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## SCIENTIFIC ASPECTS OF SPORTS SELECTION AND ORIENTATION

**Анотація.** Визначено співвідношення понять «спортивний відбір» і «спортивна орієнтація». Визначено лімітуючі фактори ефективної системи спортивного відбору. Наведено особливості реалізації завдань спортивного відбору на окремих етапах підготовки спортсмена: базовий етап, етап відбору дітей за руховими здібностями, етап відбору обдарованих спортсменів; етап відбору талановитих спортсменів; етап відбору спортивної еліти. Охарактеризовано принципи спортивного відбору: системності, наукової обґрунтованості, комплексності, пролонгованого динамічного відбору, педагогічної цінності, адаптивності критеріїв відбору, гуманізму, актуальності, рентабельності, динамічного прогнозування (моніторингу). Встановлено, що система відбору передбачає розробку та експериментально-дослідну перевірку ефективності моделей відбору в рамках організаційних заходів; при цьому моделювання лише тоді має певну ефективність, коли дослідна модель відтворює основні характеристики планованої системи підготовки спортсменів, відповідає її меті, завданням, методам, враховує особливості етапів багаторічної підготовки.

**Ключові слова:** спортивна діяльність, спортивний відбір, спортивна орієнтація, спортивні здібності, етапи спортивного відбору, принципи спортивного відбору.

**Formulation of the problem.** The modern solution of the tasks of sport of higher achievements constantly dictates the need to study and develop children's and youth sports. At the same time, the effectiveness of such activities does not meet the high requirements of athletes training for important international and domestic competitions. This confirms the fact that many winners and prize-winners of children's and youth competitions do not reach the level of senior national teams, end their sports career without ever starting performances in senior teams.

Modern professional sport of higher achievements involves the selection of the most gifted people in terms of sports and their special preparation for participation in high-ranking competitions. Along with the development of theoretical ideas and the accumulation of scientific data, the formation of a scientifically based system of the gifted children selection in various sports took place for many years.

**The purpose of the article** is to study the psychological and pedagogical aspects of stress factors preventing and overcoming in modern sport basing on the analysis of a set of literary sources and professional training experience.

**Analysis of recent publications and research.** Psychological and pedagogical aspects of sports selection and orientation became the subject of research of domestic and foreign scientists. In the works of R. Akhmetov the peculiarities of athletes productivity prediction as a factor of increasing the effectiveness of the educational and training process are studied (Akhmetov, 2007); O. Krechetova investigated the most important prognostic indicators for sports selection (Krechetova, 2007); peculiarities of genetic factors in the system of sports selection became the subject of study of L. Serhiienko, N. Chekmarova (2008); N. Chekmerova considers the problem of sports selection in the context of studying the model characteristics of the development of psychomotor abilities of high-class athletes (Chekmerova, 2008); O. Shynkaruk's research summarizes the experience of selection organizing in Olympic sport (Shynkaruk, 2001).

**Presentation of the main material.** Most experts believe that selection is a system of organizational and methodological measures of a complex nature, which includes pedagogical, sociological, psychological, medical and biological methods of research and control, on the basis of which the children's inclinations and abilities for specialization in one or another kind of sport are revealed. At the same time, sports selection is an important and organic part of the educational and training process, as it contributes to solving the main task of sports training, which is high sports results achieving (Akhmetov, 2007; Krechetova, 2007).

However, for quite a long time, there was no organized, scientifically based selection of promising athletes in almost all kinds of sport. At that time, the recruitment of athletes to groups of various level of training was conducted only taking into account the evaluations of coaches, recommendations of physical education teachers and parents. However, according to statistics, such a selection system turned the training of the sports reserve into insufficiently efficient and unprofitable one due to a large dropout. At the same time, the results of scientific

research of the selection of athletically gifted children and young people occurred to be undemanding in the real conditions of athletes training.

The lack of an effective sports selection system was caused with a number of factors. Firstly, there were no adequate methodological approaches and methods for giftedness diagnostics and athletes' achievements prediction. Secondly, no organizational conditions were created to conduct such work in the form of special selection centers or similar structures. Thirdly, there is no comprehensive system of sports coaches training to conduct the scientifically based sports selection in the institutions of higher education.

The selection system involves the development and experimental verification of the effectiveness of selection models within the framework of organizational measures; at the same time, modeling has a certain effectiveness only when the experimental model reproduces the main characteristics of the planned system of athletes training, corresponds to its purpose, tasks, methods, takes into account the peculiarities of the multi-year training stages.

Sports selection is a set of measures that allow to determine a high level of child's inclination (giftedness) to one or another type of sports activity (kind of sport).

Sports orientation is a system of organizational and methodological measures that allow to outline the direction of specialization of a young athlete in a certain kind of sport. Sports orientation is based on an assessment of a specific person's capabilities, on the basis of which the optimal sports activity is chosen for them (Serhiienko, 2010; Shynkaruk, 2001).

Abilities are a set of personality qualities that meet the objective conditions and requirements for a certain activity and ensure its successful performance. In sport, both general abilities (which provide relative ease in knowledge, abilities and skills mastering and productivity in various activities) and special abilities (necessary to achieve high results in a specific activity, kind of sport) are important.

Sports abilities depend to a large extent on hereditary predispositions, which differ in stability and conservatism. Therefore, in sports abilities prediction, one should pay attention, first of all, to those relatively stable features that determine the success of future sports activities.

Choosing a kind of sports activity for each individual is a task of sports orientation, while selecting the most appropriate children (adolescents) in terms of sports, basing on the requirements of the kind of sport, is a task of sports selection. A wide variety of sports expands the possibility of an individual to achieve mastery in one of the sports activities.

*1. Basic stage.* Any type of human activity requires certain psychophysiological prerequisites. Analogously to the mentioned above, a child striving for sports activities must have a certain complex of morphological and psychological peculiarities, functional and motor indicators. Therefore, at this stage, it is identified whether the child can continue to play sports or not. The most important thing here is the absence of medical contraindications to sport, also the desire to do sports is taken into account etc. The duration of this stage is several weeks. As a result, about 20 % of children are dropped out.

*Tasks of the basic sports selection:*

1) assessment of the state of health of children and adolescents during their admission to sports. Children's health indicators during medical examinations should be: a) absence of diseases; b) normal state of basic functions; c) appropriate and harmonious development; d) high reactivity of the body.

2) identification of children's motivation to sports. Basing on the survey and pedagogical observation, the coach can discover the criteria of motivation for sport.

3) taking into account the age that is most favorable for the expected kind of sport in the future.

*II stage. Selection of children according to motor abilities.*

At this stage of sports selection, the selection of children to the CYSS (Children and Youth Sports School) is mainly conducted. Here, the child's inclination to a certain group of sports is determined, for example, sports and strength, complex and coordinative, which require primarily the manifestation of endurance or the complex manifestation of movement qualities in changing situations (games, martial arts), etc.

*Tasks of the stage:*

1) primary assessment of motor skills. Several systems are known that are recommended for mass examination of a contingent of children aged 9-14. For the selection of children capable to motor activity, it is suggested to use the normative evaluations of some international tests of motor abilities of children and youth.

2) individual prediction of the development of morphological indicators and motor abilities of the child.

3) comparison of the passport and biological age of the child.

4) identification of a young athlete's resistance to diseases and predisposition to injuries.

*III stage. Selection of gifted athletes (selection for improvement in a certain kind of sport).*

*Tasks of sports selection:*

1. Assessment of the child's general abilities and properties.

2. Evaluation of the correspondence of the morphotype to a certain kind of sport.

3. Evaluation of the development of motor abilities and functional capabilities in a certain kind of sport.

4. Study of the ability to learn and rates of indicators increasing in a number of control tests.

5. Identification of motivation in a certain kind of sport.

6. Assessment of the general abilities and peculiarities of the child (intellectual abilities, memory, attention, thinking, typological properties of the nervous system, psychological reliability).

7. Selection of a game role in playing sports. That is due to the fact that the next sports training will be focused on this narrow specialization.

8. An important task of the third stage of sports selection is the determination of a particular specialization in a kind of sport (sports orientation).

At this stage of sports selection, a comprehensive analysis of previous training is important. Preference should be given to those young athletes who have achieved a high level of training and sports results due to a small amount of training work (absence of many training sessions every day), little competition practice, correctly posed movements.

#### *IV. The fourth stage. Selection of talented athletes.*

The continuation of the previous stages is the fourth stage of sports selection, which is the selection of talented athletes.

The selection of athletes at this stage involves the use of the most important methods that are highly informative.

During the selection at the fourth stage, the following indicators are taken into account:

- sports and technical results and their dynamics during the years of training;
- the degree of consolidation of the technique of the most unstable elements performing during the exercising in extreme conditions;
- the degree of the athlete's technical readiness and resistance to confusing factors in the conditions of competitive activity.

1. An important task of this stage is to identify the athlete's inclination to achieve the international class results. The problem can be solved in several ways.

a) assessment of the athlete's correspondence with model characteristics. The anthropometric indicators, functional characteristics of readiness and the level of motor skills development of high-class athletes can be the model characteristics.

b) comparison of the age of a specific athlete with the optimal age limits for achieving the highest result in a certain kind of sport.

2. Completing the team is also an important task of the fourth stage of sports selection. When completing the teams, they are mainly based on the principle of dynamics unity of the athletes' mental activity, and the similarity of their temperament. Preference is given to emotionally stable, introverted athletes.

#### *V. The fifth stage. Selection of the sports elite.*

At the fifth, final stage of sports selection, the most important task is a comprehensive assessment of the athlete's prospects. The proposed program for testing the level of candidates preparation for the national team consists of four stages:

- at the first stage, questionnaire data, anthropometric indicators and the level of development of the athlete's motor skills are registered;
- at the second stage, psychophysiological characteristics are registered;
- at the third stage, the state of the cardiovascular system is identified;
- at the fourth stage, physiological testing is conducted in laboratory conditions, which allows to identify the tonal state of the athlete, his or her reserve capabilities and the body's reaction to the proposed training load.

At this stage of selection, there is practically no need to assess the prospects of an athlete basing on morphological and functional features, abilities for effective sports improvement. Here, the task of reserve capabilities of the organism identifying for a possible further increase of the previously achieved level of adaptation is set.

Following the sequence of stages of sports selection allows to cover the entire contingent of athletes more fully, having studied information about the participants of the selection in detail.

We defined the following as the main methodological principles of selection in sports:

*The principle of systematicity* requires the joint development of the selection procedure, the study of mental and physiological peculiarities of high-class athletes, the prediction of the results of training and sports achievements.

*The principle of scientific foundation.* Selection rules formulated for a specific kind of sport or for certain competition situations cannot be used without special scientific verification and deep theoretical justification. Only the scientific foundation of the selection methods and criteria allows to avoid serious mistakes.

*The principle of complexity.* Selection in sport is a multifaceted problem, namely social, pedagogical, medical, economic, psychological one. A decision about the athlete's destiny can be made only on the basis of the entire complex of information.

*The principle of prolonged dynamic selection.* Selection in sport should be a continuous process of study and diagnostics of personality various properties and qualities that are important for sports activities. Such study is conducted regularly throughout the entire sports life at various stages of sports improvement.

*The principle of pedagogical value.* The results of the diagnostic examination of athletes should be used not only for the selection of the most gifted athletes, but also for scientifically based training process management, improving the conditions for competitions: purposeful construction of education and training processes, rationalization of training programs, regulation of loads, improvement of educational and training facilities.

*The principle of adaptability of selection criteria.* The criteria for deciding whether an athlete fits should be flexible, dynamic and changeable. The need to increase or decrease them arises periodically in connection with the changes in requirements for athletes due to the sports competition increase or decrease, competitions in different conditions, etc.

*The principle of humanism.* The selection should protect the athlete from excessive loads for his or her body and disappointments associated with the wrong choice of sports or sports specialization.

*The principle of relevance* involves constant emphasizing the importance of the selection criteria and their system to ensure the positive dynamics of sports results. As a rule, this principle prompts coaches and psychologists who work in the direction of psychological selection to develop systematic predictions of performances not only in relation to sports results, but also taking into account the psychological states in which they can be achieved and demonstrated. Methods of self-regulation and psychohygiene play one of the decisive roles in the actualization of selection criteria.

*The principle of profitability* requires the development of methods of the effectiveness evaluation and practical usefulness of sports selection measures from various points of view: reasonability, predictability, time spent, prime cost, operativeness of recommendations, personnel potential.

*The principle of dynamic prediction (monitoring)* involves the constant use of various methods of measurement and control of sports abilities, functional states to study the dynamics of development and further results prediction.

**Conclusions.** Systematic involvement of people into sports, their interest and personal achievements depend on correspondence of the individual peculiarities to the specifics of one or another kind of sport. Each person's choice of the kind of sport that matches his or her individual characteristics most closely is the essence of sports orientation. The technology of orientation and selection is the same, the difference is only in the approach: during orientation a kind of sport is chosen for a specific person, and during selection a person is chosen for a specific kind of sport. Sports selection is a long, multi-stage process, which can be effective only if at all stages of the athlete's long-term training, a comprehensive methodics of assessing his or her personality is provided, which involves the use of various research methods (pedagogical, medical and biological, psychological, sociological, etc.). Sports orientation is a system of organizational and methodical measures that allows to outline the direction of specialization of a young athlete in a certain kind of sport. Sports orientation is based on an assessment of the capabilities of a specific person, on the basis of which the most suitable sports activity is selected for them.

The quality of selection is an important condition for the success of long-term training of the sports reserve. At the same time, there is also a process of critical understanding of many theoretical and practical provisions in the preparation of the sports reserve. In this situation there is a natural need for a thorough study of all the components of the athletes training, where a prominent place is given to the correct selection and timely determination of the sports suitability, reliability and readiness of young athletes. In this regard, the study of sports selection in the system of modern coach training is a relevant problem. We see prospects for further research in the development of an integrated system of future coaches professional training for scientifically based sports selection.

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### **PROSKURNIN ANDRII**

#### **SCIENTIFIC ASPECTS OF SPORTS SELECTION AND ORIENTATION**

**Abstract.** The relationship between the concepts of «sports selection» and «sports orientation» is determined. The limiting factors of an effective system of sports selection are determined. Peculiarities of the implementation of sports selection tasks at separate stages of an athlete's training are presented: the basic stage, the stage of children selection according to motor abilities, the stage of gifted athletes selection; stage of talented athletes selection; stage of sports elite selection. The principles of sports selection are characterized: systematicity, scientific foundation, complexity, prolonged dynamic selection, pedagogical value, adaptability of selection criteria, humanism, relevance, profitability, dynamic prediction (monitoring). It is established that the selection system involves the development and experimental testing of the effectiveness of selection models within the framework of organizational measures; at the same time, modeling has a certain effectiveness only when the experimental model reproduces the main characteristics of the planned system of athletes training, corresponds to its purpose, tasks, methods, takes into account the peculiarities of the multi-year training stages.

**Keywords:** sports activity, sports selection, sports orientation, sports abilities, stages of sports selection, principles of sports selection.