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ADAPTATION OF FIRST–YEAR STUDENTS TO STUDY AT THE UNIVERSITY AND ITS CONNECTION WITH THEIR PSYCHOPHYSIOLOGICAL FEATURES

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1 КУРС СТУДЕНТТЕРДІҢ УНИВЕРСИТЕТТІҢ ОҚЫТУҒА БЕЙІМДЕЛУ ЖӘНЕ ОНЫҢ ПСИХОФИЗИОЛОГИЯЛЫҚ ЕРЕКШЕЛІКТЕРІМЕН БАЙЛАНЫСЫ

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АДАПТАЦИЯ СТУДЕНТОВ 1 КУРСА К ОБУЧЕНИЮ В УНИВЕРСИТЕТЕ И ЕЁ СВЯЗЬ С ИХ ПСИХОФИЗИОЛОГИЧЕСКИМИ ОСОБЕННОСТЯМИ

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Annotation

Adaptation is a complex psychophysiological process which is accompanied by a significant voltage students body systems. And further successful activity of students depends on adaptation. Successful passage of adaptation in the future will favorably affect learning, increasing the activity of students in educational and cognitive activities.Adaptation to educational process is a multifaceted process that requires the inclusion of all the resources of the body, but among first–year students it is not fully formed.In addition, the first months of training are the beginning of the formation of adaptive reactions to the conditions of the university and, depending on the individual characteristics of the body, the conditions of training at the university can be caused by favorable reactions, trains the organism, or unfavorable, leading to a decrease in the resistance of the organism.Adaptation can take quite a long time. For this reason, students may experience psychophysiological overstrain, as a result of which activity decreases, and before them there is a problem with the formation of a new mode of behavior, as well as the fulfillment of ordinary activities for students.

Key words: psychophysiology, adaptation, students, nervous system, educational process.

Аннотация

Адаптация является сложным психофизиологическим процессом, который сопровождается существенным напряжением систем организма студентов. И от которой зависит дальнейшая успешная деятельность студентов. Успешное прохождение адаптации в дальнейшем благоприятно скажется на обучении, повышая активность студентов к учебно–познавательной деятельности.Адаптация к обучению является многосторонним процессом, нуждающимся во включении всех ресурсов организма, однако у студентов первокурсников он сформирован не до конца. Начало обучения является началом формирования адаптационных реакций к условиям университета и в зависимости от индивидуальных особенностей организма условия обучения в университете могут вызывать реакции благоприятные, тренирующие организм, либо неблагоприятные, приводящие к уменьшению устойчивости всего организма.Она может занимать довольно длительный период времени. По этой причине у студентов может произойти психофизиологическое перенапряжение, в результате у них снижается активность, и перед ними появляется проблема с формированием нового способа поведения, а также выполнения обыденных для студентов видов деятельности.

Ключевые слова: психофизиология, адаптация, студенты, нервная система, учебный процесс.

Аңдатпа

Бейімделу күрделі психофизиологиялық үдеріс болып табылады, ол студенттердің дене жүйелерінің байланысымен өтеді. Студенттердің одан арғы табысты оқу қызметі оған байланысты.Болашақтаоқуғасәтті бейімделуініңөтуі оң әсерін тигізеді, оқушылардың оқу–танымдық және когнитивті әрекеттерге деген белсенділігін арттырады.Оқуға бейімделу – бұл бүкіл дененің барлық ресурстарын қосуды талап ететін көп қырлы үдеріс, бірақ бірінші курс студенттерінің арасында ол

толықтай қалыптаспаған. Оқудың басталуы университеттің жағдайына бейімделу реакциялардың қалыптастырудың басталуы деп еспетеленеді және ағзаның жеке ерекшеліктеріне байланысты университетте оқыған жағдайлары оңтайлы реакцияларды тудыруы мүмкін, ағзаны жаттығайтын,немесе жағымсыз, бұл организмнің тұрақтылығын төмендейтін реакциялар. Бұл өте ұзақ уақыт алуы мүмкін.Осы себепті студенттер психофизиологиялық шамадан тыс асып кетуі мүмкін, нәтижесінде олар белсенділікті төмендетеді және жаңа мінез–құлық тәртібін қалыптастыруда, сондай–ақ студенттер үшін әртүрлі күнделікті іс – шараларды жүзеге асыруда мәселе туындайды.

Түйінді сөздер:психофизиология, бейімделу, студенттер, жүйке жүйесі, оқу үдіріс.

Introduction

One of the general theoretical problems of higher education is the problem of adaptation students to the conditions of study in the university. Adaptation in this context is defined as a multifaceted process of activating the social and biological reserves of young people in stage of development and formation, and in this connection requiring an increased attention of the teacher to first – year students, the need for them psychopedagogical support in conditions of higher education. To identify the features of adaptation students first – year students should clarify the understanding of the term in psycho–pedagogical science. Adaptation is a combination of psychological and physiological reactions of the body, underlying the adaptation of it to the surrounding conditions, aimed at maintaining the relative permanence of its internal environment, under which there is a social interaction of the individual, social group and social environment [1].

The first years of education the sharp transition of yesterday's schoolchildren to the new conditions of life and learning causes in the beginning active mobilization, and then depletion of physical reserves and adaptive mechanisms of the body of students.

The initial period of study at a higher educational institution is quite important, both socially and physiologically, in the student's life. New learning conditions, high total training load, large volume, novelty and complexity of the material that the student must master, present the body with increased demands.

Main goal of this article is study and establish the psychophysiological characteristics of students, which affect the adaptation to the educational process.To achieve the goal, the following tasks were set: to determine the levels of adaptation in students 1stcourse; toidentify the levels of anxiety in students, to identify levels of basic characteristics of the nervous system among students.

Methods of investigation

The study was conducted on students of 1 course of different faculties NKSU named after M. Kozybayev. The study was conducted from September 2017 until May 2018. 60 students aged 17 to 18 took part in it. The choice of research methods is determined, first of all, by specific tasks of scientific work.

The following methods were used in the study:

1) Multi–level personal questionnaire "Adaptability" (A.G. Maklakov and S.V. Chermyanin) to identify the adaptability of the subject with respect to the following parameters: adaptive abilities, neuropsychic stability, moral normativity.

2) Methods of studying psychoemotional states: a method for assessing personal and situational anxiety (the test of Ch. D. Spielberger in the modification of Yu. L. Khanin).

3) Technique for diagnosing the typological properties of the nervous system (J. Streliau).

Results and discussion of investigation

Using the multilevel personal questionnaire "Adaptibility" (A.G. Maklakov and S.V. Chermyanin), we interviewed students of 1stcourse to identify the levels of adaptation for the following parameters: adaptive abilities, neuropsychic resistance, moral normativity. We got the following results (Figure 1).

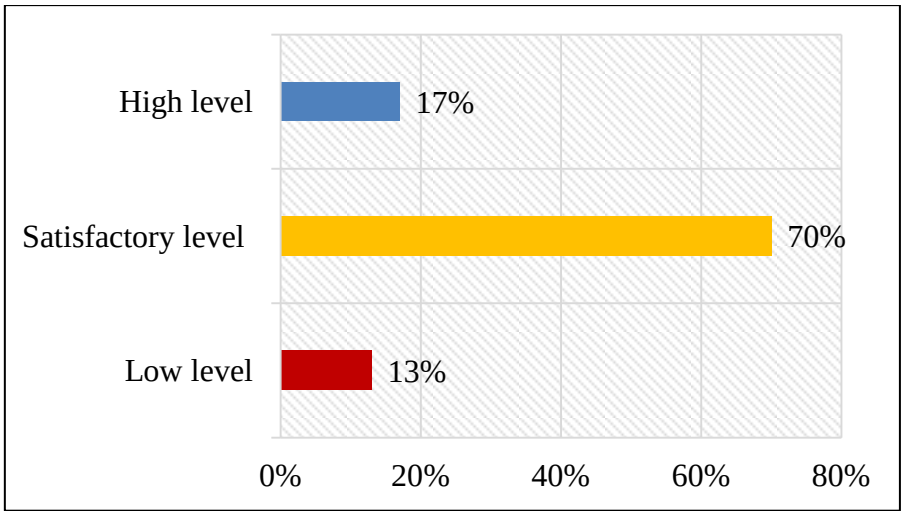

Figure 1The levels of adaptation among students of the 1st course

13% of studentsof the 1st course had a low level of adaptation. They also had a low level of neuropsychological resistance. Moral normality in these students is below average. This means that they have a low level of socialization, an inadequate assessment of their place and role in the team, a lack of desire to comply with generally accepted standards of conduct. Such students are characterized by a depressed mood, a violation of discipline, independent work is difficult and does not cause interest, they are not confident in their own strengths and strive for submission.

70% of students of the 1st course have a satisfactory rate adaptation level and the average level of the neuropsychic resistance. The adaptation of these students depends on the external environment. These students tend to have low emotional stability. Socialization for them is complicated, asocial failures are possible, as well as an expression of aggression and conflict. The functional state at the early stages of adaptation can be disrupted. Students who belong to this group need constant monitoring.

17% of students of the 1stcourse have a high level of adaptation. These students have a high level of neuropsychological stability. The moral normativity of these students is high. a high level of socialization, an adequate assessment of their role in the team, an orientation toward observance of generally accepted norms of behavior. They adapt easily enough to new learning conditions, quickly enter a new collective, are easily and adequately oriented in the situation, quickly develop a strategy for their behavior.

As can be seen, the level of adaptation of students and the level of neuropsychic stability coincide, therefore, have interdependence.

The process of adaptation is closely related to the notion of emotional wringer and stress. So, the factor that prevents successful adaptation of students is anxiety. The occurrence of anxiety links the increase in behavioral activity, the change in the nature of behavior.

Using the technique of assessing personality and situational anxiety (the test of Ch.D. Spilberger in the modification of Yu. L. Khanin), we revealed levels of anxiety in students of the 1stcourse.

By results, we can say that most of the first – year students have a high level of anxiety (60%). Satisfactorylevelof anxiety was detected in 32% of students and low level of anxiety was in 8% of students. Students with a high level of anxiety are closed and not very sociable. The expectation of failure and the low self – esteem of these students provide the basis for non – initiative. High situational anxiety is associated with a decrease in attention, and sometimes with impaired fine coordination. The patterns between emotional and motivationally – demanding spheres of personality are closely related to a high level of

anxiety. Intrapersonal conflict of a person is the cause of the dissatisfaction of needs, which as a result forms a state of anxiety. High anxiety can adversely affect adaptation, i.e. cause disadaptation in first – year students. The behavior of students with a high level of anxiety is marked by an acute emotional reaction to the report of failure. In stressful situations or with a lack of time, it is difficult for them to work. Fear of failure prevails over the desire to achieve success [2].

It is of interest to study the state of anxiety of students in conditions of study in higher education. It is known that an increased level of anxiety of students negatively affects the functional state of the central nervous system and the organism as a whole. A repeated experience of anxiety can lead to high sensitivity to stress, difficulties of intellectual activity in stressful situations, somatic and neuropsychic abnormalities.

Numerous datademonstrate that lifestyle characteristics of students, manifested in limited physical activity, poor nutrition, poor hygiene training, the daily routine and rest, the prevalence of bad habits, negative impact on their health, give rise to feelings of anxiety, affecting the progress of students [3, 4].

One of the main systems of the students` organism, which directly affects the adaptation is the nervous system. Mainnervous processes provide the basis for the formation of character and abilities of students.Therefore, the next step was to investigate the students' properties of the nervous system by diagnosing the typological properties of the nervous system (J. Streliau). This technique is designed to determine the three main characteristics of the nervous system: the level of excitation, inhibition and mobility (Table 1).

Table 1 Levels of basic characteristics of the nervous system among students

Characteristics of the nervous system	Levels	Students of the 1st course
Level of excitation	Low	8
	Average	24
	High	28
Level of inhibition	Low	8
	Average	22
	High	30
Levelofmobility	Low	9
	Average	31
	High	20

Analyzing the table 1 it can be seen that students dominates the high level of excitation, the average inhibition level and the average level of mobility. High levels of excitement among students provide the ability to perform effective activities in a situation requiring vigorous action. Stimulus, quick inclusion into work, workability and achievement of high productivity; low fatigue; High performance and endurance are typical for students with this level of excitement. For students with a low level of excitation is characterized by weak and delayed reaction to the excitement quickly achieved protective inhibition, slow inclusion in work, workability and low labor productivity; high fatigue; low working capacity and endurance.

Students with a high level of inhibition, the process of stimulation and stimuli are easily extinguished; rapid response to responding to simple sensory signals, good reaction; high self – control, concentration, vigilance, composure in behavioral reactions.

Students with a low level of inhibition have an impulsive response to the stimulus, weak self – control in behavioral reactions, a certain disinhibition, undemanding and condescending to themselves; slow or belated, responding to simple signals [5].

The balance of the nervous process of studentsdetermines their adaptive abilities, i.e. flexible "tuning" of the processes of excitation and inhibition in relation to the situation.

Knowing the level of excitation and inhibition, you can find out the balance of the nervous system.Thus, the balance of the nervous system of force R is the ratio of the excitation force and of force of inhibition.

The balance of the nervous system is the ratio of the basic nervous processes (excitation and inhibition) involved in the production of positive or negative conditioned reflexes. We found levels of balance of the nervous system in students (Table 2).

Table 2 Levels of balance of the nervous system among students

Course	Level of balanceof the nervous system		
	R<0.85	R>1.15	R=0.85–1.15
1st course students	24	6	30

The closer to unity the value of R, the higher is the balance. This value has been detected in 30 students. If the value of R goes beyond the range of 0.85–1.15, then we can argue that a person is unbalanced in his psychological activity.

6 students whose value of R is greater than 1.15, have imbalance in the direction of excitation, that is, the excitation processes do not balance the processes of inhibition. With a significant shift in the balance of nervous processes in the direction of excitation, strong short – term emotional experiences, unstable mood, good adaptation to the new, risky, strong desire for a goal with full return, a military attitude to danger without special calculation, poor immunity to interference are likely.

30 students whose value of R is less than 0.85, havean imbalance in the direction of inhibition, that is, the processes of inhibition do not balance the processes of excitation. With a significant shift in the balance of nervous processes in the direction of inhibition, balanced behavior, a stable mood, weak emotional experiences, good patience, restraint, composure, an unabashed attitude to danger, a real assessment of one's abilities, good immunity to interference are likely [6].

Conclusion

Summing up the research, we can conclude that thestudents of 1st course were identified 3 levels of adaptation: low (13%), satisfactory (70%) and high (17%). A satisfactory level prevails.We found that the levels of adaptation of students coincide with the following levels of psychophysiological features:anxiety, basic characteristics of the nervous system,balanceof the nervous system. Therefore, we can say that the psyhophysiological characteristics of the students have an impact on their adaptation to the educational process.

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