

Prevention of stress conditions of students by means of physical culture and sports

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Abstract

Objective of the study was to discover methods for preventing students from experiencing stress through physical activity and sports.

Methods and structure of the study. The research was carried out at the Don State Technical University in Rostov-on-Don, involving two groups of second-year students. The experiment took place from January to February 2024. To assess the stress levels of the students, a survey was administered.

Results and conclusions. For students experiencing high levels of stress, a tailored set of classes is recommended, which includes physical exercises designed to improve health, enhance the body's resilience, and promote a healthy lifestyle. These activities also help develop perseverance, endurance, and coordination. The study demonstrated the effectiveness of this comprehensive approach.

Keywords: *physical fitness, stress, sports, students, psychological state.*

Introduction. The educational process of students is associated with constant stress and irregular schedule, which is why stressful conditions often arise, which sometimes flow into depressive ones [2]. Stress factors include: poor sleep, debts, lack of interest in academic activities, fatigue - that is, heavy workload and lack of rest, conflicts with classmates, irregular meals, heavy academic workload [3]. Students often use various techniques to relieve stress. This includes communication with friends, walks in the fresh air, hobbies - for example, drawing, reading literature. According to many sources, fatigue and anxiety can be relieved by physical education and sports [1]. This can be any physical activity that distracts a person from anxiety, bad thoughts: for example, athletics, boxing, football, basketball.

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Methods and structure of the study. The analysis of the necessary theoretical information on the

specified issue was carried out, a scientific and practical study was organized and conducted, including a comparative pedagogical experiment and a questionnaire.

To achieve the stated goal, a pedagogical experiment was conducted at the Don State Technical University in Rostov-on-Don by involving two groups of 2nd year students. The experiment was conducted from January 2024 to February 2024. The control group was in the specialty «Pedagogical Education» (the program «Organization and Management of Pre-school Education»), and the experimental group was in the specialty «Advertising and Public Relations» (the program «Digital Communications and Public Relations»). The age category of the study groups has a criterion from 18 to 25 years. The first group has 15 girls and 15 boys, the second group has 12 girls and 18 boys.

The study was conducted in stages. At the first stage of the survey, respondents, namely two groups, were asked questions of the following content to un-



derstand the initial data of both groups. Do you do physical education and sports outside of school hours? How often do you experience emotional or psychological tension? Are you often in a state of stress?

Based on the presented results, it was determined that the state of stress and emotional tension is present in both groups in approximately equal quantities. In other words, more than half of the respondents often experience stress, which confirms the need to prevent stressful conditions.

The second part of the questionnaire had an open answer. The following results were obtained during the study. The stress level had to be assessed on a five-point scale. 3 people assessed the stress level as one point, 8 people as two points, 15 people as three points, 27 people as 4 points, and 7 people as 5 points. Respondents answered the question about sleep time as follows: less than 6 hours a day – 25 people, 6-8 hours – 23 people, more than 8 hours – 12 people.

The next stage involved the proposal to introduce sports and physical education into the extracurricular activities of one of the groups – the experimental group, studying in the Advertising and Public Relations specialty (the Digital Communications and Public Relations program) and consisting of 30 people. For a month, the experimental group had to follow the instructions of the authors of the current study – the teachers. The list of tasks is presented in Table 1. This table shows the most common and basic ways of doing physical education as a means of reducing stress.

Throughout the experimental period, the study group was required to monitor the degree of fatigue in accordance with the signs indicated in Table 1.

Results of the study and discussion. After a month, namely in February 2024, the experimental group completed a control survey. Respondents as-

sessed the degree of fatigue and stress after physical education and sports outside of school hours.

During the last study, we obtained the following results:

After the experimental period, more than 60% of the subjects showed an increase in their performance level, an improvement in their mood, a normalization of their sleep, an increase in the quality of their studies, and a decrease in their irritability. That is, such stress indicators as decreased performance, autonomic disorders, sleep disorders, and the appearance of fatigue during mental stress significantly decreased their indicators due to physical activity. The degree of overfatigue of the body and stress was assessed as incipient by 65% of respondents. The degree of overfatigue of the body and stress was assessed as mild by 25% of respondents. The degree of overfatigue of the body and stress was assessed as severe by 7% of respondents. The degree of overfatigue of the body and stress was assessed as severe by 7% of respondents.

Based on the presented data, we can talk about the high efficiency of using physical training tools to reduce and prevent stress levels in the body. In addition, students were asked one last question: will you continue to engage in physical education and sports outside of school hours? 90% of respondents answered positively.

Conclusions. According to the results of the experiment, the experimental group significantly increased their level of physical fitness, and at the same time reduced the level of stress in the body. The students of the experimental group increased their level of stress resistance and performance when completing assignments. Engaging in a set of physical activities aimed at strengthening health, hardening the body, develop-

Table 1 – Standard template for a personal physical training plan

Nº	Task	The means and methods used	Contents of funds
1.	Strengthening health, hardening the body, inclusion in a healthy lifestyle	Morning exercises, physical exercises, hygienic and natural factors, daily routine	A set of 10 exercises (their description); contrast shower, air baths; adherence to the daily routine, sleep, nutrition; a 30-minute walk before bed; moving from home to work (to study) and back on foot
2.	Developing persistence	Mandatory fulfillment of the planned daily and weekly tasks	Wake up at 6:30 a.m., go to bed at 11 a.m.; 45 minutes of physical exercise at 6 p.m.; self-study from 7 p.m. to 9 p.m.
3.	Development of coordination skills	Exercises to develop coordination of movements	Description of exercises, number of series and their repetitions
4.	Cultivating Endurance	Running, hiking, cycling, etc.	Running alternating with walking, gradually reducing it over the course of 30 minutes; hiking, cycling for 2-4 hours.



Table 2 – Brief description of the degree of fatigue and stress

Sign	Degree of fatigue and stress			
	Beginning	Easy	Expressed	Heavy
Decrease in capacity	Little expressed	Noticeably expressed	Expressed	Sharply expressed
The appearance of fatigue during mental stress	Under increased load	Under normal load	With a light load	No visible load
Sleep disorder	Difficulty falling asleep or waking up	Constantly having difficulty falling asleep or waking up	Daytime sleepiness	Insomnia
Vegetative disorders	Sometimes there is a feeling of heaviness in the head	Often a feeling of heaviness in the head	Occasional headaches, loss of appetite	Frequent headaches, loss of appetite

ing endurance, developing perseverance, outside of school hours contributed to the prevention of stressful conditions of the students of the experimental group. Thus, engaging in the set of 10 exercises proposed by us, a contrast shower, observing the daily routine, sleep and nutrition, as well as a 30-minute walk before bed, walking from home to school and back, getting up at 6:30 a.m., going to bed at 11 a.m., running alternating with walking with a gradual reduction in it for 30 minutes, hiking, cycling for 2-4 hours - indicates the high effectiveness of physical activity in preventing stressful conditions of modern students.

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