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COPING STRATEGIES AND LEVEL OF ANXIETY OF MEDICAL STUDENTS DURING MARITAL STATE

Abstract. During martial law and during active hostilities, the risk of mental health disorders increases, so the issue of stress resistance of medical students is a relevant research topic.

The purpose of the study: to investigate the peculiarities of coping strategies of students' personality depending on the level of anxiety. This study was carried out in accordance with the theme of the National Development Program of the Department of Medical Psychology of the Institute of Medical and Pharmaceutical Sciences of the Private joint-stock company "Higher educational institution "Interregional Academy of Personnel Management""Medical-psychological aspects of the educational process". The methodological basis of the research was a holistic understanding of a person as a biopsychosocial being. 32 medical students of the 1st-3rd years took part in the study.

Psychodiagnostic methods were used: the Spielberger-Hanin test for the study of personal and situational anxiety and the Questionnaire for determining the coping strategies of a person to overcome problems in various spheres of his activity, developed by R. Lazarus and S. Folkman in 1988 and adapted by T. L. Kryukova, E. V. Kuftyak and M. S. Zamyshlyaeva in 2004.

As a result of the study, the specifics of the response of medical students to the military situation as a stressogenic factor were theoretically substantiated, the risk factors for the emergence of pathological anxiety states and the specifics of coping strategies as the basis of the stress resistance of the personality of medical students in the conditions of martial law were determined.

It is possible to conclude that the hypothesis is confirmed regarding the existence of a close correlation between coping strategies and the level of anxiety of the individual in medical students.

The results of the conducted research can be used for psychoprophylaxis, overcoming negative mental states of medical students and optimizing the educational process under martial law. Prospective research is planned to focus on the study of the specifics of coping strategies of students of various specialties, different educational institutions, their differentiation by coping style, the establishment of the presence of destructive coping strategies in medical students, the specifics of coping strategies of dependent persons, and the development of effective psychotherapeutic interventions aimed at overcoming negative mental states of students and optimizing their coping strategies in the conditions of martial law.

Key words: medical students, martial law, mental health, stress, anxiety, coping strategies.

КОПІНГ-СТРАТЕГІЇ ТА РІВЕНЬ ТРИВОЖНОСТІ СТУДЕНТІВ МЕДИЧНИХ СПЕЦІАЛЬНОСТЕЙ ПІД ЧАС ВОЄННОГО СТАНУ

Анотація. Під час воєнного стану та під час активних бойових дій підвищується ризик порушення психічного здоров'я, тому питання стресостійкості студентів-медиків є актуальною темою дослідження.

Мета дослідження: дослідити особливості копінг-стратегій особистості студентів у залежності від рівня тривожності.

Дане дослідження проведене у відповідності з темою НДР кафедри медичної психології ІМіФН ПрАТ "ВНЗ "МАУП" "Медико-психологічні аспекти навчального процесу". Методологічною основою дослідження було цілісне розуміння людини як біопсихосоціальної істоти. В дослідженні взяли участь 32 студенти медичних спеціальностей 1-3 курсів.

Були використані психодіагностичні методики: Тест Спілбергера-Ханіна для дослідження особистісної та ситуативної тривожності та Опитувальник для визначення копінг-стратегій подолання особистістю проблем у різних сферах її діяльності, розроблений Р. Лазарусом і С. Фолкманом у 1988 р. та адаптований Т. Л. Крюковою, Є. В. Куфтяк і М. С. Замишляєвою в 2004 р.

В результаті дослідження теоретично обгрунтовано особливості реагування студентів-медиків на військову ситуацію як стресогенний чинник, визначено фактори ризику виникнення в них патологічних тривожних станів та особливості копінг-стратегій як основи стресостійкості особистості студентів-медиків в умовах воєнного стану.

Можна зробити висновок про підтвердження гіпотези щодо наявності у студентів-медиків тісного кореляційного зв'язку між копінг-стратегіями та рівнем тривожності особистості.

Результати проведеного дослідження можуть бути використані для психопрофілактики, подолання негативних психічних станів студентів-медиків та оптимізації навчального процесу в умовах воєнного стану.

Перспективні дослідження планується спрямувати на вивчення особливостей копінг-стратегій студентів різних спеціальностей, різних навчальних закладів, проведення їх диференціювання за стилем копінгу, встановлення наявності деструктивних копінг-стратегій у студентів-медиків, особливості копінг-стратегій залежних осіб та розробку ефективних психотерапевтичних втручань, спрямованих на подолання негативних психічних станів студентів і оптимізацію їхніх копінг-стратегій в умовах воєнного стану.

Ключові слова: студенти-медики, воєнний стан, психічне здоров'я, стрес, тривога, копінг-стратегії.

Introduction

During martial law and during active hostilities, the risk of mental health disorders increases. The military invasion of Ukraine is accompanied by the destruction of infrastructure, the occupation of territories, forced migration, a catastrophic drop in GDP, high inflation rates, etc., which has a rather strong impact on the mental health of the population (Shaleny, V., Shtefan, N., Krylova, O., et al., 2022). The state of anxiety arising from a military situation contributes to the development of post-traumatic stress disorder (PTSD) (Kakaje, A., Al Zohbi, R., Hosam Aldeen, O. et al., 2021), and the coping strategy "focus on emotions" negatively affects all components of mental health (Karamushka, L. M., 2022). Therefore, the situation of martial law is a powerful stressogenic factor that requires the provision of psychological protection of the population from negative psycho-emotional influence and the development of optimal emotional and behavioral strategies of personal response in conditions of limited resources (Gruzynska, I., 2022). Therefore, the issue of stress resistance of different categories of the population (Yermakova, N., & Saulenko, O., 2020) is a relevant research topic.

The conditions of martial law are a stressful situation that requires the provision of psychological

assistance to vulnerable sections of the population, in particular students, aimed at increasing their level of stress resistance (Slon, M. O., 2022; Kyslovsky, I. A., 2022). The task of psychologists is to provide assistance in stabilizing the psycho-emotional state and overcoming anxiety, restoring mental balance and increasing the integrative resource of stress resistance of students in a situation of martial law (Atamanchuk, N. M., 2022; Moroz, L. I., & Safin, O. D., 2022), which determines the motivation for conducting research on the peculiarities of coping strategies of medical students.

This study was carried out in accordance with the theme of the National Development Program of the Department of Medical Psychology of IMiFN PJSC "University of Applied Sciences "MAUP" "Medical-psychological aspects of the educational process".

The scientific novelty of the study consists in the theoretical substantiation of the peculiarities of the response of medical students to the military situation as a stressogenic factor, the risk of developing pathological anxiety states in them, and the determination of coping strategies as the basis of the stress resistance of the personality of medical students in the conditions of martial law.

The practical significance of the research results lies in the possibility of using them for psychoprophylaxis, overcoming the negative mental states of medical students and optimizing the educational process in the conditions of martial law.

Literature Review

Peculiarities of coping strategies in youth

Adolescence is an important period of psychosocial development of the individual, but at the same time, it is characterized by an increased experience of situational anxiety associated with a state of uncertainty (Stulyka, O., & Nedelko, P., 2022). Coping strategies of young people in such situations are related to their personal adaptation potential, which determines the level of social and psychological adaptation. Cognitive-behavioral coping strategies when the level of social anxiety of an individual is increased are defined as a set of cognitive distortions directed at oneself or others, manifested in the form of negative expectations, the emotion of fear of loneliness, self-criticism, self-depreciation and self-humiliation, which leads to avoidance coping strategies, protection, hypercompensation and causes addictive forms of behavior with impaired emotional control and a tendency to self-harm (Kots, E. M, 2017). Social anxiety manifests itself in the forms of shyness and social phobia, has primary and secondary forms and can be manifested in three levels: low, medium and high (Kots, E. M, 2017).

The influence of the war situation on the dynamics of coping strategies of young people

High situational anxiety as a reaction to a war situation is associated with a limited range of personality coping strategies and resources for coping with stress, combined with low reflection and meaningfulness of one's life, contradictory manifestations of internal control and turning to the past (Bogucharova, O.I., & Tkachenko , N.V., 2016). During martial law, such coping strategies as searching for social support, positive reevaluation, planning, self-control, increased assertiveness, greater intensity of social contacts are dominant among young people (Zimbovska, N.P., 2023). The factor of positive adaptation of the individual to the war situation is the increase in the index of productive coping strategies and the use of coping resources to overcome stress (Bogucharova, O. I., & Tkachenko, N. V., 2016). In the period of martial law, the development of a person's vitality is also of great importance, which depends on the presence of conscious life goals, locus of control, and the meaningfulness of future prospects, while such non-constructive coping strategies as escape and avoidance contribute to a decrease in vitality (Bilenko, V. O., 2022).

Stressful factors and coping strategies of medical students

Healthcare workers typically have high levels of stress, which researchers (Mahgoub, I. M., Abdelrahman,

A., Abdallah, T. A., et al., 2021) attribute to poor work-family balance (Mahgoub, I. M., Abdelrahman, A ., Abdallah, T. A., et al., 2021). Both stress coping strategies and age and gender parameters influence the level of anxiety of medical workers (Özçevik Subaşi, D., Akça Sümengen, A., Şimşek, E., & Ocakçı, A. F., 2021). Researchers (Ismail, M., Lee, K. Y., Sutrisno Tanjung, A., et al., 2021) cite, first of all, the stressogenicity of the professional environment, which can be a source of distress, as the reasons for the high risk of depression, anxiety and stress among medical students, especially under conditions of uncertainty (Ismail, M., Lee, K. Y., Sutrisno Tanjung, A., et al., 2021). The pandemic, and then martial law, caused many medical students to suddenly switch to online education, creating a situation of uncertainty and an aggressive psychological reaction as a sign of deteriorating mental health. However, satisfying the need for communication and cooperation made it possible to maintain and even increase the overall index of constructiveness of coping strategies (Kravets, O. V., Yekhalov, V. V., & Stanin, D. M., 2022). Anxiety-depressive symptoms in medical students are commonly correlated with non-constructive coping strategies such as avoidance (Ismail, M., Lee, K. Y., Sutrisno Tanjung, A., et al., 2021). At the same time, the determining factor in overcoming psychological stress among medical students is the coping style, which depends on the individual characteristics of the perception of a stressful situation and the presence of social support (Li, Z., Yi, X., Zhong, M., Li, Z., et al., 2021).

Problem Statement

Object of research: coping strategies of the individual. The subject of the study: the relationship between the personality coping strategies of medical students and the level of anxiety.

The purpose of the study: to investigate the peculiarities of the personality coping strategies of medical students depending on the level of anxiety.

Research objectives: 1) to analyze the data of the sources of scientific literature on the problem of the formation of personality coping strategies and the level of anxiety of medical students; 2) to conduct a ascertaining experiment on the psychodiagnostic study of the level of anxiety and coping strategies of the personality of medical students of the 1st-3rd years; 3) determine the presence of a connection between coping strategies of the individual and the level of anxiety of medical students.

The hypothesis of the research assumes the existence of a close correlation between the level of anxiety of a person and his coping strategies in medical students.

Method and Materials

The methodological basis of the study was a holistic understanding of a person as a biopsychosocial being (Lukashevich, M.P., 2005). 32 students of the 1st-3rd years of the Institute of Medical and Pharmaceutical

Sciences PJSC "VNI "MAUP"" participated in the study, selected by simple randomization (14 boys and 18 girls, average age 18.3 years).

The following psychodiagnostic methods were used (Zlyvkov, V. L., Lukomska, S. O., Fedan, O. V., 2016):

- The Spielberger-Hanin test is the only method that allows you to assess anxiety both as a personality trait and as its current mental state. This technique contains 40 statements, the answers to which are evaluated as follows: 1 - no, it is not so; 2 - probably so; 3 - true; 4 - absolutely true. Anxiety indicators are divided into two scales - the Reactive Anxiety Scale (RT) and the Personal Anxiety Scale (OT). The number of points up to 30 indicates a low level of anxiety, 31-45 - moderate anxiety, 46 and more - a high level of anxiety.

-Questionnaire for determining the coping strategies of a person to overcome problems in various spheres of his activity, developed by R. Lazarus and S. Folkman in 1988 and adapted by T. L. Kryukova, E. V. Kuftyak and M. S. Zamyshlyaeva in 2004 (Kryukova, T.L., Kuftyak, E.V., 2007). The questionnaire consists of 50 statements that reveal the characteristics of human behavior in various life situations and are evaluated as follows: 0 - never; 1 - rarely; 2 - sometimes; 3 - often. The total score determines the tension level of confrontational coping, namely: 0-6 points - a low level of coping tension, which indicates its adaptive options; 7-12 points - the average adaptation potential of a borderline personality; 13-18 points - indicates high intensity of coping and severe maladaptation.

Statistical processing of the research results was carried out using the Microsoft Excel program and the Social Science Statistics online calculator, using the Student's t-test and the Pearson correlation coefficient.

The limitations of the study were related to the difficulty of conducting them in the conditions of a

military situation, which led to the limitation of the sample in terms of the number of respondents and the place of study. In the future, it is planned to investigate the coping strategies of students of various specialties and educational institutions and to differentiate them according to the coping style.

Ethical issues in the research process were resolved by strictly observing the principles of informed consent, anonymity, confidentiality and other requirements of bioethics, as well as academic integrity.

Results

In Tab.1 shows the results of determining the level of personal (PA) and situational, or reactive, anxiety (RA) of the studied medical students. As can be seen from this table, despite the fact that a high level of personal anxiety was observed only in 4 (12.5) of the studied persons, while the average and low level of personal anxiety was usually characteristic of the majority of medical students.

Statistically reliable (p<0.05), the level of reactive anxiety in the studied medical students was significantly higher than the personal level: a low level of reactive anxiety was observed in only 5 (15.6%) cases, while the majority of the studied medical students (56, 3%) had a high level of reactive anxiety.

In Tab.2 presents the values of the stress level of confrontational coping of the studied medical students, calculated using the Lazarus method.

Calculation of the correlation coefficient showed the existence of a very weak and inverse relationship between the level of coping tension of the studied medical students and indicators of their personal anxiety (Pearson correlation coefficient rxy=-0.2847). Instead, a strong positive relationship was found between the level of coping intensity and reactive anxiety (Pearson correlation coefficient rxy=0.9166).

 ${\it Table \ 1}$ The results of determining the anxiety of medical students using the Spielberger-Hanin method

Anviety level	Бали	PA		RA		Student's t test	-
Anxiety level		n	%	n	%	Student's t-test	р
high	≧46	4	12,5	18	56,3	-130,11	<0,05
average	31-45	17	53,1	10	31,3	119.40	<0,05
low	≦30	11	34,4	5	15,6	45.17	<0,05
Total		32	100	32	100		

Table 2

The results of determining the level of coping intensity of the studied medical students

The stress level of confuentational source	Points	Amount of students		
The stress level of confrontational coping	Polits	n	%	
high	13-18	14	43,8	
average	7-12	12	37,5	
low	13-18	6	18,8	
Total	32	100		

It should be noted that high reactive anxiety, determined by the Spielberger-Hanin method in medical students, indicates a high risk of developing psycho-emotional and neurotic disorders, the presence of neurotic conflict and the possibility of developing psychosomatic diseases. As for indicators of coping intensity, only 6 (18.8%) studied medical students had the adaptive option, which is evidenced by a low level of intensity, while 12 (37.5%) respondents with an average adaptive potential were in a borderline state. The revealed high intensity of coping in 14 (43.8%) of the studied medical students indicates that they have signs of severe maladjustment, which requires providing psychological support and appropriate psychocorrective interventions.

Discussion

According to the data of scientific literature sources, in situations of uncertainty, students tend to show a medium and high level of anxiety, and the medium level of anxiety is correlated with personal tension and uncertainty with a tendency to behavioral phenomena of the opposite options, active submission or avoidance. At the same time, a high level of social anxiety is combined with various manifestations of personal characteristics, such as conformity, emotional lability, conservatism, excessive sensitivity, and manifests itself in addictive behavior, a tendency to conformism and self-harm (Kots, E. M, 2017). Students react to the stressful conditions of martial law with the instability of their mental state, which is manifested by rigidity, excitability, the appearance of cognitive dysfunctions, emotional tension with anxiety and fear, requiring overcoming destructive emotions and increasing the adaptive potential of the individual (Gruzynska, I., 2022). As a result of the conducted research, it was found that during the martial law, the average and low level of personal anxiety was inherent in most medical students, while the level of reactive anxiety was high, which corresponds to the data of the analyzed sources of scientific literature. Reactive anxiety in the studied medical students was combined with a high level of coping tension (Pearson correlation coefficient rxy=0.9166), while the adaptive variant of coping with a low level of tension was found only in 18.8% of cases.

The state of distress in medical students, according to sources of scientific literature (Rajapuram, N., Langness, S., Marshall, M. R., & Sammann, A., 2020), often correlates with negative thoughts about the possibility of expulsion, states of depression and exhaustion, a decrease in the mental quality of life and even the appearance of suicidal moods. Reaction to stressful situations with the emergence of anxiety-depressive states can be manifested by sleep disturbances, headaches, low-grade fever and negatively affects the academic performance of medical

students (Fauzi, M. F., Anuar, T. S., Teh, L. K., et al., 2021). Among the maladaptive stress coping strategies in college students, researchers (Hasan, A. A. H., 2019; Amponsah, K. D., Adasi, G. S., Mohammed, S. M., et al., 2020) emphasize the importance of avoidant coping, Internet addiction, and substance abuse, while self-distraction is considered as a more adaptive strategy.

The results of the conducted research indicate that many medical students in the conditions of martial law have an average level of adaptation potential, which can be considered as a sign of a borderline psycho-emotional state. However, in the majority of studied medical students, the intensity of coping turned out to be high, which reflected the presence of pronounced psychological maladjustment in them. A high level of coping tension in combination with a high level of reactive anxiety constitutes a significant risk of developing negative psycho-emotional reactions, neurotic manifestations and psychosomatic diseases, which confirms the data of the analyzed sources of scientific literature. However, it should be noted that in the course of this study, the issue of destructive coping strategies among medical students was not considered in detail, but it is considered extremely important, so it should be a topic of future research. Signs of severe maladaptation were found in 43.8% of medical students as a result of the study, which indicates the need to provide them with psychological support. Given that among the strategies for overcoming anxiety, stress and depression among students, the most optimal, according to the sources of scientific literature, are attentiveness and optimism (Karing, C., 2021), it is planned to develop and implement appropriate methods of psychocorrective interventions using elements of cognitive-behavioral and art therapy.

Conclusions and prospects for further research

The peculiarities of response of medical students to the military situation as a stressogenic factor are theoretically substantiated, the risk factors for the emergence of pathological anxiety states in them and the peculiarities of coping strategies as the basis of the stress resistance of the personality of medical students in the conditions of martial law are determined. 56.3% of the studied students had a high level of reactive anxiety and 43.8% had a high level of coping tension. A close strong correlation between reactive anxiety and coping intensity was established (rxy=0.9166). It was found that a significant number of the studied students are in a situation of risk of developing neurotic and psychosomatic diseases, which requires providing them with psychological support and the implementation of appropriate psychocorrective interventions.

Thus, as a result of the conducted research, the hypothesis regarding the existence of a close correlation between coping strategies and the level of personality anxiety among medical students was confirmed.

The results of the conducted research can be used for psychoprophylaxis, overcoming negative mental states of medical students and optimizing the educational process under martial law.

Prospective research is planned to focus on the study of the specifics of coping strategies of students of various specialties, different educational institutions,

their differentiation by coping style, the establishment of the presence of destructive coping strategies in medical students, the specifics of coping strategies of dependent persons, and the development of effective psychotherapeutic interventions aimed at overcoming negative mental states of students and optimizing their coping strategies in the conditions of martial law.

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