

# PHYSICAL EDUCATION AND SPORTS

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## The formation of emotional stability of students in physical education

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### **Abstract.**

One of the directions for improving the training of future specialists in higher education institutions is the formation of professionally relevant personality characteristics. Emotional stability is one of these characteristics. Physical education and sport are one of the few spheres of life of modern students in which this issue can be effectively resolved. The authors provide data on the positive impact of specially organized physical education classes on the formation of such emotional stability in students.

### **Keywords:**

*emotional stability*  
*personality factors*  
*students*  
*physical education*

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The cultivation of emotional stability is one of the main tasks concerning the formation of professionally relevant characteristics in future specialists that should be provided by higher education institutions. This is due to the level of complexity and responsibility of professional duties in the conditions of modern production. There are several other factors that require serious attention to be paid to the formation of emotional stability in future specialists. Some of them are the increase in the stressfulness of modern society, the steady growth of mental disorders related to anxiety and depression, and the spread of antisocial behaviour. In this regard, experts note a significant increase in research into the emotional sphere of people in psychology. As psychologists note, the need to make responsible decisions in situations that are uncertain due to a deficit or excess of information has become typical for human life and activity. This, for example, is typical for most types of modern professional activity. Nowadays, the question arises about the formation of stress resistance in the individual, which significantly affects professional activity in extreme conditions and ensures the preservation of work capacity and health. To solve the problem, the entire possible set of means, including the means of physical education should be used.

In psychology, strong mental states, which are usually caused by excitement or a high level of energy, are usually called emotions. Emotions can be divided into positive and negative. The emotional experience itself consists of three phases: 1) perception of the object, which leads to excitement; 2) external display of emotions (crying, running away, etc.); 3) mental influence, or emotion itself (anger, fear, etc.). In psychology, there are three types of display of emotions: a reaction, a state and a personality trait. This classification is based on the duration of the existence of emotions. At the same time, the distribution of the display of emotions does not imply that the above-mentioned types cannot be interconnected. On the contrary, it is assumed that they are mutually dependent. This allows us to conclude the characteristics of other types of the display of emotions based on knowledge of the characteristics of one type.

Analysis of the use of the term "emotional stability" in

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scientific literature shows that there are significant differences in its understanding. Thus, some authors understand emotional stability as emotional resilience, the stability of a certain emotional state. According to this approach, the concept of emotional stability is reduced to the absence of a response to emotional situations. Other specialists see emotional stability as the predominance of positive emotions in a person's mind. V. L. Marishchuk interprets emotional stability as the ability to overcome a state of excessive emotional excitement during the performance of a complex activity. For L. M. Abolin, emotional stability is identical to the stability of the productivity of activities performed in stressful conditions. Some scientists consider a criterion of emotional stability to be the efficiency of activity in an emotional situation. Emotional stability is also associated with the ability to control the expression of emotions. K. K. Platonov distinguishes emotional-volitional, emotional-motor and emotional-sensory stability in the structure of emotional stability. M. I. Diachenko and V. A. Ponomarenko expand the meaning of the concept, interpreting it as a personality trait and mental state that ensure appropriate behaviour in extreme situations. A deep analysis of approaches to understanding the nature of human emotional stability was performed by I. F. Arshava in her work [1, 2]. She draws attention to the fact that all approaches suggest that the general scheme of revealing the essence of emotional stability should be conducted through the estimation of the level of complexity of the conditions of professional activity to determine its effectiveness (as a sign of emotional stability). This leads to the fact that mental tension during operations, which in many cases ensures effective performance, can be mistaken for emotional stability. I. F. Arshava proposes to consider emotional stability and emotional vulnerability according to the criterion of their significance for the success of the subject's balancing with a changing environment aimed at preserving or reproducing homeostasis. In such an approach, indicators of emotional stability are assimilation and accommodation activity. The main form of their detection will be the maintenance of homeostasis. Indicators of emotional

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vulnerability will be complications in balancing with changes in the environment. The form of their detection is a change in the functional state.

In this article, the concept of "emotional stability" will be interpreted as a person's ability to maintain the stability of mental and psychomotor processes, and to maintain professional efficiency under the influence of emotional factors.

Physical education and sport are one of the few spheres of a student's life in which the issue of forming the emotional stability of an individual can be effectively resolved. At the same time, there are very few special studies aimed at studying the issue of using physical culture for its formation. One of the authors of the article conducted a study of the influence of the author's concept of psycho-physical training on emotional stability as a factor in a student's personality [2, 3, 4]. The independent variable of the study was the use of components of psycho-physical training of railway students, which were developed by the author for the main railway professions during physical education classes. Indicators of the level of formation of emotional stability as a personality factor (according to R. Cattell) were considered as a dependent variable.

The statistical null hypothesis was the assumption that the shift between the indicators of the personality factor "emotional stability" in students of the experimental and control groups in the initial and final statistical estimation does not differ significantly from zero.

An alternative statistical hypothesis was the assumption that the shift between the indicators of the personality factor "emotional stability" among students of the experimental and control groups in the initial and final statistical estimation is significantly different from zero.

The Student's t-test for dependent samples was used for the statistical processing of the obtained data.

66 students of the Dnipro National University of Railway Transport named after academician V. Lazarian were involved in the study. The age of the research participants was 17–20 years. Students of the experimental and control groups, which were formed to test the author's hypothesis, participated in

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the experiment. Quantitatively, each of the groups consisted of 33 people. The study lasted two years. Students attended physical education classes twice a week.

According to the author's concept, the students of the experimental group were involved in physical education classes, which included the study of the basics of psycho-physical training for the specialization "Railway structures and track management". Students of the control group studied a course of physical education according to the curriculum for higher education institutions.

Psychological diagnosis of personality factors in students was conducted using R. Cattell's test. Estimation of the level of development of student's personality factors was carried out with the table of transfer of points to the sten score according to the methodology of R. Cattell.

The changes that occurred during the experiment in the experimental and control groups will be described in detail. According to the results of the first statistical estimation (at the beginning of the first semester), 11 students of the experimental (33%) and 10 students of the control (30%) groups had a low level of "emotional stability" factor. Such people tend to have a low tolerance for frustration, changeable interests, irritability, fatigue, neurotic symptoms, and hypochondria. 12 students in the experimental (37%) and 12 students in the control (37%) groups showed high indicators. This category is characterized by endurance, capacity for work, emotional maturity, realistic setting, ability to follow the demands of the group, constancy of interests, and lack of nervous fatigue. Average indicators were found in 10 students of the experimental (30%) and 11 students of the control (33%) groups.

Another statistical estimation was conducted at the end of the fourth semester. According to the "emotional stability" factor, statistically significant changes in indicators were found in the students of the experimental group, and no such changes were found in the students of the control group. Thus, in the experimental group, the arithmetic mean of the student's indicators before the beginning of the experiment was 5.03, and after its end - 5.18, which indicates a significant increase. At the same time, in the control group,

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a very slight upward shift of this indicator was recorded. Thus, before the start of the experiment, the arithmetic mean of students in this group was 5.06, and after its end – 5.09.

The dynamics of changes in the factor are clearly visible in the changes that occurred in the groups during the experiment in the total number and percentage ratio of students by grouping intervals. Thus, in the experimental group, before the start of the experiment, a low level of the “emotional stability” factor was recorded in 11 students, which was 33%. After the end of the experiment, there were 8 (24%) such students. The decrease in the number occurred due to the entry to a higher level of 3 students, which indicates a significant improvement. In the control group, before the start of the experiment, 10 students (30%) showed low indicators on the factor of emotional stability. After the end of the experiment, there were still 10 such students (30%). There were no quantitative changes in the group at this level.

The indicators of the average level of the factor of emotional stability in the experimental group are as follows. Before the start of the experiment, this level was recorded in 10 students, which was 30%. At the end of the experiment, there were 14 such students, which was 43%. The increase occurred due to 3 students moving to this level from a lower one and 1 student dropping to this level (from a higher one). A significant improvement at this level in the experimental group was noted. In the control group before the start of the experiment, the average indicators for the factor were found in 11 students, which was 33%. After the end of the experiment, 12 students with such indicators were found, which was 37%. The increase occurred due to the lowering of 1 student to this level (from a higher one).

The indicator of the high level of the factor before the start of the experiment in the experimental group was recorded in 12 students, which was 37%. After the end of the experiment, there were 11 such students, which was 33%. A slight deterioration of the quantitative result at this level in the experimental group can be noted. In the control group, before the start of the experiment, 12 students showed high results on the factor, which was 37%. After the end of the

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experiment, there were 11 (33%) students with such indicators. A slight deterioration of the result at this level is noted.

The data obtained during the experiment regarding the formation of student's personality based on the factor of emotional stability show that traditional physical education classes, which were conducted in the control group, do not have a statistically significant effect on this process. This is evidenced by the fact that the students of the control group, who studied in it for 2 years, did not experience a statistically significant increase in indicators by the factor. In our opinion, this may be explained by the lack of educational activities effective for the formation of emotional stability.

We explain the statistically significant increase in the emotional stability of the students of the experimental group by the implementation of the basics of psycho-physical training, which ensured: a) students gaining experience in participating in stressful activities (due to participation in sports competitions of professionally relevant sports); b) students mastering the skills of self-regulation of their mental state (due to the inclusion of several autogenic training classes); c) acquiring knowledge about the possibility of using coping strategies in emotional situations (due to the inclusion of the block of psychological education, in which these issues are reflected). In our opinion, this is what determined the significant growth of emotional stability among students of the experimental group.

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