

PSYCHOPHYSIOLOGICAL CHARACTERISTICS OF ATHLETES AS A FACTOR OF THE SYSTEM OF TRAINING IN WATER POLO

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Summary

At the present stage of sports development the intensity and volume of training sessions have increased to physiological maximum, requirements for technical and tactical training of highly qualified players and the duration of their stay in the sports arena have increased. So coaches, scientists and sport medical professionals are searching reserves to improve performance. Recently, differentiated approaches to the athletes training at different long-term training stages, taking into account the psychophysiological characteristics of athletes have been successfully implemented in various sports. According to these trends, there is an urgent task to develop approaches to technical and tactical training of water polo players, taking into account their psychophysiological characteristics.

The aim of the research is to determine the role of individual psychophysiological characteristics in the training system of athletes in water polo.

Materials and methods. During the research, we used the methods of theoretical analysis and generalization of literary sources, documentary method. It has been interviewed 20 water polo coaches. To analyze and to process the results of the questionnaire, we have used the methods of mathematical statistics.

Results and discussion. To interview water polo coaches, we have developed a questionnaire on the specifics of water polo training, identifying the most talented water polo players at the early stages of long-term training and psychophysiological characteristics in the water polo training system.

In the course of the research, we have interviewed water polo coaches on the peculiarities of the individual psychophysiological characteristics of athletes in the training system in water polo. As the result of the survey, it has been determined that psychophysiological characteristics were an important component of athletes training system in water polo. The most significant psychophysiological characteristics for water polo players of different game roles have been determined.

Conclusion. The study found that all interviewed coaches (100%) believe it is necessary to take into account the psychophysiological characteristics of athletes in the selection and construction of training process in water polo.

At the early stages of long-term training psychophysiological characteristics of athletes are one of the most informative criteria for talented athletes in water polo according to 53% of respondents, alongside with anthropometric data of athletes (14%) and motivation (29%).

As a result of the survey, respondents noted the most effective psychophysiological characteristics for different positions, in particular for goalkeepers it is the speed of simple and complex motor reactions, for defenders it is the ability to anticipate. For midfielders it is speed of thinking and decision-making and for wings it is speed of motor reactions and speed of thinking.

Introduction.

In modern conditions of water polo development, achieving high results is impossible without performing the maximum human capacity loads. Due to the trend of recent years regarding the commercialization of sports, the competition calendar has been condensed and the competitive struggle has intensified. Accordingly, there are new requirements for various aspects of training in this sport. The intensity and volume of training sessions have increased to a physiological maximum, the requirements for technical and tactical training of highly qualified players and the duration of their stay

in the sports arena have increased, so coaches, scientists and doctors are looking for reserves to improve the performance of athletes.

Research in recent years, which was conducted in the field of problematic issues of training athletes in water polo, focused on the following areas: physical training of water polo players [1, 2, 3] , technical and tactical training in water polo [1, 3] , features of determining the role players [2, 3] , tactical training in water polo [1, 2, 3] . At the same time, analyzing current research in water polo, it should be noted a small number of studies by Ukrainian scientists, as well as the fact that most research on technical and tactical training of water polo players is aimed at analyzing and improving team actions of water polo players.

However, in studies conducted in sports and martial arts [4, 5, 6] it is noted that today one of the inexhaustible reserves for improving the technical and tactical training of athletes is the individualization of their training.

In various sports, in particular in martial arts, in recent years, successfully implemented differentiated approaches to the training of athletes at different stages of long-term training, taking into account the psycho-physiological characteristics of athletes. Given these trends, there is an urgent question of approach to technical and tactical training of water polo players, taking into account their psycho-physiological characteristics.

Purpose: to determine the role of individual psychophysiological characteristics in the training system in water polo.

Research methods. In the course of the research were applied the methods of theoretical analysis, generalization of literary sources and documentary method. A survey was conducted to interview water polo coaches. In order to analyze and process the results of the questionnaire were used the methods of mathematical statistics, namely: arithmetic mean and standard deviation.

To conduct a survey of water polo coaches, a questionnaire was developed that included questions about the specifics training of water polo, identifying the most talented players in the early stages of long-term training and psychophysiological characteristics in the water polo training system.

The study interviewed 20 water polo coaches who have more than five years of work experience in the relevant category and work with qualified athletes.

Results of the research.

As a result of the survey, it was found that all coaches consider the psychophysiological characteristics of athletes in water polo important to take them into account in the system of training athletes at different stages of long-term training. Also, all respondents said that they try to take into account the psycho-physiological characteristics of athletes in building the training process and in choosing the sporting role of the player in water polo.

During the survey, the trainers formed their opinion and noted the most significant psychophysiological characteristics in water polo. 19% of coaches surveyed named the ability to concentrate as one of the most important psychophysiological characteristics in water polo, 18% of trainers noted the speed of thinking and information processing as one of the most important psychophysiological characteristics and 18% of trainers noted the ability to make decisions in time. (Fig. 1) 14% of coaches noted the importance of speed of motor reactions, ability to anticipate and resistance to obstacles in the process of training athletes. Only 3% indicated the balance of nervous processes as an important psychophysiological quality in water polo.

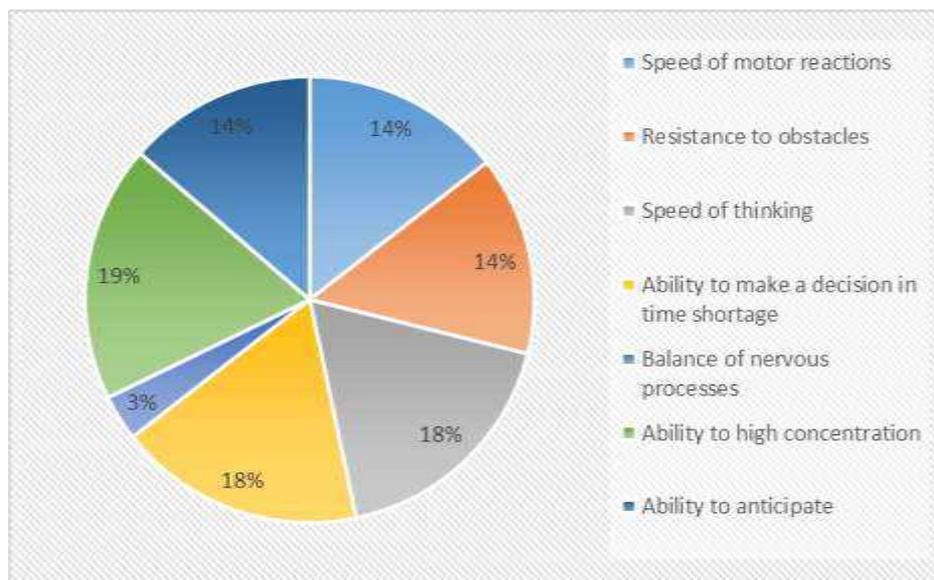


Fig.1. Significance of psychophysiological characteristics in water polo (according to coaches) .

In the questions to coaches about the peculiarities of psychophysiological characteristics in identifying gifted athletes in water polo, it was found that most coaches (83% of respondents) measure psychophysiological characteristics and take them into account before enrolling children in the group and only 17% do not measure psychophysiological characteristics. however, note the importance of taking them into account and would like to measure them in the future as part of the selection of athletes in the early stages of many years of training. (Fig. 2)

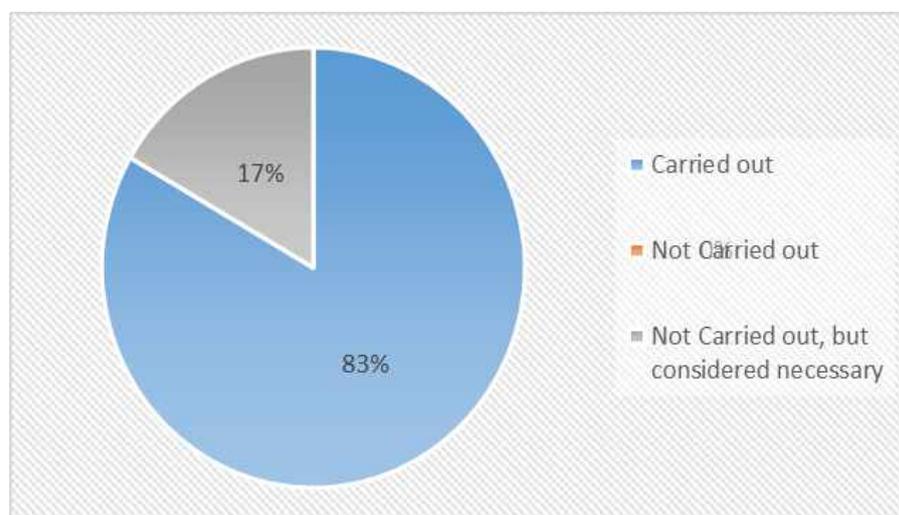


Fig.2. Number of coaches who measure the psychophysiological characteristics of water polo players within the initial selection of athletes.

As a result of a survey of coaches on the criteria of talent in water polo, the coaches surveyed give a predominant role to such qualities of the athlete as speed of thinking and information processing (29%), as well as motivation and desire to play sports (29%). Another equally important quality of the athlete is the speed of motor reactions (24%) (Fig. 3). 14% of respondents noted that the anthropometric data of the

athlete are selected. The smallest number of coaches, namely 4%, believe that the physical fitness of the athlete at the beginning of water polo can be a criterion for the talent of the athlete. It should be noted that one of the most important informative criteria of giftedness in the initial stages of long-term training is the psychophysiological characteristics of athletes, which include speed of motor reactions, speed of thinking, information processing and decision making, resistance to obstacles, balance and strength of the nervous system.

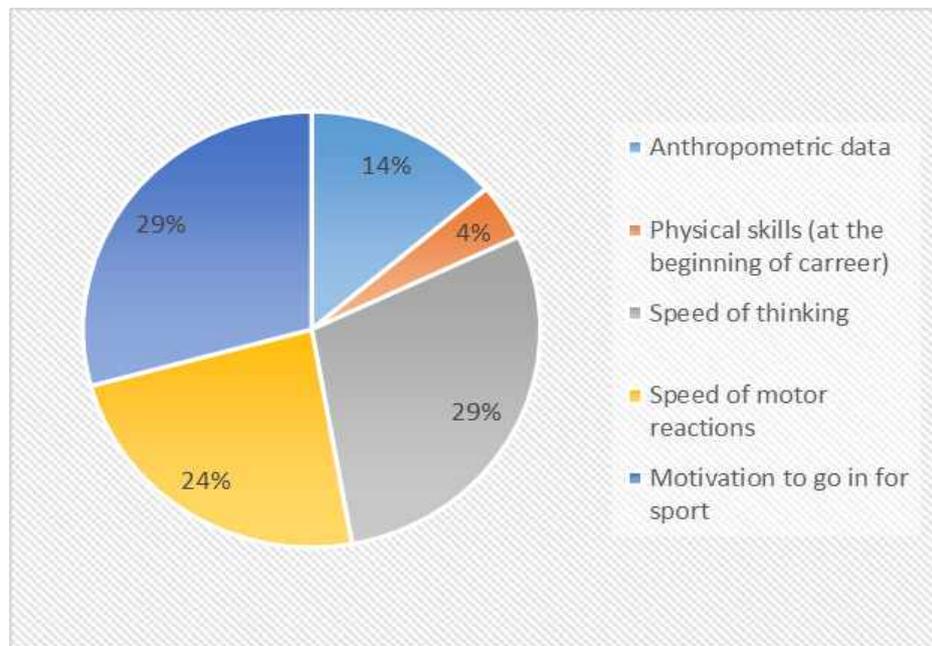


Fig.3. Criteria for gifted athletes in water polo at the initial stages of long-term training (according to coaches)

The opinion of coaches about the optimal age for the beginning of narrowly specialized trainings, taking into account the game roles in water polo, was divided. 42% believe that it is better to do it before the age of 7, and 58% say that the most favorable age will be the age of 7-9. With

Given the fact that all interviewed trainers note the importance of taking into account psychophysiological characteristics during the training process. All coaches unanimously agreed that the psycho-physiological characteristics of water polo players differ according to the playing role of the athlete.

Respondents were asked to rate on a scale from 0 to 5 the importance of a psychophysiological characteristic for athletes of different roles. In general, coaches believe that all the proposed psychophysiological characteristics of athletes are important in water polo, regardless of the role of the athlete, this is confirmed by the assessments made by coaches in this questionnaire. Thus, according to the interviewed experts, the most important for the goalkeeper is the speed of thinking (4.8) (Fig. 4), the speed of motor reactions (4.7)] and the ability to high concentration (4.6).

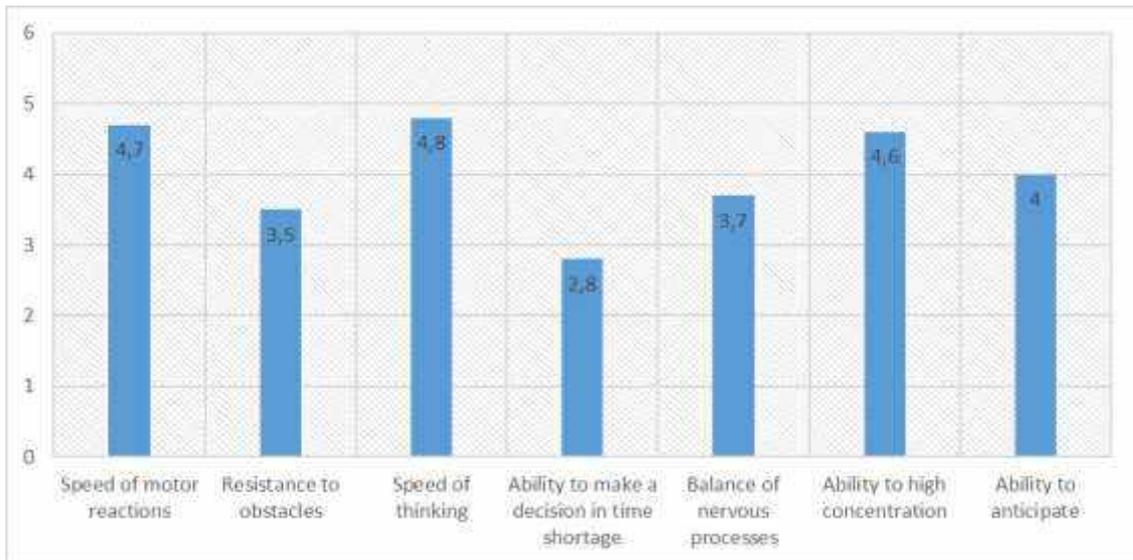


Fig.4. The most important psychophysiological characteristics for goalkeepers.

For defenders, the priorities are such reactions as the ability to anticipate (4.7), speed of thinking and the ability to high concentration (4.4). In turn, coaches note that attackers must have a high level of decision-making ability in conditions of lack of time and space and the ability to anticipate (4.7), which is directly related to the speed of thinking (4.6). As for midfielders, the most important psychophysiological characteristics, according to respondents, for water polo players of this game role are speed of thinking (4.8) and speed of motor reactions (4.7), as well as the ability to anticipate (4.7).

Discussion.

In recent years, a number of studies have been conducted to take into account psychophysiological characteristics in the system of training athletes. A number of studies have been conducted in martial arts, including wrestling and fencing [7,8]. The results of these studies confirm our results on the need to take into account psychophysiological characteristics in the construction of the training process of athletes, as well as to determine the talent of athletes in the initial stages of long-term training.

Conclusions.

The study found that all interviewed coaches (100%) consider it necessary to take into account the psycho-physiological characteristics of athletes in the selection and construction of training athletes in water polo.

Psychophysiological characteristics of athletes are one of the most informative criteria for the talent of athletes in water polo in the early stages of long-term training, according to 43% of respondents, along with anthropometric data of athletes (14%) and motivation to play water polo (29%).

As a result of the survey, respondents noted the most effective psychophysiological characteristics for different game roles, in particular for goalkeepers is the speed of simple and complex motor reactions, for defenders the ability to anticipate. For midfielders it is speed of thinking and decision making and for attackers it is speed of motor reactions and speed of thinking.

Prospects for further research are to develop a differentiated program of technical and tactical training of water polo players of different game roles, taking into account individual psychophysiological characteristics.

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