressions.

Based on these lessons, we managed to identify:

About 30% of the athletes out of the total number of trained participants reported on symptomatology
that impeded both locomotor activity and simply stable negative experiences and somatic conditions.

28% had a history of medical operations under general anesthesia (which, according to Levin, is a “medical trauma”)

About 15% of athletes reported experiencing shock traumas during their athletic career and before it began

About 8% of athletes reported obsessive and intractable psychosomatic experiences (vegetative crises, circadian rhythm disturbances, tension headaches, etc.)

3 participants in a confidential conversation reported on the symptomatology of PTSD (post-traumatic stress disorder) and OCD (obsessive-compulsive disorder)

Also, according to the results of an oral survey of athletes, 75% expressed interest in further acquaintance with the method and a desire to learn independent work on the methodology of SE.

Based on the foregoing and these results, we recommend using the “Somatic Experience” technique to work with highly qualified athletes. At the very beginning of our article, we cited quite pessimistic thoughts of Safonov V.K., regarding the current state of the teaching staff system in big-time sports. The main criterion for pessimism was the data of a diagnostic study that showed a variety of pathological psychosomatics in a larger number of professional athletes. It seems to us that the method proposed here could effectively and ecologically solve a number of problems that generate such a state. It is difficult to overestimate the importance of practical data that could be obtained as a result of carrying out a full range of activities included in the method of Somatic Living. However, for now we remain only at the level of assumptions, albeit supported by a significant amount of scientific and practical data.

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SELF-PRESENTATION IN SYNCHRONIZED SWIMMING

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Keywords: self-presentation, identity, personal maturity, conformism, stress.

Abstract. Self-presentation plays an important role in those kind of sports, where results are judging by subjective criteria. The stereotypedness of the self-presentation in synchronized swimming is necessary for performances in a group, to impede the development of individuality and its involvement in overcoming stress.

The relevance of research. The success of self-presentation mostly determines success in business, in personal relationships, as well as achievements in sports, where results are judged by subjective criteria. Factors affecting the success of self-presentation, the laws governing the formation of a socially attractive image are more and more interested not only by specialists, but also by a wide audience, including athletes. To create an expressive image, you need to be able to highlight and emphasize individual and typical features; figurative characteristics should not be smoothed or leveled [6, 11, 13]. Self-presentation, in turn, directly affects the identity, understood as the experience and construction of a personality by a person [1].

The problem of self-presentation is particularly relevant for complex coordination sports, where sports results are evaluated by subjective criteria and an important role is played by the impression that the athlete makes on the judging team when performing motor actions.

Individuality in a sports team for the overall success of a team is often suppressed, as it is required to follow the ideals and values of the team. Standardizing processes contribute to the rapid and effective solution of stereotypical tasks, but lead to uniformity of emotions in the group, contribute to the loss of flexibility, the predominance of the pattern of reactions, inhibit the further development of the group [8]. The predominance of the performing nature of creative activities, playing games prevents the formation of resources, the growth of opportunities, obtaining rich sensorimotor experience and practical skills that could be useful...
in the future, does not allow to stimulate cognitive functions, consciously work on yourself, try to more accurately enter various images etc. [10, 11]. All this makes the study of the features of self-presentation in complex coordination sports, including synchronized swimming, an interesting and urgent task.

**Organization of the study.** We conducted a comparative study of the tactics of self-presentation, the severity of the status of professional identity, the level of stress, and the structure of the relationship between these indicators in the two groups of subjects:
- Russian national team in synchronized swimming (7 Honored Masters of Sports, 4 of them are Olympic champions, 4 world-class Masters of Sports, 5 Masters of Sports, n = 16). Conventional name is “Olymp”;
- students of SCOLIPE specializing in water sports (water polo – 4 people, swimming – 4 people, synchronized swimming – 4 people), including 1 world-class Master of Sports, 8 Candidates Master of Sports, 3 Masters of Sports), n = 12, Conventional name is – “SCOLIPE.”

The age of sportswomen is 16-29 years old.

The study of team “Olymp” was conducted by Shurochkina M.V. on the Olympic sports base “Ozero Krugloe”, the team “ SCOLIPE ” – in the Russian State University of Physical Culture, Sports, Youth and Tourism (SCOLIFK) in March 2018.

**The methodology.** The data were obtained using the following psychodiagnostic methods: scales of measurement of self-presentation tactics by S. Lee, B. Quigley, and others [14]; methods of studying the status of professional identity A.G. Gretsova, A. A. Azbel [5]; psychological stress scale PSM-25 L.Lemyre, R.Tessier, L. Fillion in the adaptation of N.E. Vodopianova [4].

**The results of the study.** The subjects of the group “Olymp”, compared with the group “SCOLIPE”, showed significantly less developed, “diffuse” identity, reliably more frequent use of both protective and assertive self-presentation tactics (Table, Figure 1).

Such assertive tactics of self-presentation, which are reliably more often used in the group “Olymp” compared to the group “SCOLIPE”, are: “desire / effort to please”; “attributing to oneself achievements”, “exaggerating one’s achievements” and “negative evaluation of others” are based on real facts, because the success of the group “Olymp” of subjects is indeed much higher than that of the subjects of the group “SCOLIPE”.

**Table – Differences in the Mann-Whitney U-test data of two groups:**

«Olymp» (n=16) and «SCOLIPE» (n=12)

<table>
<thead>
<tr>
<th>Methods</th>
<th>Exponent</th>
<th>Olymp</th>
<th>SCOLIPE</th>
<th>Uemp</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>central case</td>
<td>Sigma</td>
<td>central case</td>
</tr>
<tr>
<td>Scale for measuring self-presentation tactics S. Lee, B. Quigley</td>
<td>Denial of responsibility</td>
<td>17,8</td>
<td>4,55</td>
<td>12,6</td>
</tr>
<tr>
<td></td>
<td>Acceptance with responsibility</td>
<td>20,3</td>
<td>6,83</td>
<td>15,5</td>
</tr>
<tr>
<td></td>
<td>Renunciation</td>
<td>20,1</td>
<td>5,81</td>
<td>15,8</td>
</tr>
<tr>
<td></td>
<td>Self-obstruction</td>
<td>16,9</td>
<td>5,47</td>
<td>11,3</td>
</tr>
<tr>
<td></td>
<td>Apology</td>
<td>37,1</td>
<td>3,69</td>
<td>34,8</td>
</tr>
<tr>
<td></td>
<td>Desire / effort to please</td>
<td>27,4</td>
<td>8,98</td>
<td>18,0</td>
</tr>
<tr>
<td></td>
<td>Intimidation</td>
<td>8,9</td>
<td>2,86</td>
<td>7,3</td>
</tr>
<tr>
<td></td>
<td>Request / plea</td>
<td>15,3</td>
<td>4,74</td>
<td>11,0</td>
</tr>
<tr>
<td></td>
<td>Attribution of achievements</td>
<td>18,8</td>
<td>5,81</td>
<td>12,2</td>
</tr>
<tr>
<td></td>
<td>Exaggeration of achievements</td>
<td>15,3</td>
<td>6,08</td>
<td>9,9</td>
</tr>
<tr>
<td></td>
<td>Negative evaluation of others</td>
<td>12,3</td>
<td>4,23</td>
<td>7,2</td>
</tr>
<tr>
<td></td>
<td>An example to follow</td>
<td>26,4</td>
<td>7,35</td>
<td>22,8</td>
</tr>
<tr>
<td>Methods of studying the status of prof identity AG Gretsova, A. A. Azbel</td>
<td>Indefinite (diffuse)</td>
<td>3,0</td>
<td>2,00</td>
<td>1,2</td>
</tr>
<tr>
<td></td>
<td>Imposed</td>
<td>1,6</td>
<td>2,34</td>
<td>0,3</td>
</tr>
<tr>
<td></td>
<td>Moratorium</td>
<td>10,8</td>
<td>6,14</td>
<td>10,6</td>
</tr>
<tr>
<td></td>
<td>Formed</td>
<td>10,1</td>
<td>6,95</td>
<td>13,3</td>
</tr>
<tr>
<td>Psychological stress scale PSM-25</td>
<td>Mental Tension Indicator</td>
<td>95,4</td>
<td>22,59</td>
<td>76,8</td>
</tr>
</tbody>
</table>

**Note:** * (**) - the differences are significant at p≤0.05 (p≤0.01).
Discussion of the research results. The less formed, diffuse identity of the group “Olymp” of subjects is a consequence of the infantilism of their personality. Infantile personality does not cope with the bonding and discriminating work necessary for the integration of disparate ideas about themselves and others, to unite their past, present and future identity into a complex spatial-temporal (continual) integrity [9].

As a rule, doubts about the value of one’s personality characteristic of an immature identity are accompanied by: moderate degree of dissatisfaction with oneself, bordering on indifference to oneself, a tendency...
to conformism, low psychological autonomy, submission (to a coach, a group of peers), acceptance of others, ready-made patterns and patterns activities [7].

There is a possibility that from this stage the subjects will be able to move to a “moratorium” and then to “achieved identity”. To do this, you need to get a clear idea of how to adapt to social relations, about your qualities, combine your “I” into a stable and continuous, go through the period of making your own decisions, including when choosing a system of values or future professional activities.

However, most often, the infantilism tendencies that characterize an unformed (diffuse) identity with the further maturity only increase, and the indicators of socio-psychological adaptation and personal maturity decrease. These tendencies are accompanied by: the desire to escape from reality, self-denial, dependence, experiencing emotional discomfort, pessimism, apathy, depression, undirected anger, alienation, anxiety, feelings of helplessness and hopelessness [3, 12].

Reliably more frequent use of protective and assertive self-presentation tactics in the group “Olymp” suggests that the subjects of this group are more inclined to manage their own self-presentation taking into account the specific social situation compared to the group “SCOLIPE”.

Our subjects of the group “Olymp” are high-qualification synchronous sportswomen – masters of sports of world class, honored masters of sports and Olympic champions (Rio de Janeiro, 2016) can be classified as representatives of public professions (actors, politicians, etc.), having a high level of self-monitoring (self-control, communicative control). They are attentive to appearance, easily adapt to the expectations of the audience, maintain frequent contact with many people, but they may not rely on their own attitudes when making decisions [2]. In the event of a negative reaction from a biased audience, female athletes can turn to self-presentation defensive tactics (for example, to “prevent oneself” – creating the appearance of interference). It is good that at this time our team in synchronized swimming is a favorite of international competitions.

The lack of an interconnection between tactics of self-presentation and professional identity in the group “Olymp” does not allow female athletes to rely on identity, for example, in overcoming stress, creates a high risk of destabilization of self-relationship, over-dependence on significant others.

The stencil of the self-presentation of the subjects of the group “Olymp” does not allow, experimenting with identity, to receive support in the manifestation of conformation, low psychological autonomy, submission (to a coach, a group of peers), acceptance of others, ready-made patterns and patterns activities [7].

However, most often, the infantilism tendencies that characterize an unformed (diffuse) identity with the further maturity only increase, and the indicators of socio-psychological adaptation and personal maturity decrease. These tendencies are accompanied by: the desire to escape from reality, self-denial, dependence, experiencing emotional discomfort, pessimism, apathy, depression, undirected anger, alienation, anxiety, feelings of helplessness and hopelessness [3, 12].

Reliably more frequent use of protective and assertive self-presentation tactics in the group “Olymp” suggests that the subjects of this group are more inclined to manage their own self-presentation taking into account the specific social situation compared to the group “SCOLIPE”.

**Figure 2 – Significantly different fragments of the correlation graphs of the group “Olymp” and group “SCOLIPE”**
of their individual qualities, and this is an important condition for the development of individuality.

The formation of a more complex and well-functioning self-regulation system requires serious work of specialists in the formation of personality based on the knowledge of the resources and capabilities of a particular synchronizer.

Findings:

1. In the group “Olymp”, compared with the group “SCOLIPE”, the immature, unformed, diffuse identity is more pronounced, self-presentation is focused on meeting the expectations and preferences of the audience, and not on their own self-esteem or personal idea of the ideal. Their social role and the need to match the role is poorly understood by the subjects.

2. The group “Olymp” subjects are reliably more likely than the group “SCOLIPE” to use a variety of self-presentation tactics aimed at:
   • please, make an impression of a successful, strong, status person;
   • receive support as necessary with threats and intimidation, as well as with requests and pleas;
   • protect the image created by demonstrating existing or made-up problems due to excessive focus on the features of appearance and character and poor awareness of their social role.

3. The frequency of manifestation of a complex of assertive types of self-presentation, interconnected with the desire, diligence to please the subjects of the group “Olymp” is interconnected with the level of stress and is not related to the level of formation of professional identity (unlike the subjects of the group “SCOLIPE”). This creates a high risk of destabilization of self-attitude among the subjects of the “Olympus” group, their over-dependence in stressful conditions on the assessments of significant others.

4. The subjects of the group “SCOLIPE” revealed an interconnectedness of the “moratorium” of identity and the frequency of self-presentation protective tactics (mainly aimed at avoiding responsibility, “sanctions” for mistakes or bad actions).

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ности, культура. Вып. пятый. Спорт, эстетика, искус-

INDIVIDUAL CHARACTERISTICS OF VOLUNTARY REGULATION IN YOUNG ATHLETES TAKING INTO ACCOUNT THE FEATURES OF ASYMMETRY

INDIVIDUALНЫЕ ХАРАКТЕРИСТИКИ ПРОИЗВОЛЬНОЙ РЕГУЛЯЦИИ У МОЛОДЫХ СПОРТСМЕНОВ С УЧЕТОМ ОСОБЕННОСТЕЙ АСИММЕТРИИ

Keywords: brain, asymmetry, lateral features, volitional regulation, sport of higher achievements.

Abstract. The age dynamics of personality’s volitional qualities is studied on the example of 45 sportsmen-teens of 14–16 years and 100 students of 1–4 courses of sports high school at the age from 18 to 25 years. For the study of strong-willed qualities, the technique of M. Chumakov was used, for the study of asymmetry – the indicators of the «cross-arms» test by A. Luria. It was revealed that the dominance of the left frontal lobe in adolescents and young men is associated with higher rates of volitional regulation.

Ключевые слова: мозг, асимметрии, латеральные особенности, волевая регуляция, спорт высших достижений.

Аннотация. Изучена возрастная динамика волевых качеств на примере 45 спортсменов-подростков 14–16 лет и 100 студентов 1–4 курсов спортивного вуза в возрасте от 18 до 25 лет. Для исследования волевых качеств использовалась методика М.В. Чумакова, для проявления асимметрии – показатели пробы «перекрест рук» по А.Р. Лурия. Установлено, что доминирование левой лобной доли у подростков и юношей связано с более высокими показателями волевой регуляции.

The study was carried out with the financial support of the Russian Foundation for Basic Research (JPSG), project No. 16-06-50146-a (f)

The relevance of research. Identifying the individual characteristics of arbitrary regulation is undoubtedly relevant in modern sports psychology (especially when...
preparing highly qualified athletes) [1, 3-6, 10]. Arbitrary regulation of an athlete is always very closely related to such a concept as goal formation. The goal in psychology is defined as something that realizes the human need and acts as an image of the end result of an activity, as a pre-conceivable and anticipated result of conscious activity. The goal can be determined as a conscious image of future results, indirectly related to the motive of O.K. Tikhomirov [8]. And the more complex the goal, the longer the path a person needs to go in his development. The goal in sports is what the athlete’s activities are directed at. If there is no goal, then there is no activity, there is no purposeful activity of the subject. On the contrary, goal setting stimulates and programs the activity, it is the mechanism for deploying the appropriate program of behavior. All this requires the formulation of the question of studying the characteristics of volitional regulation, taking into account age-related changes and manifestations of asymmetry.

**Research methods.** Our experiment was conducted traditionally in the form of group testing. To identify the individual characteristics of volitional regulation, a study was conducted using the method of determining volitional personality traits (VPT) according to M.V. Chumakov [9]. It was attended by 45 teenagers of 14-16 years involved in the fight. Of these, 25 subjects were with right-hand indicators of the “cross-hand” test (right-hand ICHT) according to A.R. Luria [2], which reflects the dominance of the left frontal regions (related to the arbitrary regulation of behavior) and 20 adolescents were with the left indicators of this sample (left ICHT). The study was conducted on the basis of GBU «Sports School № 55 SKIF» of the Department of Physical Culture and Sports of Moscow [3; ten].

A similar study was also conducted on 100 students of 1-4 courses of a sports university (RSUPESY&T) aged 18 to 25 years. For the study of volitional processes, the method of VPT and the indicators of the “crossing hands” according to A.R. Luria [2], the total volume of the studied sample was 145 subjects.

The VPT questionnaire is designed to diagnose the expression of the volitional qualities of a person. The methodology contains 9 scales: “responsibility”, “initiative”, “determination”, “independence”, “moderation”, “perseverance”, “energy”, “attentiveness”, “purposefulness” [9]. Statistical data analysis was performed using non-parametric U – Wilcoxon-Mann-Whitney test.

**The results of the study.** Comparison of averaged data according to the method of VPT of M.V. Chumakov [9] in the group of teenage athletes showed that the subjects with the right indicators of the “crossing hands” test according to A.R. Luria (compared to the left) show higher numbers on the “responsibility” scales (4.5 p. and 3.9 p., respectively, p <0.05), “initiative” (4.6 p. and 3.9 p., p <0.05), “energy” (6.5 p. and 6.0 p., p <0.03) and on a scale of “purposefulness” (6.2 p. and 5.4 p. accordingly, p <0.05) (table).

Comparison of averaged data according to the method of VPT of M.V. Chumakov [9] for students of a sports university showed that subjects with right-hand ICHT (compared with left-hand ICHT) show higher rates on the “responsibility” scales (4.7 p. and 4.0 p., Respectively, p <0.05), “initiative” (4.9 p. and 4.0 p., P <0.05), “energy” (6.7 p. And 6.1 p., P <0.03) and on a scale of purposefulness ”(6.4 p. and 5.6 p., respectively, p <0.05).

**Discussion of the study results.** In general, according to the results of the study, subjects with left hemispheric dominance reveal higher data on the scale of the VPT methodology, which indicates a greater severity of indices of arbitrary regulation in the first group of individuals. The data obtained correlate with the results of psychodiagnostic studies. Also (according to experiments), it can be stated that as they grow up (as they move from adolescent to older age groups), there is an increase in indicators on the scales of the VPT method.

**Findings.** The obtained data can be successfully used in solving differential diagnostic problems in sports

<table>
<thead>
<tr>
<th>VPT method scales</th>
<th>Right hand – RICHT (n=25)</th>
<th>Left hand – LICHT (n=20)</th>
<th>Significance of differences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responsibility</td>
<td>4.5</td>
<td>3.9*</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Initiative</td>
<td>4.6</td>
<td>3.9*</td>
<td>p&lt;0.05</td>
</tr>
<tr>
<td>Determination</td>
<td>4.1</td>
<td>3.6</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Independence</td>
<td>5.2</td>
<td>4.7</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Moderation</td>
<td>6.5</td>
<td>6.1</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Perseverance</td>
<td>4.2</td>
<td>4.1</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Energy</td>
<td>6.5</td>
<td>6.0*</td>
<td>p&lt;0.03</td>
</tr>
<tr>
<td>Attentiveness</td>
<td>4.6</td>
<td>4.3</td>
<td>p&gt;0.05</td>
</tr>
<tr>
<td>Purposefulness</td>
<td>6.2</td>
<td>5.4*</td>
<td>p&lt;0.05</td>
</tr>
</tbody>
</table>
psychology, including the diagnosis of individual features of the regulatory functions of athletes.

The results show the presence of asymmetry of the third (regulatory) block of the brain according to A.R. Luria. This position is also confirmed by the data of psychodiagnostic studies of teenagers and young men with different lateral features [3, 10] and previously established data that the partial dominance of the left frontal lobe (more often in males) is associated with higher rates of goal formation and volitional regulation [4, 5, 10]. We have previously conducted piloting studies show that for girls and women, these indicators are less specific (more “blurred”), i.e. they are not always confirmed by statistical processing. The results can be used practically to diagnose the individual characteristics of arbitrary regulation in sports psychology when training highly qualified athletes and to predict human behavior in extreme situations [3-7]. They can also be used when reading a course in sports psychophysiology (in the section “volitional regulation of behavior”) [5].

**Literature**


**Литература**


TECHNIQUES FOR PRESTART STATES DIAGNOSIS IN ATHLETES

METHODS FOR DIAGNOSIS OF PRESTART STATES IN ATHLETES

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Keywords: psychological state, prestart state, observation method, self-evaluation, state anxiety, heart rate variability, bioelectric brain activity.

Abstract. The article discusses and systematizes the main approaches and methods aimed at diagnosing the prestart states of athletes. The advantages, disadvantages, and scope of application of the separate techniques was shown.

Relevance. The prestart state of an athlete is understood as the conditioned reflex psychological and physiological pre-tuning of a person and his body for the upcoming competitive activity [3]. Diagnostics of the actual prestart state can be used for the operational selection of athletes to participate in the fight [1, 2, 19] or to develop and refine the skills of correction and self-correction of the psychological state in preparation for competitions [10, 23, 28]. Difficulties in diagnosing the prestart psychological state are associated both with...
the complexity of testing just before the start, and with the internal validity of the tests used.

To diagnose a prestart state, an athlete can perform self-assessment of his own state, determine his anxiety, study of the nervous system, accuracy of movements, analyze of physiological indicators, as well as directly monitor the behavior and psychological state of an athlete. The most commonly used psychological methods for diagnosing a prestart state are specialized questionnaires and tests, a vegetative coefficient in a Luscher test, psycho-physiological and physiological indicators, etc.

Observation as a technique for the diagnosis of prestart psychological state. Observation is a descriptive psychological research technique, consisting in a focused and organized perception and registration of the athlete's behavior. The advantage of this technique is the ability to diagnose the status of an athlete at all stages of preparation and performance at competitions, including immediately before the start. In the observation, as a rule, it is not only the athlete who is included, but also the coach or the team, that allows you to record more accurately and predict the psychological state of the athlete, taking into account both behavioral and emotional aspects. However, the disadvantages of this technique include its subjectivity, the singularity of the observed circumstances and labor-intensiveness [13].

Self-evaluation of prestart psychological state. The techniques related to this section suggest the athlete to make an independent assessment of his own prestart state. In particular, the method of assessing the functional state of «Self-evaluation. Activity. Mood» (SAM) is widely used when working with athletes to diagnose pre-competition and prestart state. The questionnaire includes 30 pairs of diametrically opposed adjectives by which the athlete needs to evaluate himself. It allows you to assess the status of an athlete for each of the three qualities [5].

The motivational state scale was developed by V.F. Sopov and includes 7 statements, rated by the athlete on a 4-point scale. The method makes it possible to identify unfavorable prestart motivational states that may be associated with a conflict in the athlete-trainer system, with doubt in the method of preparing for competitions, etc. The dynamics of the prestart state at different stages of preparation can be assessed. The results of the method are supposed to be analyzed within the framework of the two-level “motivation-anxiety” ordinate system [14].

The scale-thermometer is an operational tool for self-evaluation of an athlete's condition according to two criteria: “well-being” and “desire to work”. The athlete is proposed to rate his condition on horizontal lines with marks from 1 to 20. The technique can be modified by the addition of other scales [6].

Despite the relative ease of application of these techniques, diagnostics of a prestart state based on self-evaluation may be associated with the social desirability of answers and the subjectivity of an athlete. Repeated measurement of self-evaluation can affect subsequent diagnostic results. In addition, as a rule, immediately before the start, athletes do not have the opportunity to fill out questionnaires, and therefore these methods are more suitable for diagnosing a pre-competitive, rather than prestart state.

Diagnosis of anxiety as an indicator of prestart psychological state. Anxiety is traditionally regarded as one of the main indicators of an athlete's readiness for competition. The reactive alarm scale was developed by C. Spielberger and adapted in Russian by Yu.L. Hanin. The Spielberger – Khanin questionnaire includes 20 statements with four answer choices for each of them: “I am calm,” “Nothing threatens me,” etc. [24, 25, 33-35]. This technique was used in numerous domestic [4, 8, 9, 12] and foreign studies [27, 31, 36]. In addition to reactive (situational) anxiety, C. Spielberger suggested studying the athlete's personal anxiety as a stable feature of his character [33].

To study the prestart state, we also use Sport Competition Anxiety Test (SCAT), developed by R. Martens [30]. The test includes 15 questions, 10 of which are aimed at diagnosing anxiety, 5 constitute a «scale of lies.» The technique, along with the Spielberger – Khanin questionnaire, was used in many studies [12, 22, 29].

The study of activation-fatigue of the nervous system. The diagnosis of a person's energy plant can be made on the basis of the vegetative coefficient in the Lüscher test. This indicator was proposed by K. Shyposh and is determined by the ratio of the positions of mobilizing (red, yellow) and passive colors (blue, green) in the choice of an athlete. The test allows to assess the psychological state of the athlete in the continuum from exhaustion and mindset to optimize the expenditure of forces to mobilization and excessive arousal [13].

Evaluation of physiological indicators prestart psychological state. The most frequently used indicators in psychophysiology and physiology reflecting various functional and psycho-emotional states of a person are indicators of the cardiovascular system, skin conduction and bioelectric brain activity. Sometimes only changes in heart rate (HR)
are analyzed. But, despite the ease of registration, this indicator has a lot of flaws from the substantive point of view. The problem of using heart rate as an indicator of stress and / or psycho-emotional stress is related to the fact that many factors affect the heart rate (including heart rate). Registering only the heart rate and tracking its dynamics when a person's state changes, we cannot speculate about what is happening in the body, the influence of which factors led to visible changes in the heart rate. Thus, an increase in heart rate can be caused both by an increase in sympathetic influences and a weakening of parasympathetic ones. Therefore, in research to diagnose the functional states of a person, methods are used aimed at a deeper analysis of the heart rhythm, the study of its variability.

**Heart rate variability (HRV)** is understood to mean the spread of the interval between adjacent R-deflection (RR-intervals) on an electrocardiogram (ECG) record. According to the temporal and amplitude characteristics of the rhythmic oscillations of the RR intervals, one can judge the state of the regulatory mechanisms of the human body [7]. In a calm relaxed state, different rhythm interval intervals are present in the rhythmogram recording. Under stress, the duration of RR-intervals decreases, and their variability decreases (the work of the heart begins to obey a more rigid uniform rhythm). Quantitative assessment of these indicators allows time and frequency variants of heart rhythm analysis [15, 16].

Time analysis of the heart rhythm involves the calculation of indicators such as the average duration of RR-intervals, their standard deviation, as well as the construction of histograms of the distribution of cardiointervals and the calculation of additional indicators and indices: distribution mode, mode amplitude, variation scale, Bayevsky stress index. Frequency (wave) analysis of heart rate variability is based on the construction of cardiorhythmogram spectra with the allocation of its three main components: VLF (very low frequency), LF – low frequency, HF – high frequency. By the contribution of each of these components to the total spectral power, one can judge the influence that prevails at a given period of time: sympathetic, parasympathetic, or the influence of suprasegmental (higher) brain regions on the heart rhythm. The results obtained for the work of the heart can be transferred to the whole organism as a whole and judge the degree of emotional stress of a person, the severity of his stress state [7].

In addition to the parameters of the heart in studies to assess the effects of the sympathetic and parasympathetic divisions of the autonomic nervous system (ANS) on the functional state and to assess the level of emotional stress, a number of other physiological indicators are used. Measurement of **skin conduction** (or the inverse of its value – skin resistance) is used to assess the degree of emotional stress of a person [21], in assessing stress [32], driving pressure [26]. This method has a very high sensitivity, since at the slightest change in a person's condition, the sympathetic section of the ANS is activated, which causes increased sweating and a drop in skin resistance (or increase in conductivity).

In psychophysiological studies to measure the functional state of an individual, the **measurement of the peripheral temperature** of the phalanges of the fingers is used. The relationship between peripheral temperature and psychoemotional stress is as follows: during stress, the sympathetic division of the ANS is activated, its fibers have a vasoconstrictive effect on peripheral vasses, less blood flows to the finger and its temperature decreases. During relaxing the reverse process happens.

The **tension of the muscles** of the face (in particular the forehead) and the muscles of the upper shoulder girdle (trapezoid muscles) is an informative indicator of the presence of psycho-emotional stress. Muscle tension is assessed according to the results of surface electromyography (EMG).

The **parameters of the bioelectrical activity of the brain** are most often calculated on the basis of the registration of the electroencephalogram (EEG). Certain frequency ranges of EEG rhythms are associated with the activity of different parts of the brain (both the cortex and subcortical structures), as well as changes in the level of general activation and changes in the functional states of the human body. According to the degree of the alpha rhythm in the EEG, one can judge the level of wakefulness and the functional state of a person. In studies conducted with the participation of professional athletes and musicians, it was shown that for the best performance of motor acts the brain is optimal in which a pronounced alpha rhythm is recorded in the EEG [11, 17, 18].

In several studies on sports related to aiming (golf and shooting), the change in physiological parameters was studied immediately before the strike or shot, taking into account the qualification (experience) of the athlete and the success of the subsequent strike or shot [11, 17, 20]. In these studies, a slowing of the heart rate is observed immediately before a stroke or shot, and the more experienced the athlete is, the more pronounced is his slowing pulse.
In studies of Napalkov D.A. et al. [11] clearly demonstrated that the experienced shooters immediately before the shot increases the severity of alpha activity, and with a shift to a higher frequency range compared to the initial frequency of the alpha rhythm. Such effects are associated with the automation of motor skills in experienced athletes, with more economical use of brain resources, suppression of the processing of information that is not needed at the moment. However, in those sports where the so-called explosive power is a key success factor, the mechanisms for improving performance can be completely different.

**Conclusion.** Diagnostics of the prestart state of an athlete can be performed not only using psychological methods such as observation, questioning, scaling, projective tests, etc., but also using psycho-physiological and physiological equipment that objectively records the athlete's condition. Despite the wide application of the described methods, the athlete's standard readiness indicators for competitions in each sport will vary not only in different sports, but will also be individual for each athlete, which has been repeatedly emphasized in the theoretical approaches of A.V. Alekseeva, Yu.L. Khanin and others. Therefore, for the diagnosis of the pre-start condition, it is preferable to select those techniques that not only can be performed organizationally in the last minutes before the start, but also allow the athlete to be repeatedly assessed, which will allow him to identify the optimal (combat) state.

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APPLICATION OF METHODS OF EVALUATION OF QUALITY OF LIFE FOR DIAGNOSIS OF STATE OF PSYCHOLOGICAL HEALTH OF ATHLETES

ПРИМЕНЕНИЕ МЕТОДОВ ОЦЕНКИ КАЧЕСТВА ЖИЗНИ ДЛЯ ДИАГНОСТИКИ СОСТОЯНИЯ ПСИХОЛОГИЧЕСКОГО ЗДОРОВЬЯ СПОРТСМЕНОВ

Keywords: psychological health, diagnostic methods, beginners and experienced athletes.

Abstract. The purpose of this work was to identify the possibility of applying methods for assessing the quality of life for diagnosing the psychological health of an athlete's personality. The study involved sportsmen-professionals and beginners. The masters of sports, in comparison with the beginners, revealed higher rates in the physical sphere and lower in the psychological. The conclusion is made about the possibility of using questionnaires for assessing the quality of life as additional methods for diagnosing a person's psychological health.

The relevance of research. Currently, the necessity to study the psychological health of the individual is noted in many publications. An analysis of the literature from a methodological standpoint indicates that there are a limited number of “direct” methods for diagnosing psychological health. So far as it is believed that psychological health is a determinant of the structure of personality and at the same time part of it, in the procedure of its research, tests are often used to diagnose its qualities and properties. For this purpose, a large number of personal questionnaires are used [1, 7, 9]. A number of authors considering the
subjective well-being as a correlate of psychosocial or mental health for its diagnosis using the technique developed by K. Riff, projecting the performance of its six main constructs on the level of mental health of the individual [11]. About the state of psychological health can be indirectly judged by the results of methods of diagnosis of emotional burnout (V.V. Boyko or K. Maslach and S. Jackson) and others [6]. Also professional adaptation questionnaires of G.S. Nikiforova et al are used. [4]. In some researches methods of determining the dominant state [3] or emotional discomfort [2] are used for the same purpose. In addition, there are studies in which the authors judge the state of mental health of a person, based on projective research methods [11].

The applying of quality of life questionnaires for the purpose of evaluating psychological health was not used, although there are researches where mental health was determined with their help [12]. In this regard, as well as taking into account the relevance of studying health, especially among individuals performing their professional activities in difficult, special or extreme conditions (for example, athletes), we undertook this study.

The purpose of the research is to determine the possibility of diagnosing the psychological health of an individual of athletes using methods for assessing the quality of life.

Organization of the research. The research was conducted on the basis of sports schools in Moscow, St. Petersburg, Ryazan.

The subjects. In this research, 200 sportsmen took part, who were divided into two groups. The main group (n = 82) is highly qualified sportsmen (masters of sports and international masters of sports); comparison group (n = 118) – these are novice sportsmen who do not have sports categories, but have been involved in sports for at least one year. All sportsmen were engaged in different kinds of sports (speed-strength, cyclical, difficult-coordination, martial arts, sports, extreme sports).

It should be noted that the task of influencing the specificity of the sport on the components of the psychological health of sportsmen was not set. It was important to determine the effect of the duration of sports activities (at least 8 years) on the subject of research, which is associated with the intensity of physical and mental stress applied by professional sportsmen. The age of the subjects – from 18 to 28 years. The subjects were of different sexes, but gender differences in the reactions of athletes in this series of studies were not taken into account.

Research methods. As a measuring tool, questionnaires were used to assess the quality of life of WHO QOL-100 and SF-36. Quantitative data were processed by parametric statistics. The difference in performance between groups was assessed using Student’s test. In addition, factor and correlation analyzes were used.

The results of the research. The obtained data due to the application of the WHO methodology QOL-100 are presented in table 1.

The presented data allow to note that on the scale of "physical sphere" among experienced athletes, the indicators are significantly higher than among beginner athletes (t = 2.6; p < 0.05).

With the help of the subsphere "physical pain and discomfort", the physical sensations experienced by athletes in our case and the degree to which these sensations are disturbing them, especially in the process of their sports activities, are measured. In this regard, it should be considered that for professional athletes, the presence of pain can not only deteriorate the results of their performances, but what is very important for them is related to material (financial) losses, which, of course, do not worry novice athletes.

Of course, we were most worried about the athletes’ ratings on the “psychological sphere” scale. It should

Table 1 – Indicators of the quality of life of beginners and experienced athletes (points, n=200)

<table>
<thead>
<tr>
<th>Scales</th>
<th>Beginners (n=118)</th>
<th>Experienced athletes (n=82)</th>
<th>Confidence level</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Confidence level</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical sphere</td>
<td>8,00±0,75</td>
<td>13,33±0,94</td>
<td>2,6</td>
</tr>
<tr>
<td>Psychological sphere</td>
<td>16,00±0,81</td>
<td>10,40±1,02</td>
<td>2,9</td>
</tr>
<tr>
<td>Level of independence</td>
<td>13,00±1,11</td>
<td>16,00±1,17</td>
<td>3,1</td>
</tr>
<tr>
<td>Social relations</td>
<td>14,00±0,99</td>
<td>10,67±0,87</td>
<td>2,7</td>
</tr>
<tr>
<td>Environment</td>
<td>12,25±1,02</td>
<td>15,25±1,14</td>
<td>3,0</td>
</tr>
<tr>
<td>Spiritual sphere</td>
<td>8,00±0,93</td>
<td>16,00±1,17</td>
<td>3,1</td>
</tr>
<tr>
<td>Overall assessment of</td>
<td>79,25±4,18</td>
<td>73,65±4,50</td>
<td>2,5</td>
</tr>
<tr>
<td>quality of life</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

< 0,05
< 0,01
< 0,05
< 0,01
< 0,01
< 0,05
4.

be immediately noted that the most negative impact on them was an excess of negative emotions. Although most of the subsphere of this sphere are oriented positively. However, the subjective assessment of their psychological sphere among experienced athletes looks much lower than that of beginners ($t = 2.9; p < 0.01$).

The decrease in the overall assessment of the psychological sphere comes from the fact that high-class athletes, due to mental fatigue, often experience negative feelings (despair, irritation, nervousness, anxiety, depression), which increases their experience and negatively affects psychological health.

On the “independence level” scale, high-class athletes demonstrated their attitude to home, work, and everyday activities: it is much better than their novice colleagues ($t = 3.1, p < 0.03$). However, the indicators on the “social relations” sphere are reversed. This refers to the fact that high-class athletes data on this scale reduced ($t = 2.7; p < 0.05$). This is due to the fact that professional athletes are incomparably more in contact with financial fraud, condemnation, politicization of sports and many other factors than beginners. All these factors are far from “moral cleanliness” and form a “social press” on the personality of professional athletes.

The data on the “environment” scale for experienced athletes is much better than for beginners ($t = 3.0; p < 0.01$). It is determined by the living conditions, material security and financial income of the compared persons. According to the “spiritual sphere” scale, highly qualified athletes demonstrate indicators two times higher than their novice colleagues ($t = 3.1; p < 0.01$). The fact is that the formation of this factor has psychosocial roots. So when asking the question: why, in the presence of mental fatigue, severe rigidity, frustration, depression and other personality traits (which obviously do not improve the well-being and psychological health of experienced athletes), are they able to perform enormous physical activities and endure mental stress? The answer, most often, is given by the athletes themselves or their coaches: everything is determined by the «socio-psychological core», «Russian spirit», and, strictly speaking, by the spiritual and moral principle. Although in the phenomenon itself formed contradictions and exacerbated.

This refers to the selection of specialists (engaged in the study of psychological health) spiritual and moral level of the individual as the most important criterion. The contradiction here is the deterioration of the psychological health of professional athletes with a sufficiently high degree of their spirituality. This is caused by two groups of factors: the first is the long-term, exhausting physical and especially mental stress and the growing demands of society on them, resulting in a “background” (out of competition) health condition; and the second is a sharp increase in various types of aggressiveness, excitability, emotional coldness, assertiveness, risk appetite, callousness and other properties, which certainly also reduce the level of psychological health. However, due to a sharp increase in the level of their manifestation in competitions, high intensity and action for a short time, they are the ones that determine the dominance over spiritual and moral criteria and other components of their health. That is why negative, from the point of view of public perception, but the qualities that are necessary and mobilizing for victory and winning, are becoming dominant and ensuring that professional athletes perform maximum loads with a significantly reduced level of psychological health. Apparently, the ability of professional athletes to over-mobilize in extreme situations to win developed over the years and is a condition of meaningfulness and a willingness to “put oneself on the block”, manifesting in this a high degree of spiritual and moral principles.

<table>
<thead>
<tr>
<th>Scales</th>
<th>Beginners (n=118)</th>
<th>Experienced athletes (n=82)</th>
<th>Confidence level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical function (PF)</td>
<td>26.33±0.78</td>
<td>29.02±0.85</td>
<td>2.3</td>
</tr>
<tr>
<td>Role-physical functioning (RP)</td>
<td>26.01±0.84</td>
<td>29.11±0.79</td>
<td>3.1</td>
</tr>
<tr>
<td>Bodily pain (BR)</td>
<td>6.62±0.67</td>
<td>9.55±0.72</td>
<td>3.0</td>
</tr>
<tr>
<td>General state of health (GH)</td>
<td>16.44±0.52</td>
<td>18.56±0.56</td>
<td>2.8</td>
</tr>
<tr>
<td>Vitality (VT)</td>
<td>17.32±0.81</td>
<td>15.13±0.73</td>
<td>2.1</td>
</tr>
<tr>
<td>Social functioning (SF)</td>
<td>8.87±0.76</td>
<td>6.60±0.80</td>
<td>2.1</td>
</tr>
<tr>
<td>Role emotional functioning (RE)</td>
<td>5.30±0.10</td>
<td>4.87±0.09</td>
<td>3.3</td>
</tr>
<tr>
<td>Mental health (MH)</td>
<td>24.58±1.76</td>
<td>19.11±1.48</td>
<td>2.4</td>
</tr>
</tbody>
</table>
In conclusion, it should be noted that the overall assessment of the quality of life, which consists of answers to 100 positively oriented questions, was still lower for athletes with higher qualifications than for beginners \((t = 2.5; p < 0.05)\).

As in many, especially foreign studies, the authors argue that quality of life is an indicator of human well-being, and the latter is considered one of the indicators (markers) of psychological health, this questionnaire can obviously be used to measure it. Taking into account the instructions of a number of authors that a high level of mental stress arising among professional athletes leads to chronic stress, injuries, overtraining, which worsen mental health and quality of life \([10]\), we attempted to diagnose psychological health using the MOS SF questionnaire -36 \([8]\).

The obtained data are presented in Table 2.

The obtained data allow us to note that four of eight indicators for experienced athletes are better expressed than for beginners. These are all scales related to the physical component of health. At the same time, the data of the scales included in the general indicators of the psychosocial component of health is lower than in the comparison group (Table 2).

The first four scales allow to test the physical condition, determine its level in the presence of pain, and identify the general health of the subject. The obtained data indicate that the physical condition of experienced athletes, compared with inexperienced, beginners, is at a higher level \((t = 2.3; p < 0.05)\). And this means that experienced athletes, despite the presence of years of influence on the psyche of extreme situations of sports activity, significantly worsening their mental and psychological health, are able to endure maximum physical and mental stress in competition conditions. Although the level of physical functioning in them could be much higher if it were possible to exclude the influence of psychopathological factors on their psyche.

The obtained data on the following four scales related to the psychosocial component of health, indicate a decrease in their experienced athletes, compared with beginners. Apparently, it is precisely the negative changes in the psyche of the first that determine the deterioration of their social functioning \((t = 2.1, p < 0.05)\), vital activity \((t = 2.1, p < 0.05)\) and, especially, role-playing emotional functioning \((t = 3.3; p < 0.001)\), which is caused by the frequently occurring and long-term affective emotional state. That is why professional athletes have lower mental health indicators than beginner athletes \((t = 2.4; p < 0.05)\). The questions of this scale are constructed so that the answers to them can demonstrate the degree of manifestation of such personality states as depression and anxiety, causing mental fatigue, mental distress and, in general, a decrease in the state of psychological health.

The results of the conducted factor and correlation analyzes make it possible to verify that there are positive connections between the two groups of studied indicators that are included in the physical and socio-psychological spheres.

Thus, the physical sphere has the closest connections with physical functioning \((r = 0.21; p < 0.002)\), with role-based physical functioning \((r = 0.188; p < 0.003)\) and to a somewhat lesser extent, there is a connection with mental health \((r = 0.177; p < 0.005)\).

At the same time, the general health of athletes is much more dependent on the parameters of the psychological sphere \((r = 0.190; p < 0.004)\), and the last one is even more closely related to social functioning \((r = 0.193; p < 0.005)\), while mental health associated with it to a lesser extent \((r = 0.185; p < 0.013)\). As for the spiritual sphere, as one of the most important criteria of psychological health, it has the closest correlation with the social sphere \((r = 0.195; p < 0.003)\) and mental health \((r = 0.186; p < 0.005)\) of experienced athletes. The overall quality of life has the closest links with social functioning \((r = 0.179; p < 0.004)\), mental health \((r = 0.177; p < 0.011)\) and with vital activity \((r = 0.176; p < 0.012)\).

Consequently, the factors related to the psychological sphere depend on the social sphere, social functioning and vital activity, while the spiritual sphere is also the closest correlated with social functioning and general health. This means that the above-mentioned factors are most relevant to psychological health, and their testing allows us to judge its condition.

**Findings:**

1. Due to the complexity of understanding the “psychological health” system and the lack of a generally accepted method of diagnosing it, in world practice questionnaires are used to measure its various structural and functional components, the evaluation of which allows to confirm its changes as an integral system, judging by the transformation of its parts.

2. Empirical evidence suggests that the use of questionnaires designed to assess the quality of life (WHO QOL-100 and SF-36) is possible with the aim of obtaining additional data for diagnosing the psychological health of an individual.

---

**TABLE 2:**

<table>
<thead>
<tr>
<th>Scale</th>
<th>Mean Value</th>
<th>SD Value</th>
<th>t-value</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Functioning</td>
<td>2.3</td>
<td>0.5</td>
<td>2.5</td>
<td>0.05</td>
</tr>
<tr>
<td>Role-based Physical Functioning</td>
<td>2.1</td>
<td>0.4</td>
<td>2.1</td>
<td>0.05</td>
</tr>
<tr>
<td>Emotional Functioning</td>
<td>3.3</td>
<td>0.6</td>
<td>3.3</td>
<td>0.001</td>
</tr>
<tr>
<td>Social Functioning</td>
<td>3.5</td>
<td>0.7</td>
<td>2.4</td>
<td>0.05</td>
</tr>
<tr>
<td>Mental Health</td>
<td>2.5</td>
<td>0.6</td>
<td>2.5</td>
<td>0.05</td>
</tr>
<tr>
<td>Vital Activity</td>
<td>3.3</td>
<td>0.7</td>
<td>3.3</td>
<td>0.001</td>
</tr>
<tr>
<td>General Health</td>
<td>3.2</td>
<td>0.6</td>
<td>3.2</td>
<td>0.001</td>
</tr>
<tr>
<td>Psychological Health</td>
<td>2.7</td>
<td>0.5</td>
<td>2.7</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Literature
CONFLICT ANALYSIS OF INTERPERSONAL RELATIONS IN THE TEAM OF HIGHLY QUALIFIED HANDBALL PLAYERS

КОНФЛИКТOMETРИЧЕСКИЙ АНАЛИЗ МЕЖЛИЧНОСТНЫХ ОТНОШЕНИЙ В КОМАНДЕ ГАНДБОЛИСТОК ВЫСОКОЙ КВАЛИФИКАЦИИ

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Keywords: the level of interpersonal conflicts, the coefficient of group and individual conflict, interpersonal conflict, handballers of high qualification.

Abstract. Cohesion and a favorable socio-psychological climate is conducive to the growth of sports in the team. In this work, we have looked levels of conflict in interpersonal relations of handballers for an adequate analysis of the psychosocial climate and in the woman's team.

The relevance of research. Associated with the fact that conflicts are an integral part of vital human activity, it is necessary to give it as full attention as other psychological aspects of everyday life. Realizing that a conflict can lead to undesirable consequences, it is necessary to minimize possible damage, cause this phenomenon and benefit from it [5].

According to the definition of the concept generally accepted for sociology of sport, sport is a social phenomenon that includes competitive activity itself, preparation for it, and specific interpersonal relations and behavioral norms arising in the process of this activity. Accordingly, in essence, sports activities are inevitably associated with special relationships, including conflicts. Modern sport places high demands on the physical and mental abilities of a person. Training and competitive process is often accompanied by the emergence of conflict situations, passing either into
direct, open, conflicting interaction, or into a hidden or intrapersonal conflict [2].

The close and effective interaction of teammates in sports and gaming activities is impossible in the context of a destructively pronounced conflict interaction [3,4]. Acute long-term conflicts between athletes destroy the system of business and personal relationships, negatively color the interactions between group members, and ultimately lead to a decrease in athletic performance.

The object of the study was informal and interpersonal relations in the team of highly qualified handball players.

The subject of the study was the nature of informal and interpersonal relations in the level of cohesion and well-being of relationships in the women's handball team.

Hypothesis of the study: we proceeded from the assumption that the diagnosis and analysis of informal and interpersonal relations of highly skilled handball players will help identify the level of cohesion and well-being in a team as a basis for the formation of an optimal psychological climate.

Objectives of the study:
1. To determine the level of interpersonal conflict in a team of highly qualified handball players;
2. To identify the nature and characteristics of interpersonal and informal relationships in the women's handball team;
3. To determine the level of cohesion and well-being of relationships in the women's handball team.

**Table 1 – Group Conflict Level Indicators**

<table>
<thead>
<tr>
<th>Very often</th>
<th>Often</th>
<th>Rarely</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Σ</td>
<td>P1(%)</td>
<td>Σ</td>
<td>P2(%)</td>
</tr>
<tr>
<td>0</td>
<td>0,00</td>
<td>3</td>
<td>16,67</td>
</tr>
</tbody>
</table>

Note: JCI - is a conflict frequency index; P1, P2, P3, P4 are the percentages of answers according to the first, second, third and fourth answer variants.

**Table 2 – Indicators of individual conflict handball players**

| № | The frequency of the player’s conflict according to the group |
|---|---|---|---|---|---|---|
|   | Very often | Often | Rarely | No | J(CI) | Subgr. By confl. level (K) |
| Σ | P1(%) | Σ | P2(%) | Σ | P3(%) | Σ | P4(%) |
| 1 | 5 | 27,78 | 8 | 44,44 | 5 | 27,78 | 0 | 0,00 | -0,66 | K1 |
| 2 | 1 | 5,56 | 7 | 38,89 | 10 | 55,56 | 0 | 0,00 | -0,50 |
| 3 | 0 | 0,00 | 9 | 50,00 | 7 | 38,89 | 2 | 11,11 | -0,35 |
| 4 | 0 | 0,00 | 0 | 0,00 | 16 | 88,89 | 2 | 11,11 | -0,18 |
| 5 | 0 | 0,00 | 2 | 11,11 | 13 | 72,22 | 3 | 16,67 | -0,15 |
| 6 | 0 | 0,00 | 5 | 27,78 | 8 | 44,44 | 5 | 27,78 | -0,05 |
| 7 | 0 | 0,00 | 4 | 22,22 | 9 | 50,00 | 5 | 27,78 | -0,03 |
| 8 | 0 | 0,00 | 3 | 16,67 | 9 | 50,00 | 6 | 33,33 | 0,06 |
| 9 | 0 | 0,00 | 1 | 5,56 | 10 | 55,56 | 7 | 38,89 | 0,17 |
| 10 | 0 | 0,00 | 0 | 0,00 | 11 | 61,11 | 7 | 38,89 | 0,19 |
| 11 | 0 | 0,00 | 0 | 0,00 | 10 | 55,56 | 8 | 44,44 | 0,26 |
| 12 | 0 | 0,00 | 0 | 0,00 | 8 | 44,44 | 10 | 55,56 | 0,41 |
| 13 | 0 | 0,00 | 1 | 5,56 | 5 | 27,78 | 12 | 66,67 | 0,54 |
| 14 | 0 | 0,00 | 0 | 0,00 | 4 | 22,22 | 14 | 77,78 | 0,70 |
| 15 | 0 | 0,00 | 1 | 5,56 | 2 | 11,11 | 15 | 83,33 | 0,76 |
| 16 | 0 | 0,00 | 0 | 0,00 | 3 | 16,67 | 15 | 83,33 | 0,78 |
| 17 | 0 | 0,00 | 0 | 0,00 | 2 | 11,11 | 16 | 88,89 | 0,85 |
| 18 | 0 | 0,00 | 0 | 0,00 | 2 | 11,11 | 16 | 88,89 | 0,85 |
However, among team players, the coefficient of individual conflict (Table 2) ranges from -0.66 to 0.85, hence the conflict between players varies considerably within the same group.

In this regard, we divided the players by the level of individual conflict into 3 subgroups: the first (athletes with conflicts are slightly above the average) – 3 athletes (16.66% of all group members); the second (sportswomen with conflicts of a considerably average level) – 10 players (55.55% of the members of the whole group); the third (athletes with low conflicts) – 5 players (27.77%) from members of the whole group.

To determine the nature of interpersonal relationships in the women's handball team, we used the method of conflict measurement developed by I.Suleimanov and A.P. Dmitriev.

In accordance with the requirements for the implementation of this methodology, we have developed conflict-resolution selection criteria (questions) for athletes of the group:
1) “Who do you prefer to live in one room at a training camp?
2) “With whom do you not want to live in the same room at the training camp?

Based on the presented selection criteria, conflict matrices were compiled (Table 3).

On the conflict matrix, two groups are strongly pronounced. The first one is stable (marked on

Research methods. To solve the tasks we used the following research methods:
• Analysis and synthesis of literary sources
• Pedagogical observation
• Questioning
• Socio-psychological methods for determining interpersonal conflict (in particular: “Methods for determining the level of interpersonal conflict” (B. A. Babayan),
• Methods of mathematical statistics (conflict indices, median (Me), scope of variation (R); conflict frequency index (J CI) for the team as a whole and for each player separately).

The results of the study and their discussion. One of the most important characteristics of relationships in a sports team is the level (or degree) of conflict, as an individual athlete, and in the sports group as a whole.

The index of group conflict (J CI) of the women’s handball team (calculated by the method of B. A. Babayan) was -0.42 (with a range of JCI from -1.0 to 1.0), which indicates the level of group conflict is above average. The average Conflict Indicator of each player of the group Me (J CI) = 0.2 indicates that the values of the coefficient of individual conflict among the players as a whole are at the level of the average value (which does not coincide with the value of the group coefficient (-0.42) of the conflict given above).
the conflictogram with different colors, players No. 8, 9, 11, 13, 14, 15, 16, 17 and 18) and is ahead of the second group in terms of formation (marked with yellow color on the conflictogram, players No. 1, 2, 3, 4, 5, 6, 7, 10 and 12), since there are ten mutual elections in the first grouping, but not in the second grouping.

Based on the conflict matrices, conflictograms were compiled, reflecting these two groups and their inter-personal and informal relationship handball players in the team.

We see a clash between the two factions; where the players of the first group belonged to other teams before, and the players of the second group belonged to this team. This is explained by the number of negative unidirectional choices by the athletes of the first group to the athletes of the second group.

The second group undergoes a stage of formation between veterans and young people, and at the moment there is no desire to establish new informal ties.

In the first grouping we observe mutual and positive unidirectional elections between its members.

Then, on the basis of the conflict matrix, the group (Table 4) and individual (Table 5) conflict indices were calculated.

The reciprocity index (RI) for the whole team, reflecting the level of cohesion in the informal sphere of relations, was 0.036 – a low figure. Group Conflict Index (GCI) is the “reverse” reciprocity index. Throughout the whole group, it is equal to 0, which suggests that the desire of the group members to establish informal relations with each other is low.

The reciprocity index in the first group was 0.14, and the reciprocity index in the second group is 0.
other members, shows that the most conflicting members of a group, to a lesser extent than less conflicted athletes, tend to establish new informal relationships.

The index of positive conflict expansiveness (IPCE), characterizes the positive attitude of a member of the group to its other members. He also confirms that sportswomen in the first group are more inclined to support positive informal relations than sportswomen in the second grouping.

It can also be noted that the IPCE indicator for all players of the first subgroup is equal to 0.24, which is higher than the index of the second subgroup equal to 0. Thus, there is a high level of group cohesion in the first subgroup and a low level in the second subgroup.

The Group Conflict Expansiveness Index (GCEI) characterizes the desire of group members to establish informal relationships with other group members. IGCE of the first group was 5.7, and the second group – 0.75. This indicates that the athletes of the first group are more eager to establish informal relations than the second group.

GCEI for the group as a whole is equal to 3.17, for the first subgroup it is 1, for the second – 2.1, for the third – 6.6 (subgroups on the level of individual conflict). These results also show that the most conflicting members of the group, to a lesser extent than less conflicted athletes, tend to establish new informal connections. Such connections are most important for the third, least conflicting subgroup in terms of the level of individual conflict.

The Conflict Expansiveness Index (CEI), which characterizes the attitude of a member of a group to its other members, shows that the most conflicting members of a group, to a lesser extent than less conflicted athletes, tend to establish new informal relationships.

The findings suggest that the informal cohesion of the first group is three times higher than the general group and significantly higher than the cohesion of the second group.

The Group Conflict Expansiveness Index (GCEI) characterizes the desire of group members to establish informal relationships with other group members. IGCE of the first group was 5.7, and the second group – 0.75. This indicates that the athletes of the first group are more inclined to support informal relations than the second group.

<table>
<thead>
<tr>
<th>Table 4 – Group conflict indexes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nº</td>
</tr>
<tr>
<td>GCEI</td>
</tr>
<tr>
<td>RI</td>
</tr>
<tr>
<td>GCI</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Table 5 – Personal Conflict Indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nº</td>
</tr>
<tr>
<td>GCS</td>
</tr>
<tr>
<td>PCS</td>
</tr>
<tr>
<td>NCS</td>
</tr>
<tr>
<td>CEI</td>
</tr>
<tr>
<td>IPCE</td>
</tr>
<tr>
<td>NCEI</td>
</tr>
<tr>
<td>GCRI</td>
</tr>
</tbody>
</table>

**Sigma (σ) – quadratic deviation.**
criteria. Therefore, we can talk about the existence of low cohesion in the team.

The positive conflict status (PCS), which is determined according to the conflict measurement criteria with a positive orientation, makes it possible to identify certain status positions (conflict status status) of the members of the group: “stars”, preferred, adopted, isolated and neglected.

The identified status groups allow us to determine the level of well-being of relationships (LWBR). This concept was introduced by J.L. Kolominsky, who proposed to distinguish three grades of LWBR: high, medium, low.

I gradation – “stars” (Table 6), II gradation – “preferred”, III gradation – “accepted”, IV gradation – “isolated”, and V gradation – “neglected”.

Thus, the number of athletes in status groups, where the index (PCS) is lower, exceeds the number of athletes in status groups with a relatively high index.

I + II <III + IV + V

Consequently, the level of welfare of the relationship (LWBR) in a team is low.

Findings.

Conflictometric analysis of interpersonal relationships in a team of highly qualified handball players suggests the following:

– the level of group conflict is above average (moderate), which is characterized by the presence of a conflict situation among individual handball players;
– the average indicator of individual conflict among handball players is generally at a level below the average, which indicates a level of conflict at below average; group cohesion (in terms of RI) – low;
– team athletes are divided into two weakly interacting groups, with one of them being dominant, more cohesive;
– athletes of the first group are more eager to establish informal relations than the second group (in terms of the GCEI);
– the most conflicting members of the group, to a lesser extent than the less conflicting athletes, strive to establish new informal relationships (in terms of the CEI);
– sportswomen of the first group are more inclined in supporting positive informal relations than sportswomen in the second group;
– The level of well-being of relationships (LWBR) in the team for the period under study is low.

The findings suggest the need for pedagogical correction of interpersonal relations of female athletes and the development of a system of psychological and pedagogical measures to increase group cohesion and prevent the onset of acute conflict situations.

Literature

THE TEAM «SPIRIT»: ABOUT THE PHENOMENOLOGY OF SPORTS INTERACTION

«ДУХ КОМАНДЫ»: О ФЕНОМЕНОЛОГИИ СПОРТИВНОГО ВЗАИМОДЕЙСТВИЯ

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Keywords: «team spirit», collective subject, psychological resource, role space, group identity, fencing.

Abstract. There formed thesaurus of the notion «team spirit», it analyzed psychological essence of the group experience arising beside athlete in combined activity, it brought results of the empirical studies, which increase conceptions about «team spirit» phenomenon, with athletes of fencing team of the Ukraine.

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«ДУХ КОМАНДЫ»: О ФЕНОМЕНОЛОГИИ СПОРТИВНОГО ВЗАИМОДЕЙСТВИЯ

The relevance of research. The attention of researchers to the psychological aspects of interpersonal interaction is traditional [7, 11, 15]. Its scientific ontology can be traced from the “collective unconscious” in the psychodynamic works [17], to the emergence and development of subjective signs of joint activity [1]. In sports and psychological studies, scientists are currently shifting the focus...
of attention from modeling and conceptualization, which are characteristic of studying the problems of “psychological preparation” in sports, and later on the “psychological support” of sports activities to an ideographic, possibly more individualized description of the subject’s “psychological support” sports or sports-pedagogical activity, reflecting the increasing degree of conditionality of the achieved personal results (subjective) categories. This justifies the interest of researchers to the problems of searching, forming, expanding the means of mental activity, its resources and their evaluation.

The purpose of the study is to analyze and summarize the phenomenological formations of sublime states arising in the joint activity of sports teams and establish empirical referents of their research.

Methods. Theoretical analysis of the problem, the questionnaire of M. Belbin for assessing roles in a team (Belbin team roles assessment), modification of the organizational identification scale of J. Cheng (adaptation by AV Lovakov), assessment of the psychological readiness of an athlete, variational analysis (ANOVA), nonparametric analysis of variance Kruskal-Wales (Kruskal-Wallis ANOVA by ranks H-test).

The results of the study and their discussion. The use of the term “sports team” initially provides for a certain level of development of the group. In the socio-psychological context, a team is a kind of a new growth of a small group, which has already formed group processes and states, unique mechanisms of functioning and interaction.

Therefore, the development of sources of activity of individual subjects and the team as a whole implies a special form of organization of people, based on thoughtful positioning of participants who have a common vision of the situation (training, competitive), strategic goals and have developed interaction procedures [5].

One of the resource sources of sports results is the spirituality of the subject of sports and educational activities, that is, that which inspires “spirit” inspires. This is evidenced by the wide use in the literature of such concepts as “inspiration”, “courage”, “dedication”, “resource condition”, “cohesion”, “partner feeling”, “team sense”, “feeling” we “, “fighting spirit”, “Winning spirit”, “hard spirit”, “morale”, “team spirit”, etc., which experts often use to explain the success or failure of sports performances.

The concepts of “spirit” and “resource” cannot yet be attributed to the formed psychological categories, however, interest in these subject attributes is obvious, as evidenced by the increasing number of scientific papers on this problem, both methodological and applied. The study of the problem of spirituality of the subject, develops in four directions: religious, cultural, philosophical and psychological. Within the framework of the latter, a study of situational and personal factors is carried out that contribute to the emergence

![Figure 1-Conceptual model of cohesion in team sports](image-url)
of spiritual (elevated) states in a person associated with the awareness and experience of higher values, the formation of spiritual abilities, the formation of spiritual intelligence [3, 10]. A potential consequence of this process is the fullness of the involvement of the subject of the regulatory agents of the psyche, for the organization of mental activity, which leads to the realization of new opportunities for self-regulation.

One of the possible reasons for the scientific interest of sports psychologists to this topic is the awareness of the limited development of an athlete or team purely activity framework, when the conditions of their formation and implementation, is a constant going beyond the “limits of yourself”, the search for additional means of activating the psyche [9]. The source of education of mental resources, according to the concept of Tolochek V.A. [14], in addition to internal or intrasubjective inherent qualities of individual subjects) there may be external ones, among which are intersubject or systemic qualities arising from the interaction and performance of joint group activities, as well as extra-subject, manifested as in the process of “live” interaction, and broadcast by means of culture, for example, command (corporate, organizational).

Such views are consistent with the ideas about the development of cohesiveness of sports teams, the conceptual model of which was developed by A. Carron [19] (Figure 1) and includes four categories: environmental factors, personal factors, management factors, and team factors. A. Carron was the last to play a significant role, since the total contribution of these factors may to some extent compensate for the lack of development of others, including the level of individual skill of the group members. That is why a team of well-functionally trained athletes focused exclusively on the realization of individual capabilities, in other words, search-oriented intrasubjective resources, is not always able to realize their potentially high level. In such cases, the coaches, and the athletes themselves, speak of the absence of an important, sometimes necessary condition – “team spirit”. While less successful in individual types of athletes can demonstrate outstanding ability in a coherent team interaction

In general, the scientific view of the nature of the team “spirit”, its emergence and development became possible thanks to the development of a number of psychological and socio-psychological phenomena, among which are the subjectivity in professional activities [4], non-equilibrium mental states [13], the flow state [20], spirituality of a professional [12, 16], as well as the psychological climate of the team [6], joint activities [1], team cohesion [19], collective subject of activity [1], group roles [18] and others

In accordance with modern ideas about the dynamics of the mental activity of the group, a number of criteria characteristics determine the level of its development. In other words, the development of a collective subject of activity is characterized by corresponding properties, characteristics, types that determine, in turn, its level (Table 1).

The latter level “closes” the integrity of the group, forms a reflexive environment [8], in which the ability of the group (team) to make intuitive or rational decisions is manifested. This process determines the activation of “intragroup consciousness”, thus forming a group image of its potential, which reflects group needs, aspirations, goals, and also resources for the regulation of group activity.

The formation of a team need is associated not only with the ability to satisfy individual desires, but also with the appearance, within the framework of achieving a common goal, a feeling that was previously not typical for an individual athlete, which in social psychology has been called the “we” feeling associated with team spirit and team success [4]. The content side of this phenomenon is:

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**Table 1 - Criteria characteristics of a group subject of activity (according to A.L. Zhuravlev)**

<table>
<thead>
<tr>
<th>Kind</th>
<th>Characteristic</th>
<th>Type</th>
<th>Level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Interconnectedness and interdependence of individuals in a group</td>
<td>Group state of preactivity</td>
<td>Interconnected</td>
<td>Potential subjectivity or presubjectivity</td>
</tr>
<tr>
<td>2. Quality (ability) to manifest various forms of joint activity</td>
<td>Group activity</td>
<td>Interconnected-active</td>
<td>Real Subjectivity</td>
</tr>
<tr>
<td>3. The quality (ability) of the group to self-reflection</td>
<td>Group self-reflection, self-knowledge</td>
<td>Interconnected-active-reflexive</td>
<td>Reflective subjectivity or developed subjectivity</td>
</tr>
</tbody>
</table>
– collective experience of success and failure (team euphoria, depression);
– the pride of each team member for the fact that the whole team goes to a common goal together;
– the ability of each team member to take risks in extreme situations in order to achieve team victory;
– confidence that, if obstacles and barriers of a sporting and psychological nature arise, the team can unite and mobilize;
– the realization that sports training and competition given part of life, health and human values by all.

It is the real experience of being involved in group processes, the mutual experience of a sublime sensory mental state arising in the process of joint activity, leads to the formation of a sense and at the same time sensory category – “spirit” [12]. This is facilitated by the “expansion of consciousness”, the strengthening of all human capabilities occurring due to the maximum “openness” and hypersensitivity both to external information and energy messages, and to individual and collective contents of the subconscious, which is accompanied by “a sharp expansion of the information base of understanding” [16] actual, for example, competitive situation. In such a state, athletes often note an extraordinary intimacy, rallying, mutual experience, which is one of the conditions for mutual understanding, preceding interpenetration into the inner world of another person. Own experience “expands” by the addition of someone else, as a result of which the horizon of understanding expands. Experience and understanding constitute the phenomenon of mutual connection – empathy [2], thanks to which the team can acquire some kind of unity, forming a group subject of activity.

The intensity of the mutual experience of the sublime sthenic state arising in the process of performing meaningful joint activities obviously determines the strength of the command “spirit”, while the subject’s emotions shift from the “information blocking mode to the energetic mode” [16], as a result of which such “peak” emotional experiences as “inspiration”, “delight” “that color the resolution of a complex, tense and even extreme situation [13]. At the same time, spiritual states are characterized by harmonization of personality, concentration on the problem, internal balance, high concentration of consciousness on relevant objects, full of self-feeling and clarity of mind. This mental state is often accompanied by specific sports sensations (projectile, water, rival, distance, support, movement, etc.) and is characterized by the greatest sports performance.

Phenomenologically, this characteristic is close to the “flow state” described by M. Csikszentmihalyi [20], i.e. a state of complete unity of activity with a situation characterized by optimal inner motivation, when a person is completely immersed in what she does, but at the same time characterized by freedom, joy, a feeling of complete satisfaction and excellence. According to the author, clear goals, balance between the level of abilities of the performer (group) and the complexity of the task, for example, a competitive program, direct and fast feedback, a high degree of concentration of attention on a relatively limited subject, fusion of actions and consciousness (“I am the action!”).

Essential for understanding the phenomenon of personal interaction are the participants’ own ideas about the team, which determine the field of possible communications, values or ideas presented in group thinking, which regulate and guide the desired behavior. Thus, a certain energy space can be formed, which has its own perimeter and configuration with its own synergetic specific autonomous response, configured place and time. This space, according to the conviction of A. Manegetti, outlines the perceptual “semantic field”, which is information that is capable of transmitting any phenomenon or event in an emotional image, altering the psycho-emotional or organic status of the recipient of this information, i.e. the subject who comes in contact with this field. The interaction or interaction of two or more subjects can occur not only through verbal and interactive activities, but also with their complete or partial absence, subject to a complimentary attitude or propensity to exchange information.

In itself, the achievement of an inspired state in a tense joint activity of a sports team leads to the formation of a qualitatively new integrity – experiencing a “resource inspired state”, which is achieved through energy-information saturation of the situation, increasing the activity of the group subject and simultaneously setting the spatial and temporal boundaries of its implementation. Such an act of experience makes adjustments in the worldview of the personality of athletes, the team as a whole, causing irreversible changes in its formation. At the same time, a group sense of the adequacy of funds is formed to demonstrate a high result. In this understanding, the formation and implementation of a resource is carried out by an athlete (team) in a certain situation within a specific event (training, competitive).

The described experiences play an ambiguous role for the team. Once having felt the state of team inspiration, athletes make it normative, to a certain extent, planned, expected, using experience gained in the
past. Such expectations are sometimes able to influence the individual image of competitive interaction, change the usual pattern of sensations of motor actions; the athlete as if is guided not by the procedural (technical) side of the performance of the motor action, which is important “here and now”, but by the expected resultant phase. At the same time control over execution of action can decrease.

Team expectations relate not only to individual experiences, but also to the team role-playing repertoire. The skill level of each team member is fixed in the minds of all athletes. A role stereotype of expected behavior arises, which, depending on the skill level of the team, may cause over-activity of its other representatives, if necessary, compensate for “role losses”, for example, in the fight against a relatively weak opponent, or, conversely, lead to significant oppression of competitive activity in the absence of a sense of sufficient resources for this, which often takes place in the struggle with a strong opponent.

At the same time, closeness of relationships and commonality of experiences are capable of performing a stabilizing function against the background of a significant reduction in various components of mental readiness, which occurs under the influence of external and internal factors. An illustration of the manifestation of the “team spirit” is the results of monitoring the psychological readiness of the women’s national combined sable fencing team of the Ukraine in preparation for their performance at the Games of the XXII Olympiad. In the process of temporal and climatic-geographical adaptation, 4 out of 5 components of readiness (neuropsychic tension, functional, motivational and executive were characterized by dynamics of various intensity with values (±S) 66 ± 11.1%; 57.9 ± 11.8%; 65, 5 ± 15.5%; 63.7 ± 15.2% and the generalized coefficients of variation (V) 0.17; 0.2; 0.22 and 0.24, respectively. Whereas the socio-psychological component of readiness, which included indicators team atmosphere, mutual support, satisfaction, psychological distance, and character within the team was the highest (78.1 ± 11.2%), while remaining unchanged within the normative values (V = 0.14). It was the presence of mutual “spirit” that, in the opinion of the athletes and the coach, created the atmosphere, against the background which occurred a qualitative transformation of the mental state of athletes.

Another informative indicator that demonstrates the peculiarities of intra-group interaction and accordingly affects the peculiarities of intra-team experiences in training and competitive activity is the distribution of roles within the team and the level of team identification. Analysis of role spaces suggests both the qualitative side, that is, the severity of certain roles, their combination, and the ratio of the set of role spaces of all team members: dubbing, absorption, distribution, the presence of free role zones, the uniqueness / stereotype of role-playing status, and others. on the reliability differences in teams by two indicators, namely the role of a “collectivist” (“team worker”) (H = 4.04; p = 0.11; c = 2; n = 12), the highest average index (17, 25 ± 4.7 points) was registered in sable fencers, whereas the smallest average (10 ± 4.6 points) is in the team of epee fencer, the average value for the team of foils women (11.75 ± 3.2 points), and also the role of “finishing up” (“completer”) (H = 5.6; p = 0.07; c = 2; n = 12), where the situation looked opposite with the corresponding average values of the indices in the teams – 7.25 ± 2.4; 8.25 ± 4.6 and 11.4 ± 3.2 points.

Among the eight diagnosed role positions, the highest indicator was registered for the role of a “team worker” in the women’ saber team of the Ukraine, who performed most successfully at the World

<table>
<thead>
<tr>
<th>Team roles</th>
<th>Self-categorization</th>
<th>Identification valence</th>
<th>Emotional Affection</th>
<th>Separation of goals and values</th>
<th>Summative assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leader</td>
<td>–</td>
<td>rs = − 0.787; p=0.02</td>
<td>–</td>
<td>rs = − 0.764; p=0.03</td>
<td>rs = − 0.650; p=0.08</td>
</tr>
<tr>
<td>Explorer</td>
<td>–</td>
<td>–</td>
<td>rs = − 0.720; p=0.04</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Scientist</td>
<td>–</td>
<td>rs = 0.606; p=0.10</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>Team worker</td>
<td>rs = 0.560; p=0.09</td>
<td>–</td>
<td>–</td>
<td>rs = 0.720; p=0.04</td>
<td>rs = 0.740; p=0.03</td>
</tr>
</tbody>
</table>
Championships. The obtained data are coordinated with the robots of a number of authors, regarding the importance of team orientation in the distribution of group roles [5, 18, 19, etc.]. The total area of intersection of "role spaces" in women’ fencing teams for sabers, rapiers and epee is 90.49%, 91% and 92.5%, respectively, the intersection-free personal role zone was the largest among sable fencers (9.51%), the smallest in epee fencers (7.5%) and intermediate values were found in the team of foils women (9.0%).

Decomposition of the team athletes’ role space indicates the homogeneity of the role positions in the team (homo / heterogeneity) and the potential possibility of changing the roles of female athletes, if necessary. At the same time, the presence of an individual free role zone underlines the functional individuality of an athlete, the uniqueness of his role in the team, which characterizes the value of the personal style realized in competitive activities.

The analysis of the configuration of the roles of the athletes of the men’s national team of the Ukraine on fencing with different types of weapons showed the reliability of differences in the teams also in two indicators. However, unlike women, the roles of the “chair” (“implementator”) were significantly different (H = 4.27; p = 0.09; c = 2; n = 12), the highest average (12.0 ± 5.2 points) was registered in the team of sabre fencers, the smallest (4.75 ± 4.3 points) – in the team of epee fencers, the average value in the team of foilsmen (8.00 ± 6.2 points), as well as the role of “disturber” (“shaper”) (H = 3.63; p = 0.12; c = 2; n = 12), where the situation was different from the previous one with the corresponding average values of the indices in the teams ≈ 10.0 ± 6.8; 8.5 ± 2.6 and 13.2 ± 2.6 points respectively.

It is also necessary to note the tangible superiority of the men’s sable team in the manifestation of such a role as a “thinker” (“creator”) with an average of 10.0 ± 8.3 points, whereas among the rapiers and rapiers 6.0 ± 4.9 that 6, 0 ± 5.0 points, respectively.

The total area of intersection of role spaces in men’s fencing teams on sabers, rapiers and swords differs from the women’s and, respectively, is 95.36%, 92% and 91.43%. Obviously, the personal role zone free from intersection was the smallest among the sable fencers (4.64%), the greatest among the epee fencers (8.57%) and intermediate values were found in the team of foilsmen (7.5%).

One of the explanations of the established differences can be the degree and nature of the identification of athletes with the team. If women identify themselves with a team exclusively on an emotional level, that is, its sensual attractiveness is taken into account first of all. In men, emotional categories are confirmed through personal (sometimes rational) persuasion, as well as the joint separation of means to achieve goals and an orientation toward shared values.

It is remarkable that the leadership roles are largely negatively correlated with the indicators of group identification, while the collectivist roles are positive (Table 2). The data obtained give us reason to believe that the team’s role-playing repertoire configuration depends on the specifics of team identification, but at the same time affects the intragroup redistribution of activity, which is significant for regulating competitive actions and determining optimal tactical schemes.

Findings. The formation of the “team spirit” occurs through a change in the actual mental state of the individual subject, which is expressed in the sense of belonging to a group, the formation of the integrity of mutual experiences, understanding and interpenetration with the formation of a group subject of activity. Participation in joint actions naturally affect the person, extrapolating to follow-up.

Empirical references of “team spirit” can be indicators of a comprehensive study of such psychological and socio-psychological phenomena as individual and group subjectivity, non-equilibrium mental states, group states of “flow”, spiritual experiences, team cohesion factors, group roles, group identification, etc. Two the latter are characterized within the team regulatory aspect, which is able to influence the increased mental activity of all team members.

The subject area of studying the nature of the “team spirit” properties in sports psychology, along with the expansion of the analysis of the content and structural relationships of the phenomenon itself, can be supplemented by studies of the resource properties of an individual subject of sports activity, its regulatory capabilities, energy-information parameters of personal characteristics, processes, states together with the space-time conditions for their implementation.

Literature

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The study of problems encountered by coaches and athletes when interacting with the media

Keywords: communicative competence, coach, athlete, sports journalist, interview, problem interaction.

Abstract. Communicative competence is one of the important factors of professionalism of a specialist in the field of «Physical culture and sport». Personal characteristics of the coach and/or athlete, inconsistency of information and external adverse factors can create problems in the interviewing situation. Sports journalists themselves can also complicate communication, showing their unprofessionalism and superficial approach to their work, as well as in the pursuit of scandalous material.

The relevance of research. The value of communicative competence in professional training of future specialists of physical culture and sports is determined by the content of the State educational standard of higher professional education, which contains requirements for professional and pedagogical communication and speech training, indicated in the block of general professional and special disciplines. At the same time, we should not forget that the communicative potential of an individual is the leading internal force that feeds the motivation to achieve success in selected activities of not only coaches, captains and team leaders, but also each athlete individually, since the implementation of all components of sports activities is carried out in the process of communication and competitive interaction of athletes [3, p. 84].

So, the relevance of studying the possibility of the formation of communicative competence of physical culture and sports specialists is determined by several aspects: the specifics of the very activity of physical culture and sports specialists; and the fact that a coach, an athlete, a sports journalist work in the “person-to-person” system, where communication is one of the significant categories.

The results of the study and their discussion. The aim of our study was to highlight the problems that arise or may arise in a situation of interaction with the media among athletes and/or coaches.
Using the brainstorming method with two groups of respondents (1 group of respondents consisted of qualified athletes of various sports studying at the NSU of physical culture, sport and health named after P.F. Lesgaft, n = 227; 2 group consisted of students – journalists, studying at the NSU of physical culture (n = 57) we prepared an empirical classification of problems that an athlete or a trainer may encounter during interaction with media representatives, for example: with the participation of in a press conference, television / radio / internet meeting, interviewing, etc. The data were summarized, divided into groups within the meaning and tabulated for systematization of the material obtained and visibility (Table 1). Due to a significantly extended sample, clarifications were made and 2 more groups of problems were added to the empirical classification previously compiled by the author [2, p. 35-40.]

During respondents’ answers processing using the method of content analysis, 8 groups of problems were identified that may arise in situations of interaction between coaches and athletes with the media:

- **Block A – athlete’s personal characteristics**
  1. Culture of speech acts of athletes;
  2. Expressive characteristics of the athlete’s speech;
  3. Emotions experienced by an athlete;
  4. Psychophysiological conditions of the athlete;

- **Block B – the quality of interpersonal interaction between the coach and the athlete**
  5. Disagreement in the opinions of the coach and the athlete;

- **Block C – professional sports journalist training**
  6. Features of the questions asked by journalists;
  7. Non-professionalism of a sports;
  8. Interviewing conditions.

We can state that Block A, which includes the first four groups of problems, can be created by the athlete himself in connection with the existing mental profile of the person, providing a certain level of activity and his behavior. Block B “Disagreement in the opinions of the coach and the athlete” affects the internal relationships in sports teams, between the coach and the athlete. These problems may be evidence of

### Table 1 – Empirical classification of problems that both coaches and athletes may encounter in a situation of interaction with the media (n = 284)

<table>
<thead>
<tr>
<th>Groups of problems that may encounter when interacting with the media</th>
<th>Content:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotions experienced by an athlete</td>
<td>Anger; irritation; unwillingness to be interviewed; embarrassment; euphoria; inability to control yourself; aggression; fear not to answer the question; fear of the crowd and cameras; excessive emotionality; diffidence; nervousness; excitement; confusion, etc.</td>
</tr>
<tr>
<td>Features of the questions asked by journalists</td>
<td>Personal questions; incorrect questions; issues related to the relationship with the coach; a large number of questions at the same time; ordinary questions; questions about the organization of training and conditions of preparation for competitions; ambiguous issues; censorship; ignorance of the athlete’s full name; obsession, etc.</td>
</tr>
<tr>
<td>Expressive characteristics of the athlete’s speech</td>
<td>The use of foul language; problems with diction; stuttering; use of words – «parasites»; confused speech; speech confusion; muscle spasm of the vocal cords (psychological moment), etc.</td>
</tr>
<tr>
<td>Culture of speech acts of athletes</td>
<td>The inability to correctly and clearly articulate his thought; violation of the sequence of presentation; incompetence in the answers; ignorance of the topic raised; lack of eloquence; ignorance of sports terminology; loss of conversation thread; many unnecessary words; forgetfulness; vivid imagination; inaccuracy in the responses; ethical behavior; outright nonsense; language barrier, etc.</td>
</tr>
<tr>
<td>Psychophysiological conditions of the athlete</td>
<td>Thirst; fatigue; injury; stupor; spasm of the vocal cords; redness; cough or dry mouth; sweating; stiffness in gestures, etc.</td>
</tr>
<tr>
<td>Terms of press conference, television / radio meeting or interview</td>
<td>There is no opportunity to fully answer questions; hardware problems; lack of time for an interview; blury timeframes; injuries received during the interviewing process; distracting external factors; rude actions of guards; organizational rules, etc.</td>
</tr>
<tr>
<td>Non-professionalism of a sports journalist</td>
<td>Ignorance of sports terminology; does not know the features of interviewing; inability to create a favorable environment, to establish contact; inability to keep up the conversation; does not understand sports; lack of understanding of the athlete’s response; infringement of the Constitution of the Russian Federation, etc.</td>
</tr>
<tr>
<td>Disagreement in the opinions of the coach and the athlete</td>
<td>Disagreements between the coach and the athlete in the views; disagreements in a sports team; inconsistency of information, etc.</td>
</tr>
</tbody>
</table>
inefficient communication and low level of communication skills of all participants of communication. Block B, which includes such groups of problems as “Features of questions asked by journalists”, “Non-professionalism of a sports journalist” and partly the 8th group “Conditions in which they conduct interviewing” depend on professional experience and preliminary preparedness of sports journalists, their level of awareness in this sport and a well-thought safety net in case something goes wrong as originally planned. The annoying accidents, man-made contingencies and technical problems were included in the 8th group of problems, since this type of problems is the most difficult to predict and may not depend entirely on the athlete or the journalist.

When processing the empirical material, significant differences were found in the content of the answers of athletes and students – journalists when answering the author’s questionnaire. (Table 2).

The respondents of group 1, consisting of qualified athletes, overwhelmingly pointed out problems associated with the ineffective management of their emotional states (46.7%) and the lack of knowledge of the interviewing process (45.4%). According to the results of the survey, positive personal contact with media representatives, the possibility of exchanging opinions on any issues or events, etc., is important for both girls – athletes and young men – athletes. Therefore, one third of the respondents’ answers indicated problems poor quality or provocative work of sports journalists (34.4%).

Only in the group of male athletes, several respondents named such a problem as “Disagreements between a coach and an athlete”. That says about the desire of domination of men in the sports team, defending their own point of view. This fact indicates the presence of formed gender stereotypes regarding the behavior of men in modern society [1].

At the same time, there were few statements regarding the factors associated with external difficulties (the habit of effectively acting in unusual, often extreme situations – what any sporting competition is), psychophysiological processes (the habit of controlling your body as a matter of course, natural process) oral speech (which indicates a normal perception of oneself, the presence of self-irony and adequate self-esteem among respondents). That is, in fact, athletes rely only on themselves and are look for means to overcome the arising obstacles in themselves. This corresponds to the predominance of one of the “spaces” of a person as “ARENA”, by reducing the “UNKNOWN ZONE” and “BLIND SPOTS” according to the concept of Joseph Laft and Harry Ingram’s personal space [4, p. 47-50].

The third conclusion concerns the fact that we can see the absence of a significant difference in the responses of athletes – men and athletes – women in almost all categories, which confirms the presence of a process of smoothing gender differences in some personality characteristics between men and women during sports (Vorozhbitova A. L., 2011).

In the second group, the subjects also most often pointed out such problems as: the inadequacy of the athlete, his excessive emotionality (63.2%), inability to answer the questions asked, confusion of speech, etc. (61.4%). Which, in their opinion, may complicate

Table 2 – Results of the study of problems encountering from the interaction with the media, using the content analysis of the respondents’ answers (n = 284)

<table>
<thead>
<tr>
<th>Groups of problems that may encounter when interacting with the media</th>
<th>1 group</th>
<th>2 group</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F (n=111)</td>
<td>M (n=116)</td>
</tr>
<tr>
<td>Emotions experienced by an athlete</td>
<td>52,3 %</td>
<td>41,4 %</td>
</tr>
<tr>
<td>Culture of speech acts of athletes</td>
<td>50,5 %</td>
<td>40,5 %</td>
</tr>
<tr>
<td>Psychophysiological conditions of the athlete</td>
<td>4,5 %</td>
<td>3,4 %</td>
</tr>
<tr>
<td>Expressive characteristics of the athlete’s speech</td>
<td>9,9 %</td>
<td>6 %</td>
</tr>
<tr>
<td>Disagreement in the opinions of the coach and the athlete</td>
<td>0 %</td>
<td>3,5 %</td>
</tr>
<tr>
<td>Features of the questions asked by journalists</td>
<td>34,2 %</td>
<td>34,5 %</td>
</tr>
<tr>
<td>Non-professionalism of a journalist</td>
<td>25,2 %</td>
<td>17,2 %</td>
</tr>
<tr>
<td>Terms of press conference, television / radio meeting or interview</td>
<td>9 %</td>
<td>9,5 %</td>
</tr>
</tbody>
</table>

*type codes: F – female, M – male
the interviewing process. That is, basically problems, according to future sports journalists, arise because of the mental properties of athletes. Tricky and provocative questions confusing athletes are recognized as an ineffective mechanism for obtaining valuable information (43.9%). But at the same time they remain one of the leading mechanisms for creating sensations and forming their own popularity in journalism. More than a third called the lack of professionalism of a sports journalist as a salutary ground for reducing the effectiveness or completely stopping interaction with athletes. This was expected, since any well-performed activity at times reduces the possibility of the working process getting out of the control of a specialist. Large values of this indicator (40.4%) indicate that the interviewed students – journalists more often justify their failures by their lack of professionalism, illiteracy or lack of experience, rely more on the help of others (that is, they hope for the indulgence of athletes and coaches), they don’t know all their capabilities (which may indicate a low self-esteem among respondents and a lack of proper experience). All this indicates that the students-journalists are dominated by such “spaces” of the personality as “UNKNOWN ZONE” and “BLINDLY” according to the presented model of the personal space of Joseph Laft and Harry Ingram [4, p.47-50].

**Findings:**
1. In a situation of interviewing both sides of the interaction can create problem situations. And only experience, a positive attitude and a willingness to make contact help to overcome difficulties in communication.
2. We have confirmed the fact of smoothing the gender characteristics of athletes, due to their involvement in sports activities.

3. A difference was found in taking responsibility for the situation between the two groups of respondents. If athletes rely mainly on themselves, then a quarter of the respondents of the second group, to which we attributed the student journalists, tend to disclaim responsibility and transfer it to those around them.

**Literature**

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   • the academic title and academic degree;
   • position, department and full name of the organization, city, country;
   • e-mail address or phone number for contacts with the authors;
3. Keywords;
4. Abstract (5-10 lines).
5. The text of the experimental study must necessarily contain the following items: introduction; purpose; materials and methods (organization of the study, subjects, research methods); results; discussion; conclusions; practical recommendations (optional); bibliographic references.

The article is accompanied by information about the author(s) (date of birth, full name, home postal address with the index, phone number, specialty, academic rank, place of work and position, e-mail address), photo(s) of each author(s) in format .jpg.

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