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АКТУАЛЬНІ ПРОБЛЕМИ СУЧАСНОЇ СПОРТИВНОЇ ПІДГОТОВКИ

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THE INFLUENCE OF SEXUAL DIMORPHISM ON THE CHOICE OF TACTICAL DECISION IN THE PLAYING SITUATION IN BILLIARDS

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Introduction. In order to achieve a high score result during competitions in individual sports, it is indispensable to have quality integral preparedness of the athlete. But quite often in sports games the result of the match depends on the right choice of tactical decision by the player. That is why in billiards an effective role is the effective choice of a tactical decision in a particular game situation for a particular athlete. Unfortunately, the planning of tactical training of high-skill athletes is practically carried out without taking into account the individual characteristics and style of play, which is often directly dependent on the gender of the athlete. Therefore, it is necessary to assess the impact of sexual dimorphism on the choice of tactical decision in the game situation in such individual sport as billiards.

The strength and mobility of nerve processes, as highly genetically determined properties of the nervous system, is one of the essential factors that determines individual differences in psychophysiological features. The previous studies [1-4] proved that certain mental functions of humans are dependent on the development of their properties of nerve processes.

The purpose of the work study of the influence of sexual dimorphism on the choice of tactical decision in the playing situation in billiards.

Methods of research: theoretical analysis and generalization, pedagogical observation, pedagogical testing, the study of psychophysiological parameters of the top billiard players, methods of mathematical statistics.

Results.

When assessing competitive activity in tennis and billiard sports, it is necessary to take into account the individual characteristics of the athletes and the style of tactics of the game.

The obtained results on revealing certain parameters of spatial-temporal characteristics of movements and analysis of competitive activity of leading billiard players of Ukraine and the world allowed to determine three types of models of tactical style of competitive activity of players. In the research group of athletes, after determining the leading indicators, players were distributed according to tactical styles of competitive activities: A - universal, B - active, C – defensive (fig. 1).

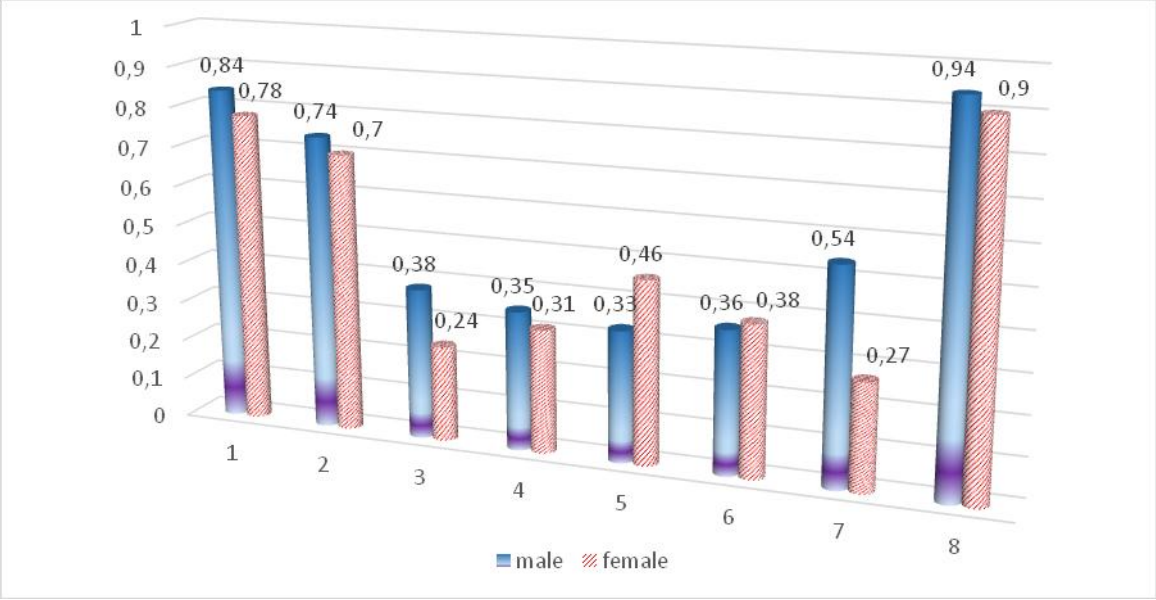

Fig. 1. The relationship of the effectiveness of sports results with the technical and tactical evaluation of billiard players (male and female):

1 - technique of execution of feeds and strikes; 2 - differentiation of muscular effort; 3 - working memory; 4 - complex visual-motor reaction; 5 - speed of information processing in the visual analyzer; 6 - functional mobility of nerve processes; 7 - switching attention; 8 - the final comprehensive assessment of tactical preparedness

For players of universal style of competitive activity in billiards the advantages in indicators of differentiation of muscular efforts, accuracy of performance of all kinds of shots. Athletes of the attacking style are characterized by the speed of complex visual-motor reaction, the speed of thought processes, the variability of the choice of technical-tactical actions and the accuracy of their execution, especially complicated shots with spin.

Defensive-style players are characterized by high values that characterize muscular effort differentiation, nerve mobility, and change of focus, use base shots, or play defense, rather than risking complicated shots with spin.

This analysis made it possible to determine that most athletes of attacking style belong to a male group.

The study of sensorimotor reactions and properties of the main nervous processes in athletes enabled us to determine the sexual characteristics of neurodynamic functions.

The statistical analysis of the results for the nonparametric U - Mann-Whitney criterion showed that in general, the men were significantly different from women according to the following indicators: the latent period of simple visual-motor reaction and the latent period of complex visual and motor reaction, the choice of two of the three stimulus ($p < 0.05$).

Determining the latent period of the reaction of choice in billiards is of great importance. The duration of this indicator determines the qualitative qualities of the athlete, which is very important in high-speed and precision sports. Thus, the average value of the latent period of the reaction of choice 2-3 for men was $\bar{x}$ = 411,26 ms, standard deviation - S = 43.84 ms, for women, respectively, 451.18 ms and 51.84 ms.

Conclusions. Study of the relationships of properties of the main nervous processes with different complexity by sensorimotor reactions at athletes has revealed the probable relationship between the latent periods of simple and complex sensorimotor reactions, as well as between latent periods of the visual-motor reaction of the choice of two of the three stimuli, functional mobility, and force of nervous processes.

With the help of correlation analysis, interconnections of individual-typological properties and sensorimotor reactions with psychophysiological indices of top billiard players of different sexes were established.

The data obtained allowed us to determine a greater percentage of athletes attacking the style of play among men. The analysis of the style of competitive activity and the individual characteristics of athletes reveals the peculiarities of the tactical training of billiard players, taking into account sexual dimorphism.

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