

Physical education and sports training of students of non-athletic specialization in the conditions of the northern university

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ABSTRACT.

The relevance of the scientific work is caused by its usefulness and significance in the following aspects: firstly, the popularization of educational classes, sports training, physical condition of students of non-athletic specialization is growing; secondly, the number of students leading an active and healthy lifestyle is increasing; thirdly, the perspective of the future development of professional, economic, political and educational life of society is becoming substantial. Successful overcoming of external and internal obstacles during the educational activities of students requires the mandatory mobilization of physical qualities, as well as their development and self-improvement.

A systematic psychophysical strain under the negative effects of various factors in educational activity is the main means of adapting the body to the conditions of intense educational activity. The significance and importance of physical activity is mediated by the ability to achieve a high level of mental and physical performance, to improve health indicators, to prevent various diseases resulting from a significant decrease of physical activity, neuromuscular tension in the educational process of students of the northern university, as well as the extreme impact of the external environment.

Key words: *students, testing, physical fitness, subjective assessment, motivation.*

I. LITERATURE REVIEW

The analysis of the theoretical, methodological and scientific national and foreign publicism has showed that to save and optimize health, mental and physical performance of students by increasing the level of physical fitness, personal orientation and motivational satisfaction from physical education classes, it is necessary to solve many problems, to search for innovative directions and approaches in the implementation and involvement the youth in the physical education system, to increase moving potential in the institution of higher education.

Numerous factors influence on the process of adaptation to training of northern university students: social, environmental, psychological, educational, etc. In addition to the academic load, the emotional load (during seminars, conferences, sessions), ecological and climatic factors (hypo

comfortable conditions, intense academic work, situational interpersonal and personal conflicts, fatigue, distress, etc.), a time shortage, the struggle of motives whether go in for sports or go to the movies, chatting with friends, lack of body exercises, constant disturbance of sleep patterns affect on adaptation to training. The complexity of these negative factors causes mental and physical stress turning into unfavorable mental states: frustration, tension, crises, depression, which can lead to misadaptation [10, 11]. Subsequently, all this is the result of reducing productivity, academic success in physical education classes and their avoidance, the deterioration of a healthy lifestyle.

The purpose of the research is to substantiate theoretically and explore experimentally the level of physical fitness of students of non-athletic specialization in a northern university.

II. MATERIALS AND METHODS

The research has been conducted on the base of Surgut State University in Surgut city, Khanty-Mansiysk Autonomous Okrug-Yugra, since 2017 to 2019. 87 (boys and girls) first-year students of the medical institute have been involved in the study. Such methods as theoretical analysis, generalization and systematization of scientific and methodological literature, pedagogical observation, testing of physical fitness, survey method, pedagogical experiment, methods of mathematical analysis and statistics have been used in the research.

III. RESULTS AND DISCUSSION

To identify the initial level of students' physical fitness, the following tests among girls were used: endurance running - 2000 meters; run on the development of speed - 100 meters; tests for determining speed-power ability - long jump from place with two legs push; on the development of flexibility - leaning forward from a standing position with straight legs on a gymnastic bench; tests of power endurance - lifting the body from a supine position and flexion and extension of the arms with emphasis lying on the floor.

Among young men: endurance running - 3000 meters; run on the development of speed - 100 meters; tests for

determining speed-power endurance - long jump from place with two legs push; on the development of flexibility - leaning forward from a standing position with straight legs on a gymnastic bench; tests to determine power and power endurance - lifting the body from a supine position and hanging up on a high bar.

The problems of the level of physical fitness of first-year medical students were identified in this ascertaining experiment.

Table 1. The results of pedagogical testing on the level of physical fitness of non-athletic specialization students (%)

Levels Groups	High	Average	Below average	Below norm
Endurance running - 2000 and 3000 metres				
Boys, n- 34	-	23.8	19	57.2
Girls,n- 53	25	11	16	48
Speed development running - 100 metres				
Boys, n- 34	14.3	42.9	9.5	33.3
Girls,n- 53	15.2	6.6	15.2	63
A long jump from a place with two legs push				
Boys, n- 34	65	10	25	-
Girls,n- 53	11	26	26	37
Leaning forward from a standing position with straight legs on a gymnastic bench				
Boys, n-34	50	25	5	20
Girls,n- 53	54.3	26	11	8.7
Lifting the body from a supine position				
Boys, n-34	35	25	10	30
Girls,n- 53	8.7	30.4	37	23.9
Hanging up on a high bar and flexion and extension of the arms with emphasis lying on the floor.				
Boys, n- 34	10	40	15	35
Girls,n- 53	8	18	9	65

According to the results of an ascertaining pedagogical experiment on the physical fitness qualities, it is necessary to note diversity and multidirectionality of the results obtained on samples of students. Thus, in terms of endurance quality the below norm results were obtained from male students where average and low indicators are noted. Whereas female students have a high level of endurance quality where 25 percent is noted (see table No.1). Testing for determination of power qualities: lifting the body from a supine position, hanging up on a high bar shows that boys have higher rates at an average level than girls (see table No.1).

In addition to testing physical qualities, each student has performed a test of a differentiated self-esteem - SANZHU or "Degree" [9, 12]. Boys and girls have showed similar results in this test, therefore, the average group indicators were presented for the entire sample.

Table 2. Average group indicators of a differentiated self-esteem "Degree" among boys and girls.

Degree Scales (0-15 points)	Indicators M±m	Level
Feeling well	10,4± 2,2	Average
Activity	5,8±2,0	Below average
Mood	10,2±2,8	Average
Desire to train	7,4± 1,8	Below average
Satisfaction with their results	4,9±2,0	Below average

In accordance with a subjective assessment with the "Degree" methodology on physical education classes, students had showed the average and below average results. These results of the differentiated self-esteem indicate that first-year students of a medical institution, both boys and girls who are not athletes, evaluate themselves low in terms of physical and mental fitness.

First-year students who left the secondary school with low physical data are most often not ready for physical education classes at university programs and have a problem in improving their physical fitness. As one can see from the test results, feeling well and mood are within normal limits. Most likely, a PE teacher has to increase their level of a subjective assessment and power of achievement motivation, since some indicators are good for individual physical qualities among boys and girls and individual students show a high level of physical fitness.

At present, improving the results of students' physical training requires from the teacher, besides the methods of physical preparation, also psychological preparation. Such factors as achievement motivation, positive emotional experience during the classes, level of aspiration, sense of purpose, will undoubtedly affect the students' physical fitness and performance.

In our studies we have included a test on the power of achievement motivation [5]. A technique for diagnosing the achievement needs according to N. M. Peysakhov.

We mainly have used the Peysakhov questionnaire on the achievement motivation at the beginning of the academic year among students [5]. The formed strength in the achievement needs is aimed at the effectiveness of a certain activity and usually manifests itself through two trends: the desire to achieve success or avoid failure, and their correlation indicates the strength of this human need [5].

The AN test (achievement needs) was developed by a group of psychologists [5]. When creating the AN test, the authors were guided by studies of the type of TAT (Thematic Apperception Test) that is widely known in our country and especially abroad. This test presents a questionnaire with 22 statements, where a testee should answer with agreement or disagreement for each statement. Then according to the questionnaire key points are summarized. The total score indicates the level of AN. The test brevity, the importance of the research task, the ease of interpretation serves as a convenient tool in diagnosing the student's motivational sphere.

Table 3. The manifestation of achievement needs among students of non-athletic specialization (boys-34 and girls-53, total - 87 people.)

Manifestation of achievement needs	Absolute number (number of students)	Relative number (%)
Striving for success	30	34,5%
Desire to achieve failure	57	65,5%
The results	87	100%

The scientists designate the main categories in the interpretation of the theory of achievement needs: firstly, the trend or desire as "a motive for success", and secondly, as "a motive for avoiding failure." Thus, the predominance of the motive for achieving success corresponds to a high level of the achievement needs, and the predominance of the motive for avoiding failure is low. The motive for achieving success, as well as the motive for avoiding failure, has a different impact on the effectiveness and quality of physical fitness.

The hypothesis of scientists is that the basis of the desire to avoid failure is a person's anxiety about a possible failure in the upcoming activity. And this subjective experience gives a rise to a certain level of fear, which affects the effectiveness and quality of the activity.

Thus, 34.5% of students are distinguished by a desire for success, resistance to mental stress and adaptability. They are not prone to anxiety, on the contrary, they are resistant to external influences, and they are trustworthy and show leadership. 65.5% are related to situationally anxious, nervous, and unstable to mental stress people. This is a poorly adaptable type of people. They are sensitive, anxious, experiencing failure painfully and get upset about trivia.

As a result of a stating experiment aimed at identifying emotionally unstable students, we have received interesting information. Comparing the results of all diagnostic methods, we determined that the average values for all tests in the two groups are closest. Emotionally unstable students are characterized by the mobilization of strong-willed efforts. The instability of strong-willed efforts disorganizes activity in a difficult educational situation. Irritability, conflict, a tendency to strong emotional stress regarding educational activities, susceptibility to fatigue and exhaustion, and vegetative disorders (digestion, sleep) are appeared in the emotional sphere.

With the stating experiment, we have found that one of the main factors affecting the student's self-esteem is emotional stability - instability. People who show emotional stability evaluate their intelligence and their skills, studying at a university, as average (i.e. adequate to their abilities). Most emotionally unstable people do not adequately assess their abilities, i.e. educational activity makes excessive demands on the mental functions of students.

Analyzing the features of male and female samples, we noted that a female sample is characterized by higher rates of emotional instability compared to a male sample. Girls evaluate the effectiveness of self-regulation and sustainability in average 1-2 points below the boys' indicators. Apparently, men are more able to control their experiences in difficult moments. Students aiming at success

usually set a definite positive goal in their educational activities and the achievement of this goal can be definitely regarded as success. They clearly show the desire by all means to achieve success in their activities; they look for such activities, engage in them actively, choose the means and take actions aimed at achieving the goal. In their cognitive sphere there is usually a strong expectation of success. Such students expect to receive an approval for the actions aimed at achieving the goal, and the work associated with it evokes positive emotions.

When the motivation for achieving success dominates, students prefer tasks of medium (optimal) and higher degree of difficulty, since solving them they show their abilities and efforts best of all. With a predominance of motivation to avoid failure tasks are chosen either easy or difficult, which are practically impossible. A student aspiring to success after failure is more interested in solving the problem, but a failure-oriented student is less interested in solving it.

Students motivated to success achievement, in a situation of choosing between an immediate reward or a larger one, but delayed in time, choose the latter. Students with a low tendency to achieve are more attached to the present and are less able to delay satisfaction.

Striving for success students attribute their achievements to intrapersonal factors (abilities, efforts, etc.), and those who avoid failure impute them to external factors (ease or difficulty of the task, luck, etc.). Students motivated to avoiding failure tend to underestimate their capabilities, quickly get frustrated with failures and lower their self-esteem, but success-oriented students behave themselves the opposite way: they adequately assess their abilities, quickly remobilize when failures, they go ahead and do not get upset.

IV. CONCLUSION.

One of the important directions of increasing physical fitness, motives of interest and satisfaction from physical education classes among students of a northern university is constant physical exercises. They increase physical and mental performance, maintain positive emotions and the strength of achievement needs. Attendance of physical education lessons, extra curriculum sports sections, the optimal and selective methodology and organization of physical fitness allow to achieve goals and solve personal problems of preserving mental performance and increasing physical fitness.

To increase the effectiveness of the educational process, it makes sense to use specific and non-specific means and methods of both sports training and psychological correction: autogenous training, meditation, breathing exercises, visiting various sports sections, Nordic walking. This allows to achieve a positive psycho-emotional state and contributes to the formation of satisfaction from physical activity, as the most important condition for increasing the need and desire for systematic training exercises.

A variety of means and methods of physical education, sports training, emotionality and the implementation of an individual approach are the significant conditions determining the increase of the effectiveness and quality of the educational activities of northern university students.

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