Peculiarities of physical abilities development in hearing-impaired students with different types of temperament who started adaptive soccer lessons

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Abstract

Objective of the study. This work is aimed at determining the specifics of the dynamics of physical fitness in students with hearing impairment, differing in temperament type, after starting classes in the adaptive football section.

Methods and structure of the study. The present study involved 78 young men with hearing impairments who are second- and third-year university students and have started classes in the adaptive football section. In the course of the work, such methods as questionnaires, testing and mathematical analysis were used, including the calculation of the Student's t-test.

Results and conclusions. Initially, the physical fitness of students with hearing impairments and different types of temperament was significantly different. These differences remained noticeable even after the start of regular football practice. Phlegmatic students showed the best indicators of general and strength endurance, surpassing students with other temperaments. At the same time, choleric patients had the most developed ability to maintain dynamic balance, outperforming others in this parameter. It is advisable to use these data in universities to optimize the physical fitness of hearing-impaired students in physical education classes. Adapting football training to suit each student's temperament can help improve their athletic performance through an individualized approach. This approach will make it possible to more effectively develop the necessary physical qualities, taking into account the characteristics of each type of temperament.

Keywords: *dynamics of physical fitness, students with hearing impairment, type of temperament, adaptive football, physical fitness, strength endurance.*

Introduction. Today, there is still a need to improve the training process in adaptive football based on taking into account not only the general somatic characteristics, but also the peculiarities of the central nervous system of the trainees [3]. One of the significant indicators of the nervous system is temperament, which largely determines a person's inclinations to various types of activities and success in them, including in sports. It is necessary to clarify the influence of temperament on the effectiveness of sports activities of hearing-impaired students in team sports, in particular in football.

Objective of the study to determine the changes in physical abilities in hearing impaired students with different temperament who started attending the adaptive soccer section.

Methods and structure of the study. A group of 78 hearing-impaired young men, students of the 2nd and 3rd courses of the university, who started training twice a week in the football section at least during the academic year, were monitored. The temperament of all hearing-impaired young men was determined by questioning them using the G. Eysenck questionnaire [1]. As a result, it was revealed that among the observers there were 20 choleric people, 22 sanguine people, 17 melancholic people and 19 phlegmatic people. After determining the type of temperament, all students with hearing loss were tested for the development of dynamic balance, speed, general endurance, strength endurance, flexibility. The Student's criterion has been calculated.

Results and conclusions. The values of physical fitness parameters obtained during testing in hearing-

The results of the assessment of the physical fitness of young football players

Temperament-based student groups		Test results, M±m				
		A speed test with running with a high hip lift, once	Standard general endurance test, beats/min	Dynamic balance test with performing turns on a gymnastic bench, with	A test of strength endurance of the abdominal press and leg muscles, with	Hip joint mobility and spinal flexibility test, cm
Choleric n=20	Exodus	33,8±2,83	136,5±3,51++	7,14±0,74	74,9±2,97	48,3±2,01
	The end	34,9±3,07	116,0±4,45++	6,18±0,34*	106,5±3,28**	60,8±3,38**
Sanguine people, n=22	Exodus	36,2±2,38	129,7±5,17++	8,29±0,85+	75,8±3,67	45,4±1,57
	The end	38,5±3,22	112,0±4,36**	7,33±0,62*+	101,2±4,14**	59,9±2,01**
Melancholics, n=17	Exodus	35,8±2,37	141,5±1,35++	8,52±1,28+	82,3±4,26	44,2±2,75
	The end	36,0±2,98	114,1±2,21**	7,34±0,93*+	96,3±3,97*	58,8±3,82**
Phlegmatic, n=19	Exodus	34,9±2,27	107,3±5,02+	8,46±1,02+	70,5±2,58	52,6±2,32
	The end	35,3±1,70	97,4±4,36*	6,91±1,18**+	109,0±3,83**	63,4±2,23**

*Note: the reliability of the dynamics of the indicators taken into account is *– p<0.05; ** – p<0.01; the reliability of the differences with the best result in the test, separately at the end and at the end is + – p<0.05, ++ – p<0.01.*

impaired students of all temperament types at the end and at the end of the observation are shown in the table.

In the course of the conducted research, it was possible to establish the initial differences in the test results of representatives of different temperaments. When assessing the outcome of overall endurance using the Cairsh step test, the highest results were shown by the observed phlegmatics: 107.3±5.02 beats per minute, which exceeded melancholics by 31.8% who had the worst result in this test.

In testing the state of dynamic equilibrium, its best development was demonstrated by choleric patients (7.14±0.74 s). According to the results of this test, they compared favorably with sanguine people (by 16.1%), phlegmatic people (by 18.5%), and melancholic people (by 19.3%). In the course of determining the development of speed, strength endurance and joint mobility in hearing-impaired students with different types of temperament, initially significant differences could not be found. At the same time, at the level of the trend in the development of the quality of speed, sanguine people had the best result (36.2±2.38 times in 10 seconds). The tendency to have the greatest strength endurance was shown by hearing-impaired melancholic students (85.3±4.26 s). According to the development of hip joint mobility in hearing-impaired students, the most preferred results were shown by phlegmatics (52.6±2.32 cm).

After 10 months of regular football training, positive dynamics of the physical characteristics taken into account in the work was noted in all groups. There were differences in indicators between all the observation groups related to their existing temperament and those found earlier.

The greatest development of speed was observed in sanguine people with small differences with the rest of the observation groups. During the Cache step test, the best result was observed among phlegmatic students, who significantly exceeded the same indicator among hearing-impaired students with a different temperament who regularly trained.

By the end of the observation, the choleric group had the best result in the control exercise for assessing dynamic balance – 6.18±0.34 seconds, which favorably distinguished them from the rest of the observed groups with different temperaments.

As a result of testing strength endurance, it was not possible to identify differences between groups with different types of temperament, with a tendency to show the best result in phlegmatic people.

At the end of the follow-up, when testing hip joint mobility, the phlegmatic patients turned out to be the leaders in terms of results with an unreliable margin from the rest of the groups, who showed a result of 63.4±2.23 cm.

Conclusions. Temperament is an innate feature of a person and very significantly determines the features of his behavior. The study found differences in the indicators of physical fitness of hard-of-hearing young students with different types of temperament who took up adaptive football. In this regard, it becomes clear that taking into account temperament during regular football training for the hard of hearing can help increase their effectiveness and enable a coach to achieve greater physical development in his students during an individualized approach.

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