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ADAPTABILITY OF KRASNOYARSK STATE MEDICAL UNIVERSITY
FIRST-YEAR STUDENTS AS A WAY TO PRESERVE THEIR HEALTH

E. Avdeeva, N. Dyakova, T. Lebedeva
Krasnoyarsk State Medical University, Krasnoyarsk, Russia

Abstract

The authors consider social adjustment not only as an essential factor for adaptation to the system of higher education, but also as an indicator of the health. The university represents a multivariate and multimodal educational environment, corresponding to the laws of social, psychological and physiological development. This environment is reported to contain a lot of challenges for the first-year students, especially for foreign students and the students-representatives of ethnic minorities. In the process of theoretical and diagnostic studies of adaptive capabilities of the first-year students the different abnormalities have been revealed in the state of their mental health at the beginning of their studying at the university. Getting to new circumstances the students must use long-term resources of adjustment, which ensure success not only at the beginning of their studying at the university, but also in its process as well as in adult life after graduation. As a diagnostic instrument the multilevel personality questionnaire (MPQ) “Adaptability”, developed by A.G MAKLAKOV and S.V CHERMYANIN (1993) has been used. The data obtained during the investigation, confirmed the assumption that the ability to adapt can be considered as an indicator of the first-year student’s health.

Keywords: adjustment, adaptability, health, mental health, adjustment disorders, first-year students, higher education

Relevance

Attention to health remains very high, especially in periods of transition from school to university. The former applicants are required to adapt to a new multivariate and

Avdeeva Elena Aleksandrovna – PhD, Associate professor, Head of Pedagogics and psychology department, Krasnoyarsk State Medical University, Krasnoyarsk, Russia; Address: 1, Partizan Zheleznyak street, Krasnoyarsk, 660022; phone: +7 (391) 221 91 45; E-mail: paideia@mail.ru
polymodal learning environment. Dealing with new challenges, the student needs long term adjustment resources, based on physical strength and mental health.

The literature analysis allows revealing the existence of relationships between stress and university adjustment in modern students (Abdullah et al., 2009; Chang et al., 2007; Clinici, 2013). Our practice in teaching medical students demonstrates that regardless of the most attractive and innovative teaching methods, for some students training at the university may turn into ordeal leading to health problems (Avdeeva & Drozdova, 2016).

State of the problem

Nowadays the concept of “adjustment” is widely used and is often associated with life itself (Artyukhov, Kaskaeva, 2014). Moreover, the adjustment is not only a necessary factor for fitting the student into the educational environment of the university, but also it is an indicator of his health. Students’ health can’t be regarded outside the context of the corresponding adaptive situation. The idea about the relationship between the human health and its adaptive resources was mentioned by scientists many times, but most often it was their intuition. It has been recognized as the subject of serious academic research only at the end of the last century in the works of V.P. Kaznacheeva, Y.M. Makarenko and others.

There is an important fact that made the authors study the problems of adjustment in the context of health. In modern psychological and pedagogical science the adjustment processes have been studied thoroughly, they are well-measurable and in view of this can be taken as indicators of the person’s health. The assessment of adjustment is known to be made with respect to the basic parameter, responsible for this particular type of adjustment. Therefore, if it concerns the adjustment of the first-year students to the educational environment and curriculum, the critical factors of adjustment will include not only good progress, but the state of their psychological and physiological health (Wang, Guo, Liu, Gao, & Wei, 2012; Olsson, Hasselgren, Hagquist, & Janson, 2013).

The university represents a multivariate and multimodal educational environment, corresponding to laws of the social, psychological and physiological development. This environment is reported to contain a lot of challenges for first-year students, especially for foreign students and the students-representatives of ethnic minorities (Gavrilyuk et al., 2012).
Getting to new circumstances the students must use long-term resources of adjustment, which ensure success not only at the beginning of their studying at the university, but also in its process as well as in adult life after graduation (Chen S., Chen G., Chen L., & Zhao, 2013; Valiullina, 2015; Montazami, Gaterell, & Nicol, 2015; Yan, Li, & Sui, 2013).

But students “pay a high price” for their adjustment, since adaptation is followed by a range of disturbances in their health. This approach to understanding the first-year students’ adjustment to training loads is critical for the period of transition between school and university. In view of this it is important to consider student’s ability to adjustment in the context of maintaining their health. But what is meant by the state of health?

As I.I. Brekhman believes, “health represents the ability to maintain stability corresponding to the age in conditions of dramatic changes in qualitative and quantitative characteristics of sensory, verbal and structural data flow” (Brekhman, 1990). In this case, health determines the adjustment or vitality in a particular environment. The adaptability will be meaningful only if ability to adapt helps to preserve health or at least does not damage it. The student must not “pay” for the education by their health. Specific adaptive mechanisms, typical to students, can give them the opportunity to overcome a certain range of the deviations of any factor from its optimal meanings without disrupting the normal functions of the body.

However, the process of adjustment for a first-year student in the new educational system often appears as a desadaptation, or maladjustment (Kornilova, Avdeeva, 2016). The effect of the pressure of all social factors of the higher education transcends the norm of the crucial safety functions of psychophysiological systems. Taking into account this situation, the students’ ability to maintain the tolerance in the changing conditions of the university educational system seems to be a critical factor providing the stability of multivariate system of the human being at the university, determining the students’ viability and preserving their personal health.

**Materials and methods**

To confirm this conclusion the experiment was carried out in order to reveal the level of adaptability of the students of the therapeutic faculty of KrasSMU, and study its influence on the first-year students’ health. A total of 86 first-year students of KrasSMU took part in this experiment.
The influence of adjustment on the maintaining the student’s mental health was the subject of the research.

The concept of personal adjustment potential was developed by A.G. Maklakov. His works emphasize that the person’s adjustment abilities give them opportunities of vital activity. The higher level of these skills, the higher probability of successful adjustment and the more considerable range of environmental factors they are able to adapt to.

To study the adaptive potential of students a multilevel personality questionnaire (MPQ) “Adaptability”, developed by A.G. Maklakov and S.V. Chermyanin (1993), was used. With the use of this questionnaire, the adaptive resources of the first-year students were studied based on the assessment of certain psycho-physiological and psycho-social characteristics. Multilevel Personality Questionnaire (MPQ) “Adaptability” consists of 165 questions and has a four-level structure that allows getting information of different capacity and nature. According to the authors of the questionnaire the factors of adaptability are: behavior and its regulation, communicative skills and moral values. In turn, the desadaptation is manifested in asthenic reactions and psychotic depressive reactions.

Detailed information on the personal adjustment potential can be obtained by evaluating the behavioral regulation, communicative skills and the level of moral standards.

- Behavioral regulation (BR) is a concept characterizing a person’s ability to regulate his interaction with the environment through their activities. The main elements of behavioral regulation are: self-esteem, level of neuro-psychological stability, and also social approval (social support) from people.

- Communicative skills or communicative potential are determined by a person’s experience and necessity of communication as well as by the level of a person’s proneness to conflict.

- Moral standards (MS) provide the literal perception of a definite social role.

These indicators are shown at under-average, average and above-average levels. The interpretation of the levels is given below.

At the under-average level behavioral regulation (BR) of the individual is characterized by a certain tendency to neuropsychic frustration, lack of adequate self-esteem
and a realistic understanding of things. On the whole, this represents the manifestation of behavioral regulation at a low level. At the above-average level, BR is manifested by a high level of neuropsychic stability and regulation, high adequate self-esteem and a realistic understanding of things.

A low level of communicative potential is manifested by difficulties to come into contact, aggressiveness and conflicts. Having a high level of communicative skills the individual develops a social relationship easily, comes into contact with fellow students, and is not combative.

Indicator of morality provides the person’s literal perception of a definite social role. At the under-average level a person cannot assess their place and their role in the group of students, does not want to follow standards of behavior, and violates them. If this indicator is shown at the level above average, it means that the person has a realistic perception of his role in the group and follows behavioral norm.

**Results and their discussion**

The results of investigation of the first-year KrasSMU students’ adaptability with the use of the multi-level questionnaire are represented in Figure 1.

![Figure 1. The survey results of the first-year KrasSMU students](image)

As it can be seen from Figure 1, most students have high parameters of adaptability. As for the “behavioral regulation” indicator, 45% of the surveyed students showed an under-
average level, 51.7% of the students had an average level and 3.3% of the students had an above-average level.

Concerning communicative potential, 21.7% of the surveyed first-year students demonstrated an under-average level, 75.0% - an average level and 3.3% - an above-average level.

Speaking about moral standards it is necessary to underline that 3.3% of the respondents manifested the level above average, 71.7% of the respondents showed an average level and 25% of the respondents showed an above-average level.

However, an integral component of the students’ adaptive potential was surprisingly low. Only 5% of the first-year students showed an above-average level, 20.0% of the students showed an average level and 75.0% of the students demonstrated an above-average level of adaptive potential. Our findings presented in Figure 2 prove that the problem of “a high price” for students’ adjustment remains. What “eats up” the adjustment potential of the student, when he starts studying at the university?

![Figure 2. Adjustment disorders among the first-year students of KrasSMU.](image)

Figure 2 illustrates both hidden and clearly manifested indices of adjustment disorders including psychotic reactions and asthenia. Only 25% of the respondents did not show asthenic reactions and 1.7% of the respondents had no psychotic reactions. That means that these students have no problems with mental health.
However, most of the first-year students (63.3%) had unexpressed asthenic reactions to the educational environment and hidden psychotic reactions (78.3%). Thus, the students of this group have mental and psychotic disorders that decrease the students’ adaptability and damage their health (Vishnyakova, Kaskaeva, 2015), remaining unnoticed by teachers. There are also students who need specialist help since they demonstrated definite psychotic reactions (20.0%) and definite asthenic reactions (1.7%).

The hidden and definite disturbances remain concealed due to cultural and moral standards, and behavior of the students (see Figure 1). In other words, internal desadaptation (or maladjustment) is hidden inside external positive aspects of students’ adjustment. The study load and the volume of extra-curricular activities in the university being very high, mental disorders among first-year students seem to have social and pedagogical origin.

Conclusion

There is a contradiction between the perspective of being successful in medical education and the risk for preservation of the students’ health. This contradiction arises not only during the first year of studies but also during the whole course of studies at the university. The depth and complexity of this problem determines the need for further investigations in particular, concerning the influence of the educational environment on the student’s health and the development of new pedagogical approaches to deal with students taking into account their internal psychological state.

Therefore, adjustment can be considered as a measure of an individual’s health. Within one of the critical periods of the human life, students’ adjustment to the first-year training at the university will be successful if the learning process does not cause serious disturbances in the students’ health. However, as can be seen from the findings of this survey, only 5% of the surveyed students reported not to have any problems with their health. And there were only 13.3% of the students without maladaptive disorders.

It is convenient to start the development of adaptability among the first-year students with the formation of self-actualization and self-regulation skills, capable to ensure stable emotional state and sustainability of internal information environment of the student’s personality.

In this respect tutoring programs, based on system-activity approach (Zeleeva et al., 2016), student-support services (Julal, 2015) and based on cognitive, behavioral, and
mindfulness interventions stress reduction programs (Regehr et al., 2013) seem to be very useful. The psychological and pedagogical support may be also executed through the development of students’ coping behavior. This strategy is reported to be useful in adapting the students to the demands of the situation, helping them to control the situation, to slacken, soften, avoid or get used to the challenges they are surrounded by (MacCann et al., 2012).

Thus, the stressful situation can be suppressed and it is necessary to teach students to cope with difficulties without wasting their health. Further investigations are needed to find the answer to this complex psychological and pedagogical problem.

References


