

**INDICATORS OF THE INFLUENCE OF SITUATIVE EXCITATION OF EXAMINATION STRESS IN STUDENTS OF THE III COURSE OF THE SANGUINIC TYPE OF TEMPERAMENT**

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**The connection of the publication with planned research works.** This work is a fragment of the dissertation «Neurophysiological and psychophysiological mechanisms of anxiety in young people, depending on the typological characteristics of the nervous system».

**Introduction:** In recent literature data on emotional stress, the main attention is paid to the study of such physiological processes as indicators of behavior, activity and adaptation of an individual during emotional stress, as well as his ability to protect [1, 2, 3]. Therefore, despite the fact that in recent years much attention in numerous studies has been paid to the psychophysiological regulation and self-regulation of personality activity, the mechanisms of the influence of emotional stress on the functions of the nervous system still remain insufficiently studied [4, 5, 6]. In the majority of physiological and psychophysiological studies carried out until recently, it has been shown that the basis of individual typological characteristics of a person as a person is his behavioral and creative characteristics, their effectiveness in activity, perception of creating an optimal situation for each person. When assessing the state of human higher nervous activity in the approaches of these studies, attempts were made to substantiate only a few of its features [7, 8, 9]. Naturally, since there were no comprehensive approaches to human activity in these studies, it was impossible to obtain more substantiated evidence. On the other hand, since there are no completely optimal variants of the methodology for studying the connections between the formation of individual-typological characteristics of the higher nervous activity of the individual, there are still numerous questions awaiting their solution. It is for this reason that a number of scientific issues that need to be proved in the formation of human higher nervous activity are still awaiting their solution [10]. One of the most important of these issues is the study and clarification of the role of the types of higher nervous activity in the functioning of the central nervous system in emotional stress. One of these reasons is the role of the types of higher nervous activity in obtaining certain targeted results when exposed to the emotional stress of examination stress, which feature of the types of higher nervous activity is most clearly manifested, the study of changes in brain activity caused by exposure to emotional stress. The study of the relationship of individual psychological and physiological laws of people, as interpreted in the sources of physiological literature, led to the emergence of such a problem as temperament, and from ancient times to the present, a number of issues of this problem still remain unresolved [11, 12]. In the literature data of recent years, there are research works devoted to certain issues related to temperament, in the scientific works of a group of researchers [13, 14]. The choice of students for research work is also not accidental. So, in adolescence, there are pecu-

liarities of the process of adaptation to the difficulties of learning in higher educational institutions, and naturally these character traits depend on the physiological age of students, marital status and financial situation, the severity of the subjects taking place at the faculty where they study, somatic and psycho-neurological diseases of a young person, temperament, etc. is formed by development, depending on [15].

**The aim of this study** is to explain the role of temperament in stressful influences by studying the methods of psychophysiological testing of third-year students under the influence of examination stress, which is a model of emotional stress.

**Object and methods of the research.** The studies were carried out among bachelor students with a sanguine type of the nervous system at the age of 19 years of the third year of the Biological and Chemistry Faculty of Ganja State University, studying in the curriculum system. In accordance with the purpose of the study, the students were divided into groups according to the type of temperament of the nervous system. Testing of the subjects was carried out in three groups according to the following scheme: Group I – the research was carried out 2 months before the exam on school days [OD]; Group II – studies were carried out 30 minutes before the exam (DE); Group III – the studies were carried out 30 minutes after the exam (PE). In three different periods of the experiments – on ordinary days (OB), 30 minutes before the exam (DE), 30 minutes after the exam (PE) – in the studied students with the express version of the test questionnaire was used to determine the level of anxiety. Written informed consent was obtained from all students who participated in the study. For statistical analysis, a “nonparametric” method was used, using the SPSS [Statistical Package for Social Science] program. At the same time, given the need to measure the state of anxiety in three different situations and comparison in three forms [comparison between two groups, comparison between several groups, intragroup comparison], comparison of paired samples was performed using the Wilcoxon test, comparison between two independent samples – using the Mann-Whitney test, comparison between different samples – using the F-test ANOVA.

**Research results.** Measurement of the level of situational excitability on ordinary days among third-year students does not differ significantly. Since  $P=0.022$  between the sanguine type and the choleric type (**Table**), we can say that the difference between the group is statistically significant. Therefore, there was a  $P<0.05$  between the two groups. Also, the same situation is observed between the sanguine and melancholic types. That is, since  $P>0.05$ , it can be said that the difference between these groups is also statistically meaningless at the 0.05 level. This means that the level of situational excitability in 19-year-old adolescents with different

types of temperament differed significantly only between choleric and sanguine types, while in men of other groups the level of situational excitability on ordinary days was slightly different, and the existing difference was not significant. Comparison of the level of situational anxiety before the exam between the two independent groups also shows that the between-group difference was statistically significant and was not significant at the 0.05 level. Thus, among the sanguine and melancholic types there was  $P > 0.05$ . At the same time, there was also  $P > 0.05$  between the choleric type and the sanguine and melancholic types. Also, the same situation is observed between the sanguine and melancholic types. That is, since  $P > 0.05$ , it can be said that the difference between these groups is also statistically meaningless at the 0.05 level. This means that among young people with different types of temperament, the level of situational excitability before the exam did not differ significantly, and the existing difference is not a significant level.

Compared with ordinary days (Table), with the sanguine type, the level of situational excitability before the exam has seriously increased. Since with the sanguine type,  $P < 0.05$ , there is a significant difference between the level of situational excitability on ordinary days and the level of situational excitability before the exam, and the existing difference statistically significant at the level of 0.05. The results obtained on the basis of studying the post-examination level of situational anxiety and comparing it with previous situations (ordinary days and pre-examination) also show that the difference between the level of situational anxiety on ordinary days and the level of post-examination anxiety in young people, consisting of four groups, did not have a significant level in others, including the sanguine type of anxiety. Thus, in the Sanguine type,  $P = 0.048$ , since with the sanguine type,  $P < 0.05$ , there is a significant difference between the level of situational anxiety on ordinary days and the level of situational anxiety after the exam, and the existing difference is statistically significant at the level of 0.05. Comparison of the pre-examination level and the post-examination level of situational arousal shows that

**Table – Comparison of the level of situational excitability measured in 3 stages in 19-year-old students of the Sanguine type**

A type	Period	n	M	± m	min	max	P <sub>f</sub>	P <sub>x</sub>	P <sub>od</sub>	P <sub>pe</sub>
Sanguine type	Situational (ОД)	6	34,2	2,5	28	44	0,857	0,022		
	Situational (ДЭ)	6	42,0	1,7	35	46	0,857	0,836	0,042	
	Situational (ПЭ)	6	44,5	2,0	40	52	0,857	0,945	0,048	0,400

**Note:** the statistical fairness of the difference between the metrics:

Pf sanguine type – according to the indicators of the phlegmatic type group (according to the color of Mann-Whitneymeir)

Px – according to the indications of the choleric group type (according to the color of Mann-Whitneymeir)

Pod – with the indicators of a normal day in the corresponding group (according to the Wilcoxon pair criterion)

Ppe – with pre-examination indices in the corresponding group (according to the Wilcoxon pair criterion)

with the Sanguine type,  $P = 0.400$ . Since  $P > 0.05$  in all four groups there was no significant difference between the level of situational excitability before the exam and the level of situational excitability after the exam, the existing difference was not considered significant at the level of 0.05.

**Discussion of research results.** The results obtained as a result of the study indicate that the effect of examination stress on the level of situational excitability of young people with a sanguine type. Thus, an increased level of excitability in persons with a sanguine type against the background of the examined emotional stress can lead to changes in the state of human health and manifestations of a number of diseases [15]. Based on this, in the educational process, certain approaches are recommended in accordance with the characteristics of the types of the nervous system, in which some diseases can be prevented.

#### Conclusions.

1. Comparison of indicators of sanguine type and choleric type on a normal day showed a significant difference.

2. Comparison of an ordinary day before the exam, the level of situational excitability in sanguine persons has significantly increased.

3. A comparative analysis of the indicators of an ordinary day with after the examination showed that the difference in the level of situational excitability in sanguine people was felt.

**Prospects for further research.** Further research will focus on improving the educational process and reducing exam stress caused by professional endeavors.

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### ПОКАЗНИКИ ВПЛИВУ СИТУАТИВНОГО ЗБУДЖЕННЯ ЕКЗАМЕНАЦІЙНОГО СТРЕСУ У СТУДЕНТІВ ІІІ КУРСУ ІЗ САНГВІНІЧНИМ ТИПОМ ТЕМПЕРАМЕНТУ

Рустамова Т. В.

**Резюме.** Метою даного дослідження було визначення показників ситуативного збудження в процесі обстеження 19-річних юнаків зі сангвінічним типом темпераменту. Перед початком практики були вивчені типи нервової системи 19-річних підлітків згідно тесту Г. Айзенка (сангвінік, холерик, флегматик та меланхолік).

Для визначення рівня ситуативної тривожності (емоційного напруження) 19-річних підлітків, нервова система яких відноситься до типу сангвінік, була застосована експрес версія тестової анкети за методикою Ч.Д. Спілберга, Ю.Л. Ханіна.

Експериментальні дослідження проводилися у звичайний день, тобто за два місяця до екзаменів, за тридцять хвилин до екзамену та через тридцять хвилин після екзамену. Спостерігалися відмінності, що враховувалися при порівнянні студентів, що навчаються сангвінічного типу темпераменту зі студентами флегматичного типу у звичайний день, до екзамену та після екзамену. У результаті проведеного дослідження було виявлено такі зміни: порівняння показників сангвінічного типу темпераменту та холеричного типу у звичайний день показав суттєву різницю; у порівнянні зі звичайним днем перед екзаменом рівень ситуативної збудливості у сангвініків значно збільшився; порівняльний аналіз показників звичайного дня з даними після екзамену показав, що різниця у рівні ситуативної збудливості у сангвінів є досить суттєвою.

Визначення психофізіологічних (ситуативних та індивідуально-образних) показників у тих хто навчається в залежності від різного типу темпераменту вищої нервової діяльності під час емоційного напруження екзаменаційного процесу пропонується використовувати при їх професійному виборі (зокрема, серед професій, що пов'язані з високим нервово-психічним напруження). Також пропонується використовувати даний метод в якості прогнозу під час підбору кадрів інших професій у відповідності до запропонованих результатів.

**Ключові слова:** сангвінік, ситуативний, збуджуючий, емоційний, нервова система.

### INDICATORS OF THE INFLUENCE OF SITUATIVE EXCITATION OF EXAMINATION STRESS IN STUDENTS OF THE III COURSE OF THE SANGUINIC TYPE OF TEMPERAMENT

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**Abstract.** Exam stress is a classic stress model and affects a person's life activity, accompanied by numerous complex psychophysiological changes in the body. There are many situations in a person's life that create mental stress, such as exam stress (for example, certification, testing, competitions, expertise, competition for employment, defense of a dissertation or thesis, public speeches, etc.). In all cases, a person tries to achieve his goal and results in psychological tension

The aim of the study was to study the indicators of situational excitability in the process of examining 19-year-old boys of the Sanguine type of temperament. Before starting the practice, the types of the nervous system of 19-year-old adolescents were studied according to G. Eysenck's test (sanguine, choleric, phlegmatic and melancholic).

To determine the level of situational anxiety (emotional stress) of 19-year-old adolescents whose nervous system belongs to the sanguine type, an express version of the test questionnaire was used according to the method of Ch.D. Spielberg, Yu.L. Khanin.

The experiments were carried out on an ordinary day, that is, two months before the exams, 30 minutes before the exam, and 30 minutes after the exam. There were differences that were taken into account when comparing students of the Sanguine type with students of the phlegmatic type on a normal day, before the exam, and after the exam.

Determination of psychophysiological (situational and individual-figurative) indicators in students depending on the different type of temperament of higher nervous activity during the emotional stress of the examination process is proposed to be used in their professional choice (in particular, in professions associated with high neuropsychic stress). Also it is proposed to use this method as a forecast in the selection of personnel for other professions from the proposed results.

**Key words:** sanguine, situational, exciting, emotional, nervous system.

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