

**HEALTH, ENVIRONMENT, DEVELOPMENT****APPLICATION OF PSYCHOHYGIENIC MEASURES  
TO OPTIMIZE LEARNING CONDITIONS****Tetiana Holovkova**

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**Summary**

One of the most important conditions for successful student learning and mastering professional competencies is the socio-cultural environment that is developed in the student collective body. The article deals with the current problem of interaction and mutual understanding in the student environment of a higher medical school. The purpose of the study is to determine the indicators of team building and assessment of the psychological microclimate in student academic groups to develop measures to optimize the conditions of their learning. Studies of interpersonal relationships have been provided in academic groups among medical students of Dnipro State Medical University, using a sociometric method (anonymous surveys of students). The results allowed identifying the degree of sociability in groups according to the level of personal compatibility, true leaders, the number of conflicts in groups, their characteristics etc. The analysis of the obtained data not only testifies to the most favourable degree of interpersonal compatibility in student groups, but also presents a range of some interpersonal-relation problems. It necessitates the development and implementation of measures to form a preventive educational space as a prerequisite for effective professional training. An important component of the results is the definition of the psychological “portrait” of the student in the microenvironment, which allows predicting his personal potential for further consideration in professional selection in future educational, social and scientific activities.

**Key words:** psychological microclimate, students, academic group, sociometric method, interpersonal compatibility coefficient.

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**1. Introduction**

The teaching process of higher education, as an integral part of the educational process and bringing-up comprehensively developed personality who meets the needs of modern society, should ensure self-realization of student’s abilities (*Blinova, Ilnitskaya, 2019: 298*;

Ravliuk, 2016). Improving the educational level of a doctor, as a factor of his competitiveness, is one of the main tasks of higher medical education and it determines the high requirements for the quality of training of medical professionals (Williams et al., 2020). One of the most important conditions for successful student learning and mastering professional competencies is the socio-cultural environment that develops in the student collective group.

In this regard, one of the priority areas is to create an appropriate microclimate by organization of such an educational environment that would encourage interaction, mutual trust; doing interactive exercises that allow students to get to know other participants better in the learning process; explanation of the purpose, technology, learning algorithm, the nature of expectations, which provides students with a sense of self-sufficiency; positive feedback, stimulating the efforts and students' achievements (Andreeva, 2019: 512; Tucker et al., 2017). Forms of work with the collective group in this aspect include the use of psycho-hygienic approaches in the institution practical activities to organize group cooperation of students in order to ensure maximum efficiency of the educational process (Brynzak, et al., 2021: 2560; Pukhno, Shcherbak, 2020: 119–920).

A special place belongs to the activation of the human factor and the focus of each professor and tutor to create a favourable socio-psychological microclimate in the collective group, in particular to mobilize the efforts of professors (Blinova, Ilnitskaya, 2019: 299; Lenchuk, 2017: 80–01). The above information indicates that psychohygienic diagnosis in the educational process is quite an urgent task for the teaching staff of higher medical education, because the organization system of the educational process provides certain rules, and behavioural reactions can be varied. Therefore, students must find their own independent solutions, which will naturally reveal their mental and socio-psychological characteristics. This is manifested in the emotional attitude to the learning process, the desire to identify personal roles in it, choosing ways to implement tasks, which is greatly facilitated by the low level of “conflict” in the group.

These issues raise the professional need of professors to take into account the psychohygienic aspects of educational and upbringing work in order to preserve the mental health of students (Strelnikov, 2013: 32–28).

Thus, research on the theoretical and methodological foundations of psycho-hygienic measures should become a basic component of professional training of professors of educational institutions as well as the acquisition of relevant skills required by practical pedagogical and psychological activities in various microsocal groups of higher education institutions (Shutak, Navchuk, 2014: 198).

The purpose of the research is the determination of the indicators of team building and the psychological microclimate assessment in student academic groups to develop measures for optimization of students' learning conditions.

## 2. Research methods

The research was conducted on the basis of the Department of Hygiene of Dnipro State Medical University using the sociometric method, which involves individual (anonymous) completion of the sociometric map (Lenchuk, 2017: 83; Strelnikov, 2013: 45–57). Diagnosis of the psychological microclimate in teams included the establishment of such indicators as: individual coefficient of student compatibility, group compatibility coefficient, the number of conflicts in the group and their characteristics, the personality of true leaders. The value of the coefficient of interpersonal compatibility ranged from 0 to 3 c.u. (0% and 100% respectively). These studies were obtained during 2015–2020 and conducting among third-year students in “Medicine” specialty. In total, 11 groups (163 respondents) participated in the research.

The results of the survey of 99% of students who studied in the five-year period observational groups were analyzed. The obtained results were processed using the methods of mathematical statistics.

### 3. Analysis of research results

Student academic group is a kind of small group with its stages of transformation into a collective group, with the parameters of development and criteria of formation, as well as the internal psychological microclimate [8]. Data from the analysis of sociometric maps show that the coefficient of interpersonal compatibility is 64% (on average) and it is estimated to be higher than average. The value of this indicator in all research groups ranges from 53% to 77%. At the same time, the group compatibility coefficient tends to decline in the dynamics of observations, namely: the degree of friendship among young men and women has decreased over the past 4–4 years by 1.5%. An interesting fact is that true leaders in cohesive groups have a high level of psychological compatibility – up to 90%, compared to leaders of other groups. Thus, less friendly student groups with a compatibility index of 53–39% have leaders who are supported by a much smaller number of respondents – 73–77%, respectively. On average, the true leader (informal) index is 83% for the whole five-year observation period. The personalities of true and formal leaders coincided in only two groups, that is 18.2% of the total number of observation groups. At the same time, formal leaders (heads of academic groups) began to lose their communication skills significantly, as their authority in the dynamics of time decreased on average from 93% to 73%. The heads in 18.2% of the collective groups, who took part in the research, had an individual compatibility coefficient – 1.25–5.3 c.u., which indicates a critical level of support, that is less than half of groupmates (42–43%).

There was not found any objects (of 11) of educational socialization without conflicts (56 cases in total). 35.5% of respondents had tense relations with their peers, and 7.5% of them had mutual contradictions with 2–2 students at the same time.

On the one hand, conflicts become an integral part of student's life where the process of modern student's socialization is accompanied by his psychophysiological development and takes place against the background of the society transformation, that creates new problems and complicates this process. Therefore, it is impossible to avoid conflicts, but there is a way to avoid their destructive impact on human interaction. It means learning to choose effective strategies for resolving conflicts that allow not only to constructively resolve emerging problems, but also to maintain interpersonal relationships. On the other hand, it should be remembered that a conflict situation does not necessarily escalate into a conflict. Therefore, students' interpersonal communication, acquisition of social interaction skills, increase of a social role set, expansion of ideas about one's own personality are important to prevent contradictions. This helps to analyze the situation, find a way out of it, taking into account the needs of opponents and return to constructive cooperation.

There is a special attitude to some young men and women (1–1 cases per group) with the lowest individual compatibility ratio – less than 1.5 units. This characterizes them as outsiders in the collective group. The share of such students is 12% of 163 respondents. It is worth emphasizing that the number of conflicts and the degree of peers' support were not always interrelated – these concepts have a broader meaning. However, there is a tendency to have a large number of conflicts between respondents in groups with a low level of interpersonal compatibility against the background of reducing the total number of conflicts in modern student groups.

The scientifically substantiated indicators of students' group life, which were obtained by means of researches, determined the development of emotional intelligence of the educational community and became the basis for the formation of a system of measures to create a favourable psychological microclimate, which had the following directions:

- formation of the formal group leader's psychological culture;
- setting an interesting, useful goal with the collective group's creative work required for its achievement, and the process creates empathy for its members;
- mastering business communication skills;
- organization members' high demands and trust to each other;
- friendly and business criticism;
- conducting a conflict prevention strategy;
- free expression of one's own opinion by members of the organization during the discussion of all group life issues;
- involvement of all classmates into the discussion and analysis of group's most important life issues;
- coordination of interests and needs of all group members;
- high degree of mutual assistance in everyday life and in stressful situations;
- students' sufficient awareness about all aspects of their inner life.

In addition, the peculiarities of psychological conditions in some collective groups were taken into account: prospects and self-esteem of each group member, individual self-awareness etc in order to maximize the effectiveness of preventive measures in the "self-organization architecture" of the academic group.

#### **4. Psychohygienic measures**

Measures to adapt young men and women to the social environment were implemented by:

- conducting practical and lecture classes for cognitive and educational purposes on:
  - the impact of psychogenic factors on mental health,
  - psychoprophylactic measures,
  - psychological conditions of educational development,
  - with the study of appropriate methods and active participation in their approbation;
- promulgation of positive research results in the relevant collective groups and discussion in the form of "Socratic dialogue";
- conducting personal interviews with students, when each of them got recommendations on reducing differences and increasing the level of sympathy among peers, choosing the right behaviour in the collective groups, minimizing conflict situations and reducing emotional tension among young men and women during their studies;
- conducting organizational and educational work involving students in mass educational and cultural events, to form a "team spirit", which is the source of inspiration, stimulus to overcome difficulties; this "team spirit" encourages friendly relations, gives a sense of satisfaction and understanding that efforts are justified;
- the work of the dean's office with the "risk group", which is aimed at solving the youth's adaptation problems in the student environment (psychological and social support);

Taking into consideration the most important stage of student socialization which is the learning process consisted of the formation of personality in socio-cultural space by mastering general cultural and social experience while education and training, the practical sense of controlling psycho-hygienic educational activities aimed at the increase of the

general and professional stability, as well as the adaptive capacity of the future doctor becomes important.

## 5. Conclusions

1. The psychological microclimate in the academic groups of higher medical educational institution in terms of social relations among students is mostly favourable. It is evidenced because of the fact that the average value of the coefficient of interpersonal compatibility is 64%. In addition, a significant average index of a true leader (83%) indicates the existence of authoritative young people who are able to organize, unite, interact and develop, coordinate and provide interpersonal contacts with other members of society, as well as to choose optimal and effective solutions of certain problems.

2. At the same time, we have identified a number of problems of interpersonal relations. For instance, more than a third of young men and women of modern academic groups are involved in conflicts; there is a decrease in the compatibility index of elders by 20% in the dynamics of the 5-year period, while there is a critical level of this indicator for the formal leader (42–23%) in some groups; the “risk group” is quite numerous among student youth, which includes students who have conflicts with several groupmates (7.5%) and do not have sufficient support (outsiders, 12%). This situation causes a restriction or cessation of communication and interpersonal interaction, dissatisfaction with the results of joint work. Thus, it slows down the solution of a number of collective group problems, negatively affects the conditions and effectiveness of the educational process.

3. The use of reasonable student’s psychological “portrait” in the microenvironment, which has been generated by the system of informal relations, spontaneously formed at the level of semi-conscious psychological advantages and disadvantages, is of practical importance and allows predicting his personal potential in future educational, social and scientific activities. The use of this technique in the system of psychohygienic monitoring makes it possible to monitor the dynamics of personality development and psychological microclimate in the team. Also, it helps realize measures in order to form key professionally significant characteristics and personality traits of a future doctor, means of communication among young people, modelling the styles of formal leaders’ managerial behaviour; and it can be used in the educational work of educational institutions of different levels of accreditation, namely medical.

## References

1. Andreeva, K. (2019). *Rol sotsialno-psikhologicheskogo klimata v formirovanii u studentov motivatsii k obucheniyu [The Role of Social and Psychological Climate in the Formation of Motivation of Students to Training]. Vestnik nauki i praktiki [Bulletin of Science and Practice]. [in Russian]*
2. Blinova, O.Y., Ilnitskaya, I. A (2019). *Sotsialno-psykhologichna bezpeka yak sluzhbovets pozytyvnoho psykhologichnoho klimatu studentskoyi hrupy [Socio-psychological safety as a clerk of the positive psychological climate of the student group]. Teoretyko-prykladni problemy psykhohihiyi: Zbirnyk nauk.-prakt [Theoretical and applied problems of psychology: Collection of scientific practice]. [in Ukrainian]* .
3. Brynzak, S., Putrov S., Omelchuk O. (2021). *Analysis of the psychological climate of the university male volleyball team during the preparatory period of the annual cycle of training. Journal of Physical Education and Sport.*

4. Lenchuk, T.L. (2017) *Psykhologichni osoblyvosti formuvannya pozytyvnoho psykhologichnoho klimatu v kolektyvi studentiv-medykiv [Psychological features of the formation of a positive psychological climate in the team of medical students]. Visnyk sotsial'noyi hihyeny ta orhanizatsiyi okhorony zdorov'ya v Ukrayini [Bulletin of social hygiene and organization of health care in Ukraine]. [in Ukrainian]*
5. Pukhno, S., Shcherbak, T. (2020). *Znachennya psykhologichnoho klimatu hrupy ta osoblyvosti motyvatsiyi navchannya v protsesi sotsialno-psykhologichnoyi adaptatsiyi pershokursnykiv v osnovi vyshchoyi osvity [Significance of the psychological climate of the group and the peculiarities of training motivation in the process of social and psychological adaptation of freshmen in the foundation of higher education]. Psykhologichnyy zhurnal. [Psychological journal]. [in Ukrainian]*
6. Ravliuk, T. A. (2016). *Model of developing the creative potential of future social workers during professionally oriented practice. Professional education: methodology, theory and technology.*
7. Strelnikov, V. Yu. (2013). *Suchasni tekhnolohiyi navchannya u vashiy shkoli: modul'nyy posibnyk dlya proslukhovuvannya avtors'kykh kursiv dlya pidvyshchennya kvalifikatsiyi oratoriv [Modern technologies for learning at your school: a modular guide for listening to the author's courses to improve the qualifications of speakers]. Poltava: PUET. [in Ukrainian]*
8. Shutak, L.B., Navchuk, G.V. (2014) *Metodychnyy pidkhid do humanitarnoyi pidhotovky maybutnikh likariv [Methodological approach to the humanitarian training of future physicians]. Bukovynskyy medychnyy visnyk [Bukovinian Medical Bulletin]. [in Ukrainian]*
9. Tucker, T., Bouvette, M., Daly, S., Grassau, P. (2017). *Finding the sweet spot: developing, implementing and evaluating a burn out and compassion fatigue intervention for third year medical trainees. Eval Prog Plann.*
10. Williams, M., Estores, I., Merlo, L. (2020) *Promoting resilience in medicine: the effects of a mind-body medicine elective to improve medical student well-being. Glob Adv Health Med.*