



Sports activity as a means of forming anti-stress resistance of students in an educational environment

UDC 796.11



Dr. Hab., Associate Professor **E.A. Spiridonov**¹

PhD, Associate Professor **A.O. Mironov**¹

Dr. Hab., Professor **O.E. Ponimasov**¹

PhD, Associate Professor **E.G. Saiganova**¹

¹The Russian Presidential Academy of National Economy
and Public Administration, Moscow

Corresponding author: spiridonov-ev@ranepa.ru

Received by the editorial office on 20.05.2024

Abstract

Objective of the study was to increasing stress resistance of students on the basis of the development of emotional stability, adaptability of thinking and self-regulation in the process of zonation sports activities.

Methods and structure of the study. The research program of studying students reactions to various external stimuli is focused on identifying the potential of sports activity, which contributes to increasing personal self-esteem and the ability to manage stress. The diagnostic complex includes: the Spielberg-Khanina self-assessment methodology, the Eysenka test-questionnaire, the SAN test of psychoemotional reactions to stress.

Results and conclusions. A significant correlation of stress resistance with the SAN index (0,578), the ability to self-regulate (0,476), the level of subjective control (0,556) and a negative correlation with emotional lability (0,458) and the level of anxiety (0,632) was established. A system of sports and recreational activities has a high formative potential in achieving stress resistance of students.

Keywords: *students, stress tolerance, personal characteristics, educational environment.*

Introduction. Modern society is characterized by a complex multicomponent structure, which continuously changes depending on the social needs of the individual. The development and transformation of society is due to the rapid modernization of technology, which requires a new quality of labor resources.

One of the main requirements for specialists employed in various sectors of the economy is high resistance to stress, characterized by an integral manifestation of personal qualities that ensure the ability to withstand emotional, intellectual and physical stress without negative consequences for the health of the employee and others. Among the wide range of qualities that determine stress resistance, one can highlight emotional stability, adaptability of thinking and self-regulation [5].

Having the necessary set of personal qualities in a person to withstand the challenges of modern civilization is critical for maintaining mental health, success-

ful social adaptation and achieving personal goals [2].

Since higher education is the foundation for the reproduction of human capital, the search for effective tools for developing stress resistance in students becomes a strategic task in the new conditions of technological innovation [1].

The formation of stress resistance occurs throughout a person's life, however, at student age this process is the most targeted and pedagogically controlled [3, 4].

Objective of the study was to increasing stress resistance of students on the basis of the development of emotional stability, adaptability of thinking and self-regulation in the process of zonation sports activities.

Methods and structure of the study. The study involved management students aged 19,5±0,5 years, regularly attending sports clubs (47 people), and students not involved in sports (29 people).

The research program for studying students' reac-



tions to various external stimuli is focused on identifying the potential of sports activities, which, with appropriate pedagogical support, contribute to increasing personal self-esteem and the ability to manage stress, leveling its consequences.

The study was carried out in two stages. As part of the first stage, a rapid diagnosis of stressful conditions was carried out according to the method of K. Schreiner (1993), which makes it possible to determine the characteristics of the experience of stress, in particular, the degree of self-regulation and emotional lability in stressful situations. The technique is adapted for students of the appropriate age. The measurement was carried out on a 100-point rating scale: high level of stress resistance (0-29), average level of stress resistance (30-50), low level of stress resistance (51-100).

At the second stage, the relationship between the impact of sports activity factors and the contribution of various qualities of students to resistance to stressful situations in the educational process and student life was analyzed. The psychophysical effects of training are aimed at increasing the psychological intensity of sports training and competition, achieved through physical activity of increased intensity. The effective effectiveness of the model was assessed by the dynamics of growth of biological prerequisites for stress resistance of students: the degree of exposure to stress, self-regulation, emotional lability, level of subjective control, level of anxiety. The diagnostic complex includes: the Spielberg-Khanin self-assessment method, the Eysenck test questionnaire, the R. Cattell multifactorial personality study method, the K. Schreiner stress diagnostic method, the SAN test of psycho-emotional reaction to stress.

The statistical software package Statistica 6.0 was used to calculate the main indicators characterizing the reliability of the pedagogical impact in the research process.

Results of the study and discussion. Analysis of the results of testing students for stress resist-

ance indicates that the majority of young people cope relatively well with the impact of stress factors in the educational environment, which indicates the positive influence of the process of university psychological education, family and other aspects of life. In the context of the formation of a set of qualities that contribute to the effective counteraction of negative external stimuli, the high importance of sports activity in increasing the level of stress resistance of students has been established.

The peculiarities of sports activities determine the launch of physiological mechanisms that allow one to effectively withstand stressful situations in the educational process and the life of the university.

The most important physiological mechanism of schoolchildren's physical activity, which allows them to successfully withstand various types of stress, is the production of endorphins, which help reduce pain, improve mood and improve the emotional state. Systematic sports activities lead to an improvement in biological prerequisites and, as a result, strengthen the emotional stability of students to external challenges of the social environment.

The ability of young people to transition to an integral format of mastering sports and technical skills, developing physical qualities and improving personality traits, determined by its physiological characteristics and expanding the possibilities of emotional regulation of the general mental state, has been noted. The possibilities of additional use of resources of training and competitive activity are manifested in overcoming negative reactions to the consequences of the introduced large-scale requirements on the part of educational activities, which is confirmed by a decrease in anxiety to $35,7 \pm 9,8$ points; emotional lability up to $11,4 \pm 0,5$ points. At the same time, expanded abilities for self-regulation, adequate to the demands of educational activities, cause a positive reaction in the psychophysiological and socio-psychological state of students, which is manifested in an increase in the SAN index to $7,8 \pm 0,7$ points.

Indicators of personal characteristics of students based on the results of the training process

Indicator	Before	After	t	p
SAN Index, point	30,7±5,7	45,0±3,4	2,6	< 0,05
Ability of self-regulation, point	53,0±0,8	63,8±1,3	2,8	< 0,05
Emotional lability, points	16,3±0,7	11,4±0,5	3,6	< 0,05
Subjective control level, point	5,3±0,7	7,1±0,5	4,3	< 0,05
Level of anxiety, point	48,0±13,4	35,7±9,8	2,6	< 0,05



The distribution of adequate resources of sports training activities across the stages of sports training (mastering the basic fundamentals of a sport - initial sports specialization - achieving readiness at the level of sports categories) within the optimal boundaries of physical activity leads to the deployment of processes of searching for a balance between the tone of the sympathetic and parasympathetic nervous systems, which is the basis for the development of personal characteristics that determine students resistance to stress. The cumulative effect of the positive influence of sports training activities was expressed in the activation of psychological methods and mechanisms of emotional regulation as a kind of regulator of the individual activity of the students personality.

The use of the rank correlation method made it possible to establish a significant correlation between stress resistance and the SAN index (0,578), the ability to self-regulate (0,476), and the level of subjective control (0,556) and a negative correlation with emotional lability (0,458) and the level of anxiety (0,632).

Resistance to stressful factors in the educational environment was achieved due to an increase in affective tolerance and its relationship with the emotional characteristics of the individual (0,568), the use of psychoregulatory training in preparation for competitions (0,494) and the ability to verbalize emotional states (0,537). The dependence of stress resistance on the mastered competencies of sports and recreational activities sets guidelines for personal characteristics and health-saving strategies, which, when implemented sustainably in the context of educational activities, help improve the biological prerequisites for students' stress resistance.

Conclusions. The anti-stress strategy for implementing educational activities updates the methodology for the development of psychophysiological and

socio-psychological characteristics that determine emotional stability, mobility of nervous processes, strength of the nervous system, type and direction of behavioral reactions during stress.

The system of sports and recreational activities, being a projection processing model of educational activity, has a high formative potential in achieving stress resistance based on the development of subjective control and the ability for self-regulation of students.

References

1. Almazova I.G., Elnikova O.E., Kolosova I.G. Osobennosti formirovaniya stressoustoychivosti kak komponenta motivatsionnoy gotovnosti budushchikh pedagogov-sportsmenov k professionalnoy deyatelnosti. *Teoriya i praktika fizicheskoy kultury*. 2022. No. 9. pp. 110-112.
2. Zyukin A.V., Ponimasov O.E., Gabov M.V., Ryzhkin N.V. Neytralizatsiya neblagopriyatnykh urbanisticheskikh faktorov sredstvami ekologo-didakticheskoy sredey vuza. *Teoriya i praktika fizicheskoy kultury*. 2021. No. 10. pp. 108-109.
3. Kiryanova L.A., Ponimasov O.E., Kolesnikov N.V., Vinogradova O.P. Polifunktsionalnaya fitnes-tehnologiya fizicheskogo vospitaniya studentov upravlencheskikh spetsialnostey. *Teoriya i praktika fizicheskoy kultury*. 2023. No. 7. pp. 74-76.
4. Mironov A.O., Ponimasov O.E., Morozova L.V., Melnikova T.I. Antikrizisnaya strategiya realizatsii fizicheskogo vospitaniya studentov v usloviyakh ogranicheniya zhiznedeyatel'nosti. *Teoriya i praktika fizicheskoy kultury*. 2023. No. 3. pp. 61-62.
5. Shilko V.G., Shilko T.A., Potovskaya E.S., Krupitskaya O.N. Zavisimost pokazateley stressoustoychivosti studentov ot ikh otnosheniya k fizkulturno-sportivnoy deyatelnosti. *Teoriya i praktika fizicheskoy kultury*. 2016. No. 12. pp. 41-43.