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# PHYSICAL ACTIVITY AS A FACTOR OF IMPROVING STUDENTS' STRESS RESISTANCE

## ФИЗИЧЕСКАЯ АКТИВНОСТЬ КАК ФАКТОР ПОВЫШЕНИЯ СТРЕССОУСТОЙЧИВОСТИ СТУДЕНТОВ

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**Summary.** Ever increasing requirements of the society call for an urgent solution of the problem of developing students' personality, their training for future professional activities, as students should be able to adapt efficiently to social requirements and be socially resistant, very well developed physically and capable of complete self-realization.

One of the most important tasks at the current stage of development of higher education is formation of a self-developing, self-actualizing and self-suficient individual. A student has got large resourses for developing. However students possess a series of individual psychological peculiarities, capable of making obstacles for complete realization of this task. Stress resistance occupies a special place among such peculiarities.

Analyzed in the article is the notion of stress resistance, its levels among university students with regard to their physical activity. Unfortunately stress has become an institution for the bulk of young persons.

In this work the vitality of increasing the level of stress resistivity among the students of PSTU is pointed out. One of the most unfavourable life consequences is analyzed as an actual stress factor, leading to a major psychosomatic disorder- post-traumatic stress of young persons, it having caused overtiring and increased stress loads.

Stress resistivity depends on a series of factors, one of them being the level of physical acticity. That is why investigation of a dependance ben physical activity and stress resistance seems to be exceedingly important.

Optimization of the process of teaching at PSTU requires creating and implementing some special educational space, as well as efficient mathods of stress overcoming.

Positive influence of various forms of physical education and sport upon the level of students' stress resistance was considered. Kinds of sport most efficiently influencing students' stress resistance were singled out.

Key words: students, physical activity, stress, stress resistance, physical education, sport.

#### Introduction

Life and health of students are largely determined by their level of adaptivity their inborn and acquiered ability of adapting, i.e. adaptation to the entire life variability under any conditions.

Nobody can be protected from stress in the modern world. University students is not an exception. A choice of future pfofession, entrance exams, preparation for term exams, lack of enough sleeping, situation in home town- due to the special military operation and other phenomena of students life all these factors lead to various stress situations. Stress is understood to be a state of strong and lasting psychological



tension that a person experiences when his/her nervous system gets an emotional overloading [1]. Small stresses are inevitable and are mainly harmless, while high-level stress has a negative influence upon productivity of attention, as it violates normal functioning of human systems and organs. Moreover, excessive emotional experiences and stress often lead to appearance of problems for both students and their relatives (T.G. Voznesenskaya, L.A. Kizhayev-Smyk, B.M.Kogan).

Many scholars maintain that stress is the reason of many illnesses, consequently, it can cause harm to students' health, while health is a prerequisite for achieving success in training and later in labour.

Stress can become a mysery if we surrender to its dangerous force. Our perception, interpretation of events and circumstances in which students can find themselves can either ruin them or give them some new force. Healthy and sober reaction of human organism to stress is capable of turning even a critical stress into means of achieving a goal. Sensitivity of the organism to stress actions is determined by the lvel of its stress resistance. Stress resistivity must be cultivated.

V.A. Bodrov understands stress resistance as an integrating human quality, that characterizes the degree of person's adaptivity to actions of extreme factors and is determined by the level of functional reliability of the subject of activity under such conditions and is revealed in activation of functional resources of the organism and psychics.

It is also worth mentioning here that such notions like "stress resistance" and "emotional stability" can be considered as synonyms with just a negligible difference. Emotional stability in P.B. Silberman's works is characterized by interaction of emotional, intellectual, volitional and other components of individual psychological activity and it ensures an afficient achievement of the goal in emotionally complicated medium.

l.M. Abolin considers emotional stability as a systematic quality of an individual, which is acquired by an individual and is reaveaked in the process of a tense activity.

Stress resistance is not an inborn quality of an organism, but it can be cultivated by the correct way of life, behaviour and self-behaviour, active physical training can also promote it. Stress can be efficiently prevented by physical exercises if:

- the essence, structure, types and kinds of stress are determined;
- main directions of stress prevention are specified;
- the role of physical education in stress prevention is substantiated.

Thus, regular active physical exercises or going in for sports could be a key to the control of stress. That is why the investigation, aimed at discovering the dependence between physical activity and the level of stress resistance seems to be vital.

Scientists maintain that healthy persons cope with stress situations more easily. To reach it it is necessary just to go in for sports, like jogging in the morning or in the evening, riding a bicycle, or a skateboard, paying regular visits to aa gym. All negative emotions vanish together with physical load. You, certainly, should not forget your regular diet, daily regime and enough sleep.



Theoretical and methodical foundation of the investigation was laid by foreign and domestic researches of stress resistivity. This problem was investigated by the following scientists: D. Amirkhan, D. Grinberg, W. Cannon et al. The problem of stress resistance was also investigated in native research works by: L.M. Abolin, V/A. Bodrov, B.H. Vardanyan et al. The peculiarities of formation of stress resistance are revealed in the works of A.N. Glushko, O.V. Lozgacheva, T.V. Sereda et al.

# The main part

The objective of the research: to investigate students' stress resistance. The tasks of the research:

- to investigate psychological peculiarities of students stress;
- to select methods of investigating students' stress resistance, caused by actual life situation;
- to boost physical education work, sports and individual work of students with regard to various pedagogical aspects of the problem of social adaption of teenagers and youths.

Methods of investigation:

- methods of theoretical investigation: systematization, analysis of creative approaches to investigation of the problem of stress resistance;
- empirical methods testing, particularly: Stress resistance self-test (S. Kohen, G. Williamson).

## Investigation results.

Having studied and analyzed different approaches to the notion of "stress-resistance" we formulate it as a quality of a person, determining a possibility of adequate reacting in stressful medium. It is known that physycal exercises and going in for sports in the form of training or individual activities promote both better physical form and better psychiological relief, it also promoting, as we believe, stress resistance.

Anywhere, it is obvious that not all our students, studying at PSTU, are in the same position, or have equal adaptation resources, or equal stress-resistance level. But if the period of adaptation is delayed, it can lead to negative consequences both for an individual and the society.

The advantagecs of physical exercises possess neuro-chemical foundation. Physical exercises reduce the level of stress hormones in organism, including adrenalin and cortisol, thus adapting the organism to stresses.

So, having studied the state of the problem, we arrive at the conclusion that physical training can be treated as the so-called medication-free methods of stress treatment (S.V. Subbotin) and it promotes:

- reganization and reorganization of activities and regulating actions and thoughts;
- ➤ achievement of the feeing of control over the situation, the shortage of this feeling a stressful student experiences;
- improving self-estimation and confidence. Sporting activities can be enjoyed and can bring satisfaction of reaching even small results;
- ➤ appearnace of an objective and motivation, getting rid of the feeling of hopelessness, passivity and refusal from actions;



➤ abandoning negative thoughts. At that period any moderate physical load could be beneficial for person's phychological state, as it helps to avoid negative emotions and distract from any alarming and exhausting thoughts.

An active way of life, doing various physical exercises, fitness training, sports games, work out, crossfit, various kinds of wrestling, offered by the department of physical education and sport of PSTU promote health improvement and possess a beneficial impfluence upon organism. During individual training (in accordance with the recommendations of the department) it is obligatory to observe the principle of consecutive loads increase. It is also extremely important to maintain a srtict and objective control over your personal health and feeling. Physical training and sport promote formation of endorphins and other chemical compounds in brain, that improve human mood and can act as natural pain-killers, improving sleep and thus, reducing stress level. Correctly chosen sport can improve human health and strengthen immune system.

In order to determine the level of stress resistance among the students of 1-3 courses of PSTU at the beginning of the academical year we applied the test of self-evaluation of stress resistance, prescribed by S. Kohen and G. Williamson. The test contains 10 exercises. It was necessary to answer all questions, even though the statement was not relevant for the respondent. According to this test the level of stress resistance can be: excellent, good, satisfactory, bad and very bad.

On the basis of the pedagogical analysis of sress resistance level improvement it is recommended:

- to formulate a system of priorities and arrange in accordance with the degree of importance;
- to master determining the limits of the work volume very clearly;
- to clarify and analyze incomprehensible information;
- to take a good care of personal emotional and physical state (maintaining a good physical form).

In our work we analyzed and recommendepex approach to the types of physical activities in the following forms:

- practical training lessons;
- daily physical exercises;
- individual physical exercises, sports or tourist exercises during free time;
- classes at sports or other clubs;
- mass health or physical training or sports events, organized at free time.

In addition to the proposed the following methiods were applied in order to get a better level of stress resistance:

- various relaxation methods;
- autogenic training;
- physiological acting: sauna, open air visits and the like;
- active switching (physical activities, open air visits);
- positive attitude and positive perception of what surrounds you, hobby, books reading, arts activities, communication with near and dear ones etc.

After completion of the academic year the test was repeated in order to determine the correctness and efficiency of the work done. The obtined results



cofirmed our hypothesis that physical activity had a positive effect upon students' stress resistance

Students experienced changes, though quite small. Such positive dynamics can be caused by their adaptaion, successful results of examinations, additional or individual studies et al. Confirmation of positive influence of various popular kinds of sport, like mini-football, wrestling (sambo, judo wrestling), badminton, running and also gymnastics that help to overcome efficiently phychological tension was also the objective of our investigation.

We may arrive at the conclusion that the students who are physically active and speep well, have got good health and do not have bad habits and possess a good diet are more physically fit than the students, who do not go in for physical exercises. Thus, increasing the level of physical activity and reduction of university students' susceptibily to stress are likely to remain in the centre of attention in the very near future. Taking in to account the fact that that the levels of physical activity are generally considered as reducing the stress level it is required to determine and impelement strategies, promoting students' desire to do physical exercises.

We may conclude that physical exercises exerted some influence upon psychological state:

- ✓ they helped to raise self-estimation due to physical training sessions and better perception of own bodies;
- ✓ they promoted more friendly relation to you from the near ones, as more attractive appearance makes others think that you are even-tempered, sensible, frank communicative and successful in your profession;
- ✓ they imroved your vitality;
- ✓ increased your productivity, because people with good health seldom fall ill, are less prone to accidents and generally have better motivation for work;
- ✓ removed the state of depression;
- ✓ improved the capability of taking control of your own life, it resulting to elimination of the signs of stressful conduct;
- ✓ improved the mood, efficiently removing stress and negative states, caused by education tension, thus promoting stress resistance.

So, the results of our investigation show that physical activity is in inversely proportional to stress and depression, while human health is directly related to physical activit. The results also reveal that a low level of physical activity and a high level of stress represent a constant problem for university students.

Taking into account the sufficient proofs of the fact that physical activity promotes reduction of stress and it facilitates transition of stress situations, it is suggested to raise the level of physical activity of students as a factor of improving their stress resistance.

The process of social adaptation of university students to stress resistance by means of physical exercises can be significally improved if social adaptation is understood to be a universal, integrating, systematically organized and differentiated process, determined by the action of external and internal factors.

Physical education and sports should be considered as a necessary condition of formation of educatoinal, informational, motivational and behaviour purposes for the



process of stress resistance. Social adaptation of a future specialist is to be realized in inseparable connection with the process of his/her professional and personal development, as well as his/her determination for a health way of life.

The media of physical culture and taking care of health, that we offer, creating some special socializing conditions for high-quality communication between the students and teachers of the department of PE & Sport improve students' professional competence within the process of education.

The results show that in order to improve the level of health, stress resistance, and adaptation of students to the process of university education a purposeful work, aimed at their preparation for individual physical exercises is required. The classes content has to ensure theoretical and methodical; training, mastering the methods of self-control over physical and functional state of the organism and psycho-emotional sphere.

Physical exercises is one of the principle channels of self-organization, self-assertion, and social adaptation to the conditions and difficulties of the university education process.

## **Conclusions**

Analyzing the results of the work with students, applying the means of physical education we noticed certain positive dynamics in the process of social adaptation, the indices of which were impoved marks, better self-estimation, correct and purposeful character of communication with fellow students and professors, rare missing of classes, improved relation to themselves and their deeds, their good family relations and relations with their fellow students and teachers.

Physical activity is considered to be the most efficient means of combating the nervous tension. It allows to raise students' productivity and strengthen health. Serious physical training is not at all required, even exercises of moderate character are quite sufficient (jogging, health improving walking, swimming, gymnastics etc.

The practical value of our investigation is in the possibility of getting some more data regarding the kinds of sports, cultivated at higher educational establishments and additional motivation of students for going in for sports and obtaining opportunities for more precise selection of the type of sport activities, that exert an efficient influenc eupon stress resistance

Due to the afore-mentioned we may say that among the kinds of sport, mentioned above swiimming, football, basketball, wrestling and badminton possess most positive effect upon students' stress resistance.

Positive changes were also revealed towards social and mass PE work at the higher educational establishment, the fear of own appearance seems to have vanished, there appeared the desire to take part in the social work of the students' group and developed was the sense of responsibility and understanding of the necessity of attending the university classes.

The quality of the tuition process was improved, as well as students' attitude to educational and social duties. also raised was activity in participation, preparation and organizing mass sports events.

The students became more confident in their abilities and their future prospects.



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**Анотація:** Зросла потреба суспільства, гостро ставить питання розвитку особистості студентів, підготовки їх до майбутньої професійної діяльності, що продуктивно адаптуються в соціумі, соціально стійких, фізично розвинених, здатних до повноцінної самореалізації.

Однією з найважливіших завдань на етапі розвитку системи вищої освіти є формування саморозвивається, самоактуализируемой і самодостатньої особистості. Студент має великі ресурси для розвитку. Однак у студентів існує низка індивідуально-психологічних особливостей, які можуть перешкодити повноцінно вирішити це завдання. Серед таких особливостей особливе місце займає стійкість до стресів.

У статті аналізується поняття стресостійкість, розглянуто результати дослідження рівня стресостійкості у вузі в залежності від їх фізичної активності. На жаль, стрес став нормою життя більшості молодих людей.

У цій роботі наголошується на актуальності підвищення рівня стресостійкості у студентів ПДТУ. Як конкретна стресова ситуація розглядається одне з найбільш несприятливих наслідків життєвої ситуації, внаслідок чого виник важкий психосоматичний розлад посттравматичного стресу молоді, що призвело до зростання стресових навантажень і перевтоми.

Стресостійкість залежить від низки факторів, одним із яких  $\epsilon$  рівень фізичної активності. Тому актуальним  $\epsilon$  дослідження щодо виявлення залежність між фізичною активністю та рівнем стресостійкості.

Діяльність оптимізації освітнього процесу  $\Pi \Pi T Y$  вимагає створення та реалізації спеціального освітнього простору та ефективних способів боротьби зі стресом.

Розглянуто позитивний вплив різних форм занять фізичним вихованням та спортом на стресостійкість студентів. Виділяються види спорту, що найбільше ефективно впливають на стресостійкість що займаються у вузі.

**Ключові слова:** студенти, фізична активність, стрес, стресостійкість, фізичне виховання та спорт.

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