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The gymnastics influence on the 7-8 years old girls' personality characteristics

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Abstract: Some characteristic features and personality traits should be taken into consideration when choosing a sport specialization. Besides, the role of psychological factor in modern gymnastics is constantly increasing. The analysis of the psychological tests results allows to judge about the influence of gymnastics exercises on the psychological peculiarities of the students. **Materials.** The results of authors researches on comparative analysis of characteristic features and personal qualities of two 7-8 years old girls groups, one of which consists of gymnasts and another one consists of non-athletes, are considered in the article. **Research Methods.** Literary sources analysis, character express analysis method (Dembo-Rubinstein method), personality properties determination according to W.Sikora test, tapping - test, statistical analysis. **Results.** The authors carried out psychological testing of gymnasts and non-athletes 7-8 years old and analyzed the results. It is established that the values of the nervous system, personality and character traits of the two girl groups are a valid assessment to determine the sports activities impact on them. According to estimates of the degree personality properties manifestation, gymnasts are superior to non-athletes in terms of general behavior, learning ability and purposefulness. Girls who do not participate in gymnastics have mostly weak or medium-weak nervous system, have a greater absolute sensitivity (lower threshold) than gymnasts. They have an advantage in the area of weak and medium stimuli. They react faster and have greater magnitude of reaction. Gymnasts, on the other hand, have an advantage in the zone of high intensity stimuli. Gymnasts with a weak nervous system prepare for the next type of competition immediately after the performance of the previous one. Gymnasts with a higher strength of nervous system presented the exercise in a shorter time. **Conclusion.** The girls of 7-8 years old engaged and not engaged in gymnastics do have qualitative differences in psychological characteristics. The obtained results can help coaches and gymnastics specialists in the selection of children for this sport.

Keywords: gymnastics, girls 7-8 years old, psychological features, personality traits, Dembo-Rubinstein method, W. Sicora test, tapping test, personality traits.

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Introduction

In critical situations related to extreme physical and mental loads, typical for sports activity, individual-typological features of an athlete, manifestations of his personality properties, individual characteristics of his activity are revealed most sharply [1].

One of the popular in our country and the most effective sections of physical education is gymnastics. It by and large, can be called the foundation for many other sports. In modern gymnastics the role of the psychological factor is constantly increasing. This is due, first of all, to the increasing complexity

of exercises and connections. Secondly, quite children come to gymnastics. It entails a number of specific issues for research, primarily related to aspects of the gifted children selection. In this regard, the study of the individual characteristics of children, the properties of their nervous system and characteristics of temperament, the characteristics of personality and activity, the impact of sports on these characteristics becomes important.

According to the hypothesis of the study it was assumed that the psychological characteristics of girls 7-8 years old who do and do not do gymnastics have qualitative differences.

The aim of the research is to find out the differences in psychological and pedagogical characteristics of girls 7-8 years old who do and do not do gymnastics.

In order to achieve the goal, the following tasks were set:

1. to determine individual characterological sides of the studied groups of girls personality.
2. To evaluate the manifestation of the research participants individual personality traits.
3. To conduct a comparative analysis of the psychological characteristics of 7-8 year old girls.

Materials and methods

For the decision of tasks methods of research were used: the analysis of literary sources; the technique of the express analysis of character (method of Dembo-Rubinstein); definition of the person properties by the W.Sikora test; tapping - the test; the statistical analysis.

A total of 20 girls 7-8 years old took part in the study. It consisted of 2 groups: 10 gymnasts and 10 girls not involved in sports.

Results and discussion

In many sports, the qualities that act as special abilities, in some cases depend on the psychological characteristics of the athletes. It follows that some characteristic features and personality traits should be taken into account when choosing a sport specialization. One of the main tasks of a coach is to select the most gifted and promising athletes to the group of beginners. To achieve success in various sports it is necessary to take into account those psychological properties that can help to facilitate and improve sports activities [2].

One of the leading trends characterizing the development of modern sports is the increasing role of athletes' mental preparation to achieve efficiency and reliability of results, the formation of mental preparation for competition, as it can be a powerful reserve for improving the effectiveness of sports activities. As a rule, the issue of psychological preparation of athletes gets into the attention of coaches only when after several years of training their students acquire a sufficiently high level of skill and begin to perform in competitions [3].

At the age of 7-8 years, the development of the organism is relatively uniform. An increase in the strength and mobility of nervous processes provides for an increase in the efficiency of the cerebral cortex and the stability of all types of internal inhibition. The role of the second signaling system gradually increases. The importance of the first signaling system is not reduced. At the junior school age, nervous processes are already characterized by considerable strength and equilibrium, and conditioned reflexes are characterized by sufficient

stability. All types of internal inhibition are quite distinct. Insufficiency of regulatory influences of the cerebral cortex on subcortical formations is also noted. It is reflected in weakness of active attention and considerable concentration. Children of 7-8 years of age are characterized by inquisitiveness and a pronounced need for movement. At the same time, some age features of 7-8 year-old children make it difficult to work with them. At this age children have not developed self-control, not formed self-esteem. And these are the very properties of the psyche on which the success of learning and confidence in their abilities depend [4].

Psychological and pedagogical work with young athletes is aimed at creating mental readiness to improve results, and the proper formation of the athlete's personality. In the literature on the psychology of sport there are two opinions about the role played by the psychological features of personality in sport. Some believe that due to the specifics of the activity, success in sport is predetermined by the properties of the type of nervous system and temperament. Others believe that in mass sports in general, as well as in some sports, the properties of the nervous system do not predetermine the success of the activity. There is an opinion that by forming an individual style, the same success can be achieved by people with a wide variety of the nervous system and temperament properties [5].

In the two groups of girls participating in the study, psychological testing was conducted, analysis of the results of which formed the basis of this work. First, the girls' character was determined using a technique of express character analysis based on functional asymmetry of the right and left hemispheres of the brain [6].

Statistical processing of the test results showed that the sample is heterogeneous, with a wide range of individual characteristics. More often there are simple-minded, indecisive with soft character traits (40%). Friendly, contactive emotional (30%). Energetic, decisive, who achieve their goal (30%).

Of the 10 gymnasts surveyed, only 30% in terms of their character traits - decisive, prone to self-esteem, energetic with a strong character - can successfully do gymnastics in the future and show good results.

As a result of the test to determine the character traits of girls who do not participate in sports the following data were obtained: the character group is heterogeneous, there is a scattering of individual features. More often there are friendly, contact, emotional (50%). Energetic, decisive, who achieve the goal (30%). Simple-minded, indecisive, with soft character traits (20%).

Of the 10 girls participating in the study, apparently, only 30% in their character are aimed at

achieving the goal.

Analysis and processing of the test results to determine the characteristic features of gymnasts and non-athletes for the year indicate some changes. But the differences between the groups are still insignificant ($p > 0.05$), i.e. the groups are homogeneous. There is a wide range of individual characteristics.

The next step in the course of the study was the assessment of personality traits of the studied groups of girls using W. Sicora test [7]. Analysis of the data obtained indicates that 90% of the gymnasts showed a result greater than 2.5 units. It indicates a high adaptability of the body and psyche of the athlete to physical strain. While among those who do not do sports such girls only 40%. Significant differences ($p < 0.05$) established between the arithmetic mean results of gymnasts and "non-gymnasts" showed that the former have better self-control, are careful, conscientious, collected, restrained, purposeful, able to learn new exercises most quickly. Only one index of the ability to concentrate is higher in children not engaged in gymnastics ($p < 0.05$).

And finally, the girls participating in the study performed the teppin' test [8]. Its results show the presence of a weak nervous system in girls engaged in gymnastics, but we cannot speak about all of them as 30% have a weak nervous system, 60% have an average strength of nervous system, 10% have between a strong and weak nervous system. For 60% of girls-non-athletes a weak nervous system was detected, and 40% – the average strength of the nervous system.

The strength of the nervous system and the strength of the nervous processes is an indicator of the performance of the nerve cells and the nervous system as a whole. A strong nervous system can withstand a greater amount of prolonged stress than a weak one.

The level of activation at rest in persons with a weak nervous system (not engaged in sports) is higher and therefore closer to the threshold response zone than in gymnasts, persons with a stronger nervous system.

Conclusion

Thus, the research conducted has shown that:

1. The indicators of the properties of the nervous system, personality traits and character of the two groups of girls are a valid assessment to the influence of sports activities on them.

2. According to evaluations of the personality manifestation degree traits

gymnasts significantly outperform non-athletes ($p < 0.05$) on the indicators of general behavior, learning ability and goal-seeking ability. Indicators of ability to concentrate, ability to increase achievement, and self-confidence do not give reason

to speak about superiority in manifestation of personality properties in one or the other.

3. Girls not engaged in gymnastics possess, in general, weak or medium-weak nervous system, have greater absolute sensitivity (lower threshold) than gymnasts.

They have an advantage in the area of weak and medium stimuli. They react faster and have greater magnitude of reaction. Gymnasts, on the other hand, have an advantage in the zone of high stimulus intensity.

4. Gymnasts with a weak nervous system prepare for the next type of competition immediately after the performance in the previous one. Gymnasts with a higher nervous system presented the exercise in a shorter time.

5. The differences in the test results for the characteristic determinations between gymnasts and non-athletes are random ($p > 0.05$).

Thus, the conducted study showed that girls 7-8 years old engaged and not engaged in gymnastics, really have qualitative differences in psychological characteristics. However, we consider it necessary to note that since many environmental factors influence a person, it would be incorrect to attribute changes in individual personality characteristics to sports exercises alone.

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