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Nekrasova N. O.[1], Nesterenko V. H.[1], Verzun N. O.[2], Ishchenko T. B.[1], Nesterenko R. V.[3]

Pre-medical psychological support in the educational environment: from neurobiology of stress to practical algorithms

[1] Kharkiv National Medical University, Kharkiv, Ukraine
[2] "Mental Health for Business" Company, Kyiv, Ukraine
[3] Educational and Research Institute of Professional Education, National Academy of the National Guard of Ukraine, Kharkiv, Ukraine

Некрасова Н. О.[1], Нестеренко В. Г.[1], Верзун Н. О.[2], Іщенко Т. Б.[1], Нестеренко Р. В.[3]

Домедична психологічна підтримка в освітньому середовищі: від нейробіології стресу до практичних алгоритмів

[1] Харківський національний медичний університет, м. Харків, Україна
[2] Компанія «Mental Health for Business», м. Київ, Україна
[3] Навчально-науковий інститут професійної освіти Національної академії Національної гвардії України, м. Харків, Україна

no.nekrasova@knmu.edu.ua

Introduction

In the conditions of a full-scale war in Ukraine, the education system is undergoing significant transformations related not only to the organization of the educational process, but also to ensuring the safety and mental well-being of students. Educational institutions increasingly perform the function of an environment of primary stabilization, in which the teacher becomes a key figure in supporting a child or student in crisis situations. Traumatic events (airborne alarms, evacuation, losses, constant threat to life) significantly increase the risk of developing acute stress reactions, anxiety disorders and post-traumatic stress disorder (PTSD) among children and adolescents [1–4]. At the same time, access to specialized medical or psychotherapeutic care is not always timely, which reinforces the importance of pre-medical care, which is provided directly in the educational institution. Consequently, the need for the formation of a systematic approach to the training of teachers in the field of pre-medical care, which includes both physical and psychological aspects of support, has become actualized [1–4].

Today, there is no doubt that a full-fledged educational process is impossible without psychological safety. International recommendations (WHO) directly indicate the need to integrate the principles of psychological first aid in non-medical environments, in particular in education [5–7]. Psychological safety is not an abstract concept. For a child, these are very specific things: the feeling that it is safe here, that the situation is predictable, that there is an adult nearby who will not get lost. It is these factors that make it possible to reduce the level of anxiety and, what is no less important, to preserve cognitive functions. In other words, psychological safety is not an "additional option", but the foundation on which learning is possible in general [8]. To understand why standard pedagogical approaches sometimes "do not work", it is important to turn briefly to neurobiology.

In a threat situation, the amygdala is the first to react – the structure responsible for quick recognition of danger. It triggers the classic "fight or flight" response [9; 10]. At this moment, the sympathetic nervous system is activated, the level of anxiety increases, breathing changes, heartbeat changes, and attention narrows. At the same time, the prefrontal cortex – the area responsible for logic, control and planning – temporarily "turns off" or, more precisely, reduces its activity [11–13]. Therefore, in a state of acute stress, a person is literally unable to effectively perceive complex explanations or instructions. There is another important point: in dangerous situations, the brain can use the so-called "fast track" – the signal goes directly to the amygdala, bypassing detailed analysis in the cortex [9]. This allows for instant response, but at the cost of accuracy. Hence the practical conclusion: complex explanations do not work in stress, but simple, clear, body-oriented actions [7–11].

Traumatic experience: why it "comes back"

A psychotraumatic experience does not disappear by itself, it is fixed in memory, but not like an ordinary memory. Understanding this is based on the fact that implicit memory is responsible for automatic reactions such as: fear, numbness, flight. It is she who does not need awareness. While explicit memory, on the contrary, allows you to "tell a story", to fit an event into a life context. In trauma, this integration is often disrupted. As a result, a person does not just remember the event – he experiences it again. This is how what can be conventionally called the "core of traumatic memory" is formed, if the tension does not find a way out, it can turn into physical symptoms. This is a well-known mechanism of somatization, when mental pain "speaks" through the body [14]. In this reality, the teacher actually find find themselves on the first line of help.

It should be noted that the teachers are not psychotherapists. But they are the ones who see the changes first, who can notice that the child "fell out", became too anxious or, on the contrary, sharply inhibited. And very often it depends on their reaction whether this condition will deepen or whether it will be possible to stabilize it. Therefore, the basic principles are as follows: safety, stabilization, support and, most importantly, do no harm [5; 6]. Taking into account how the brain works under stress, help algorithms should be as simple as possible. Not "ideal" ones, but ones that can really be applied. And here is the key: do not overload, do not complicate, act in a structured manner [14].

The purpose of the research is to develop and justify a systematic approach to the teacher's actions in case of acute psycho-emotional states of the students of education, which is based on the natneurobiological mechanisms of stress and the integration of physical and psychological aspects of assistance.

Object, materials and research methods

This study is based on a comprehensive theoretical and methodological analysis of modern scientific approaches to psychological first aid (PFA) and neurobiology of stress [5–7; 9–13]. The study analyzed the regulatory frameworks and guidelines of the World Health Organization (WHO) and the National Institute for Health and Care Excellence (NICE) regarding psychological first aid in emergencies [5–7; 15]. The neurobiological data studied focused on the functional interactions of the amygdala, prefrontal cortex, and the sympathetic nervous system under acute stress [9–13].

Based on these interdisciplinary findings, practical pedagogical algorithms were systematized and structured for five primary crisis states: acute stress reaction, panic attack, stupor (freeze-reaction), and psychomotor agitation, alongside the identification of somatic "red flags". Ethical guidelines complied with the Declaration of Helsinki regarding the use of non-invasive secondary analytical structures based on general educational settings [16].

Research results

Practical algorithms

Algorithm 1. Primary assessment of the psychophysiological state of the student

The purpose of the initial assessment is to quickly determine the degree of risk to the health and safety of the learner with the subsequent selection of adequate response tactics. First stage (Consciousness): The level of consciousness and ability to contact is evaluated. It is determined whether the student is in a clear state of consciousness, whether there are signs of disorientation, or whether there is no contact. This indicator is a basic indicator of the severity of the condition. Second stage (Behavioral reactions): The character of the emotional and behavioral response is analyzed, in particular the presence of anxiety, panic attacks, stupor or aggression. Behavioral changes make it possible to assess the degree of disorganization of mental activity and the level of activation of the stress response. Third stage (Somatic condition): Attention is paid to the frequency and nature of breathing (normal, accelerated, difficult), skin color (physiological, paleness, hyperemia), as well as the presence of somatic complaints, such as dizziness, pain, or nausea. These parameters make it possible to detect possible violations of vegetative regulation or signs of an emergency. Fourth stage (Integral evaluation): An integral assessment of the received data is carried out with the determination of the level of risk. A mild condition is characterized by preserved contact, moderate emotional reactions and the absence of significant somatic disorders and involves the provision of pedagogical assistance. The average level is accompanied by marked anxiety or behavioral disorganization and requires a combination of assistance with dynamic observation. A serious condition is defined by a disturbance of consciousness, pronounced somatic symptoms or a risk to life and requires the immediate involvement of medical professionals [4; 5].

Algorithm 2. Actions of the teacher during an acute stress reaction

The teacher's action algorithm for an acute stress reaction is based on the principles of Psychological First Aid and is aimed at stabilizing the state of the learner, reducing the level of distress and preventing further maladaptation [5; 6; 15].

The first step is to ensure security. The teacher should minimize the impact of stressogenic factors, in particular, eliminate excessive noise, crowds or other stimuli, and, if possible, transfer the learner to a calm, controlled environment, this creates the basic conditions for the restoration of psychophysiological balance. The second stage is establishing contact. Communication should be simple, clear and emotionally supportive. It is advisable to use short, clear phrases that emphasize the safety of the situation and the presence of support. This approach helps to reduce the activation of the limbic system and gradually restore cognitive control [9; 12]. The third stage involves physical stabilization of the condition. It is recommended to ensure a comfortable position of the body (sitting or semi-sitting), to limit unnecessary movements in case of severe anxiety or disorganization, and also, in the absence of contraindications, to offer water. This contributes to the normalization of vegetative reactions. The fourth stage is aimed at reducing the level of anxiety. Simple self-regulation techniques are used, including breathing exercises and methods of shifting attention [14; 15]. Their use allows to reduce physiological activation and return the person to a more controlled state. The fifth stage includes dynamic monitoring of the state of the student. The effectiveness of the implemented measures, changes in behavior and somatic condition are evaluated, which allows timely adjustment of assistance tactics. In the absence of positive dynamics or in the case of deterioration, the teacher must ensure the transfer of the student to medical or psychological specialists,

which guarantees continuity of care and complies with the principles of interdisciplinary interaction [5; 14].

Discussion of research results

The role of coping strategies in the formation of resilience and the importance of the teacher in mastering them

One of the key directions of maintaining the vitality of the individual is the formation of constructive stress-overcoming behavior. Such behavior is considered as an integral manifestation of vitality, since overcoming difficulties not only preserves mental balance, but also contributes to the actualization of internal resources, their consolidation and development [17].

In modern psychology, coping behavior is defined as a set of cognitive, emotional and behavioral efforts aimed at overcoming external or internal demands that are subjectively perceived as stressful and that exceed the adaptive capabilities of the individual. In the structure of coping, problem-oriented, emotionally-oriented, and avoidance strategies are traditionally distinguished, each of which performs a specific regulatory function under conditions of stress.

Unlike psychological defense mechanisms, which are mostly unconscious and aimed at reducing internal stress, coping strategies are conscious forms of behavior that allow you to actively interact with a stressful situation and change its impact on a person. Considering the above, coping is not only an adaptive reaction, but also a universal preventive mechanism for the formation of stress resistance [17].

Functionally, coping strategies ensure the maintenance of a balance between the demands of the environment and individual resources. They are implemented through three main mechanisms: focusing on the problem (active solution of the situation), regulation of the emotional state and modification of the interaction between the individual and the environment. The goal of coping is to reduce the intensity of stress and prevent maladaptive reactions. Coping strategies become especially important in childhood and adolescence, when self-regulation mechanisms are still being formed. Studies show that the development of effective coping skills reduces the risk of developing post-traumatic and other mental disorders, promotes adaptation and increases psychological resilience [17; 18].

The neurobiological basis of the formation of coping strategies is the interaction of the limbic system and the prefrontal cortex. In response to stress, the amygdala activates and initiates emotional responses, while the prefrontal cortex provides cognitive control and selection of behavioral strategies. An important role in this process is played by the mesocortical dopaminergic pathway: dopamine, synthesized in the structures of the midbrain, is transmitted to the prefrontal cortex, activating the reward system and contributing to the consolidation of adaptive behavior patterns. Further activation of the hippocampus ensures the consolidation of experience, i.e., the transfer of effective coping strategies into long-term memory. It is these mechanisms that explain why the formation of coping strategies requires not only information, but also regular repetition, positive emotional reinforcement and a safe environment for their approval. In this context, the educational environment plays a fundamentally important role, because it is the teacher who is the key figure who provides the conditions for the formation of coping skills, since: he carries out regular and long-term interaction with the child; serves as a model of adaptive behavior; creates a predictable and safe environment; has the ability to systematically consolidate the skills of emotional regulation and behavioral strategies [7; 9; 10; 17].

One of the directions for mastering coping strategies, which is used in Israel, is the protocol "4 elements" – the first protocol that can be used during stress, crisis or trauma [9]. In this protocol, the first task is to regain control over the body and reduce the tension of the nervous system [19]. The protocol consists of four simple exercises by the names of the elements (Table 1):

1. The element "Air" (Breathing control): Breathing control using the "Square Breathing" technique:

− deeply exhale all the air through the mouth, counting to four (one, two, three, four); hold your breath for a count of two;

− slowly inhale air through the nose, counting to two;

− hold your breath for a count of two;

− take a deep breath, counting to six or ten until all the air comes out.

The main thing is to keep the sequence and exhale first, then inhale and exhale longer than twice or more than inhale. Slowing down the exhalation reduces the intensity of the stress reaction, so there should be a long exhalation first [14].

2. Element "Water" – replenishment of the water balance.

Stress causes dehydration, and dehydration can cause stress. To get out of this vicious circle, you need to drink more water. If there is no water, pull in your cheeks or imitate chewing movements. It has a calming effect.

3. The element "Fire" – the return of the ability to think.

During stress, a person has tunnel vision – he cannot see widely, notice what is happening around him, and cannot make responsible decisions. At such moments, a fire "burns" in one's own eyes. Therefore, it is necessary to pay attention around, look at some large (green) object on each side and name it.

4. The element "Earth" – restoration of control over the body.

Table 1

Protocol "4 elements"

Element	The Goal	Teacher's Actions
Air	Anxiety reduction	Breathing control
Water	Stabilization of the physiology	Swallowing movements
Fire	Returning of the control	Focusing on the items
Earth	Body control	Muscle relaxation

Algorithm 3. Actions of a teacher during a panic attack in a student of education

A panic attack is an acute episode of intense anxiety accompanied by pronounced vegetative and cognitive-emotional manifestations [1; 2]. Due to the conditions of the educational environment, she needs quick recognition and correct non-medicinal help from the teacher. Clinical signs of a panic attack may include rapid shallow breathing, palpitations, dizziness, feeling short of breath, and intense fear, including fear of death or loss of control. The indicated symptoms are caused by hyperactivation of the sympathetic nervous system and do not indicate an immediate threat to life, but are subjectively experienced as critical [3].

The first stage of assistance is a psycho-educational explanation of the condition. The teacher should briefly and calmly inform that the observed symptoms correspond to a panic reaction and are temporary in nature. Such verbalization contributes to the reduction of catastrophizing and partial restoration of cognitive control. The second stage is the normalization of breathing. It is advisable to use simple breathing techniques with prolonged exhalation (for example, inhaling for 2–3 seconds and exhaling for 4–6 seconds), which allows to reduce hyperventilation and stabilize the vegetative state. The third stage involves the use of grounding techniques aimed at switching attention from internal experiences to the external environment. It is recommended to invite the learner to name several objects around, describe them or make physical contact with the surfaces. This helps to reduce the intensity of anxiety due to the activation of sensory channels. The fourth stage is physical stabilization. It is necessary to ensure a safe and stable position of the body (sitting position with support on the feet), which helps to restore a sense of control over the body and reduce vegetative manifestations. An important component of the algorithm is compliance with communicative restrictions. It is not recommended to use directive or disparaging statements such as "calm down", nor to overload the learner with a large amount of information. Communication should remain simple, supportive and structured. Further actions involve observing the dynamics of the state. In most cases, panic attack symptoms subside within 10 to 20 minutes with adequate support. If there is no improvement or atypical symptoms appear (severe chest pain, unconsciousness, convulsions), medical professionals should be involved [4; 5; 14].

Algorithm 4. Actions of the teacher during stupor (freeze-reaction) in the learner

Stupor (freeze reaction) is a form of acute stress response, characterized by a sharp decrease in motor and behavioral activity due to the predominance of inhibition reactions of the central nervous system [9; 14]. This condition is associated with hyperactivation of subcortical structures and temporary inhibition of voluntary control. Clinical manifestations are immobility, absence or a sharp decrease in response to external stimuli, "disconnecting" from the environment, maintaining a fixed posture or gaze [3].

The first step in helping is establishing safe and supportive contact. Communication should be carried out in a soft, calm voice without harsh intonations, which allows you to avoid additional sensory overload. The second stage involves the gradual restoration of orientation through simple verbal instructions. It is advisable to use short, clear appeals aimed at establishing eye contact (for example, a request to look at the teacher), which contributes to the partial activation of cortical structures. The third stage includes careful stimulation of motor activity. It is recommended to offer simple actions that do not require significant effort (for example, squeeze your hand, move your fingers). This makes it possible to gradually bring the learner out of the state of inhibition. The fourth stage is aimed at restoring bodily sensation through grounding techniques. It is appropriate to pay attention to the feeling of support (for example, the awareness of the contact of the feet with the floor), which contributes to the return to the sensorimotor experience and the reduction of dissociative manifestations. In the absence of positive dynamics or prolonged stupor, it is necessary to ensure the involvement of medical or psychological specialists [4; 5].

Algorithm 6. "Red flags": indications for the immediate involvement of medical professionals.

In the system of providing primary care in the educational environment, timely recognition of conditions that are beyond the scope of pedagogical competence and require immediate medical intervention is fundamentally important. Such conditions are defined as "red flags" and require the unconditional termination of the teacher's independent actions with subsequent routing to specialized help. The main clinically significant signs that indicate a potentially life- or health-threatening condition include: loss of consciousness or its significant disturbance; convulsive attacks; intense chest pain; difficult or inadequate breathing; pronounced disorientation or contact disturbance; presence of suicidal statements or intentions [4; 5].

These symptoms can be manifestations of acute somatic or neurological conditions, severe anxiety or affective disorders, as well as crisis mental states that pose an immediate threat to life. In case of detection of at least one of the above criteria, the teacher is obliged to immediately stop further attempts to stabilize the condition on his own and ensure that medical workers are called. At the same time, it is necessary to maintain basic safety conditions: do not leave the student alone, monitor his condition until the arrival of specialists and, if possible, inform the responsible persons of the educational institution. The "red flag" algorithm performs a critical function of distinguishing between pedagogical and medical care, ensuring the timely provision of qualified care and reducing the risk of dangerous consequences [5; 15].

Prospects for further research

Further research should be aimed at evaluating the effectiveness of implemented algorithms of pre-medical and psychological care in the educational environment,

in particular, their impact on reducing the level of anxiety and improving the adaptation of students. An important direction is the study of the long-term results of the formation of coping strategies in children and adolescents under conditions of chronic stress. It is also promising to study the neurobiological mechanisms of stress resistance and their connection with educational interventions, as well as the development and approval of standardized teacher training programs. The implementation of interdisciplinary models of interaction between educational, medical and psychological services requires special attention [19–21].

Conclusions

Pre-medical assistance in educational institutions is a critically important component of the system of supporting children in wartime conditions, with the teacher acting as a key figure in the initial response to crisis situations. The use of simple algorithms and stabilization techniques is an effective and affordable tool, and the formation of coping strategies contributes to increasing the vitality of students. Thus, the integration of pre-medical care into pedagogical practice is a necessary component of modern education [4; 5; 17; 18].

Bibliography

1. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5-TR). 5th ed. Washington, DC: APA; 2022. DOI: https://doi.org/10.1176/appi.books.9780890425787.

2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders. 5th ed. Washington, DC: American Psychiatric Publishing; 2013. DOI: https://doi.org/10.1176/appi.books.9780890425596.

3. Pynoos RS, Steinberg AM. Traumatic stress in children and adolescents. Psychiatr Clin North Am. 2014;37(1):1–14. DOI: https://doi.org/10.1016/j.psc.2013.11.006.

4. Khamis V. Coping with war trauma and psychological distress among schoolage Palestinian children. American Journal of Orthopsychiatry. 2015;85(1):72–79. DOI: https://doi.org/10.1037/ort0000039.

5. National Child Traumatic Stress Network. Psychological First Aid for Schools. Los Angeles: NCTSN; 2012.

6. World Health Organization. Psychological first aid: Guide for field workers. Geneva: WHO; 2011.

7. Inter-Agency Standing Committee. Guidelines on Mental Health and Psychosocial Support in Emergency Settings. Geneva: IASC; 2007.

8. OECD. Safe and Supportive Learning Environments. Paris: OECD; 2017.

9. LeDoux JE. Emotion circuits in the brain. Annu Rev Neurosci. 2000;23:155–184. DOI: https://doi.org/10.1146/annurev.neuro.23.1.155.

10. Isenberg N, Silbersweig D, Engelien A, Holmes S, Bummorigg K, MacIntosh J, et al. Linguistic threat activates the human amygdala. Proc Natl Acad Sci USA. 1999;96(18):10456–10459. DOI: https://doi.org/10.1073/pnas.96.18.10456.

11.McEwen BS. Protective and damaging effects of stress mediators. N Engl J Med. 1998;338(3):171–179. DOI: https://doi.org/10.1056/NEJM199801153380307.

12. Arnsten AFT. Stress signalling pathways that impair prefrontal cortex structure and function. Nat Rev Neurosci. 2009;10(6):410–422. DOI: https://doi.org/10.1038/nrn2648.

13. Sapolsky RM. Why zebras don't get ulcers. New York: Holt; 2004.

14. Levine PA. In an Unspoken Voice: How the Body Releases Trauma and Restores Goodness. North Atlantic Books; 2010.

15. WHO, UNICEF. Doing What Matters in Times of Stress. Geneva: WHO; 2020.

16. Cheng C, Lau HPB, Chan MPS. Coping flexibility and psychological adjustment to stressful life changes: A meta-analytic review. Psychological Bulletin. 2014;140(6):1582–1607. DOI: https://doi.org/10.1037/a0037913.

17. Shonkoff JP, Garner AS. The lifelong effects of early childhood adversity. Pediatrics. 2012;129(1):e232–e246. DOI: https://doi.org/10.1542/peds.2011-2663.

18. Osaka M, Yaoi K, Minamoto T, Osaka N. When do negative and positive emotions modulate working memory performance? Sci Rep. 2013;3:1375. DOI: https://doi.org/10.1038/srep01375.

19. Shapiro E, Laub B, Rozenblat O. Early EMDR Intervention following intense rocket attacks on a town: a randomised clinical trial. Clinical Neuropsychiatry. 2018;15(3):194–205.

20. NCT03496714. Online psychoeducation for the prevention of PTSD. URL: clinicaltrials.gov/show/NCT03496714 (first received 12 April 2018).

21. Fine NB, Achituv M, Etkin A, Merin O, Shalev AY. Evaluating web-based cognitive-affective remediation in recent trauma survivors: study rationale and protocol. European Journal of Psychotraumatology. 2018;9(1):1442602. DOI: https://doi.org/10.1080/20008198.2018.1442602.

In wartime conditions, children and adolescents are continuously exposed to stressors such as air alerts, threats to life, and losses, which increase the risk of acute stress reactions and post-traumatic stress disorder (PTSD). Limited access to specialized medical and psychotherapeutic care emphasizes the role of educational institutions as environments for primary stabilization and the importance of teachers in providing initial support.

Most teachers lack systematic training in pre-medical and psychological assistance during crisis situations. Under acute stress, a child's ability to perceive and process complex information decreases, reducing the effectiveness of standard pedagogical approaches.

Purpose is to develop and justify a systematic approach to teachers' actions in acute psycho-emotional states of students, based on the neurobiological mechanisms of stress and the integration of physical and psychological support.

Materials and Methods. Modern scientific literature and international recommendations of WHO on psychological first aid were analyzed. Neurobiological mechanisms involving the amygdala, prefrontal cortex, and sympathetic nervous system were reviewed.

Results. Practical algorithms were systematized for primary assessment, acute stress reactions, panic attacks, stupor, psychomotor agitation, and identification of "red flags" requiring medical intervention. The role of coping strategies was also analyzed.

Conclusions. Educational institutions are important settings for early stabilization of psycho-emotional states. Simple, structured algorithms may reduce distress, prevent complications, and support the development of coping skills and psychological resilience.

Key words: pre-medical assistance, teacher, stress, psychological support

Мета – розробити та обґрунтувати системний підхід до дій педагога у разі гострих психоемоційних станів здобувачів освіти, що базується на сучасних уявленнях про нейробіологічні механізми стресу та передбачає інтеграцію фізичних і психологічних аспектів домедичної допомоги. Особливу увагу приділено ролі педагога як першої особи, яка може своєчасно розпізнати ознаки дезадаптації, оцінити потенційний ризик і забезпечити базову стабілізацію стану до залучення медичних або психологічних фахівців.

Матеріали та методи. Проведено теоретико-методологічний аналіз сучасної наукової літератури та міжнародних рекомендацій Всесвітньої організації охорони здоров'я (WHO) і National Institute for Health and Care Excellence (NICE) щодо першої психологічної допомоги та допомоги у разі гострих стресових реакцій. Узагальнено дані нейробіології стресу, зокрема щодо функціональної взаємодії мигдалеподібного тіла, префронтальної кори, симпатичної нервової системи та механізмів формування реакцій «боротьба – втеча – завмирання». На основі отриманих даних систематизовано практичні алгоритми дій педагога у кризових станах. Розроблено підходи до первинної оцінки психофізіологічного стану, допомоги у разі гострої стресової реакції, панічної атаки, ступору (freeze-reaction), психомоторного збудження, а також до визначення клінічно значущих «червоних прапорців», що потребують негайного залучення медичних працівників. Окремо проаналізовано роль копінг-стратегій, тілесно орієнтованих технік, дихальних вправ і методів заземлення у відновленні саморегуляції.

Результати. Обґрунтовано та систематизовано поетапні алгоритми дій педагога у кризових станах здобувачів освіти з урахуванням особливостей функціонування нервової системи під час гострого дистресу. Показано, що в умовах підвищеної активації мигдалеподібного тіла та тимчасового зниження регуляторної активності префронтальної кори здатність дитини або підлітка до сприйняття складних інструкцій, логічного аналізу та довільного контролю поведінки може істотно знижуватися. У зв'язку з цим найбільш доцільними є прості, короткі, структуровані та тілесно орієнтовані втручання, спрямовані на відновлення відчуття безпеки, стабілізацію дихання, уваги та тілесного контролю. Детально проаналізовано роль копінг-стратегій у формуванні психологічної стійкості та здатності до адаптації в умовах хронічного стресу. Окрему увагу приділено ізраїльському протоколу «4 стихії» («Повітря», «Вода», «Вогонь», «Земля»), який включає дихальний контроль, ковтальні рухи, фокусування уваги на зовнішніх об'єктах та м'язову релаксацію. Обґрунтовано доцільність його використання як простого інструменту первинної стабілізації, доступного для педагогічного середовища після відповідного навчання. Визначено критерії, за яких педагогічна допомога має бути негайно припинена з подальшим залученням медичних спеціалістів, зокрема у разі порушення свідомості, судом, вираженого болю в грудях, утрудненого дихання, дезорієнтації або суїцидальних висловлювань. Запропонована модель також передбачає чітке розмежування меж педагогічної компетентності та ситуацій, у яких подальші самостійні дії можуть бути небезпечними. Це дозволяє поєднати принципи психологічної першої допомоги з вимогами безпеки та своєчасної маршрутизації. Значущим компонентом моделі є створення передбачуваного, підтримувального освітнього середовища, у якому дорослий демонструє спокій, послідовність дій і готовність до підтримки без надмірного втручання або психологічного тиску.

Висновки. Освітнє середовище є важливим простором для раннього виявлення та первинної стабілізації гострих психоемоційних станів у дітей і підлітків, особливо в умовах війни та тривалого впливу стресових чинників. Педагог не замінює лікаря або психотерапевта, однак за умови відповідної підготовки може своєчасно розпізнати кризовий стан, застосувати безпечні алгоритми домедичної психологічної підтримки та визначити необхідність передачі здобувача освіти фахівцям. Впровадження стандартизованих алгоритмів, навчання педагогів базових стабілізаційних технік і формування у здобувачів освіти конструктивних копінг-стратегій можуть сприяти зниженню рівня дистресу, профілактиці дезадаптивних реакцій та зміцненню психологічної стійкості. Такий підхід є важливим складником збереження ментального здоров'я та психологічної безпеки освітнього середовища в умовах воєнних і кризових викликів.

Ключові слова: домедична допомога, педагог, стрес, психологічна підтримка, копінг-стратегії, психологічна безпека.

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Information about the authors

Nekrasova Nataliya Oleksandrivna – Doctor of Medical Sciences, Professor, Head of the Department of Neurology with Neurosurgery Nourse of the Kharkiv National Medical University; Nauky Avenue, 4, Kharkiv, Ukraine, 61022.
no.nekrasova@knmu.edu.ua, ORCID ID: 0000-0002-0900-4441 [A, B, D]

Nesterenko Valentyna Hennadiivna – Doctor of Medical Science, Associated Professor, Acting Head of the Department of Public Health and Healthcare Management of the Kharkiv National Medical University; Nauky Avenue, 4, Kharkiv, Ukraine, 61022.
vh.nesterenko@knmu.edu.ua, ORCID ID: 0000-0002-3773-9525 [C, D, E]

Verzun Nataliia Olexandrivna – Master of Psychology, Existential Analyst (GLE-International, Austria), Member of the National Psychological Association (NPA) and the Ukrainian Union of Psychotherapists (UUP); Practicing Psychologist at "Mental Health for Business".
nataverz@ukr.net, ORCID ID: 0009-0003-6627-1241 [D, E]

Ishchenko Tatiana Borisivna – Candidate of Medical Sciences, Professor, Head of the Licensing, Accreditation and Rating Department of the Kharkiv National Medical University; Nauky Avenue, 4, Kharkiv, Ukraine, 61022.
vid.licensing@knmu.edu.ua, ORCID ID: 0000-0002-1750-9925 [C, E, F]

Nesterenko Roman Vasylovych – Colonel, Candidate of Economic Sciences (PhD), Associate Professor, Deputy Head for Research; Head of the Laboratory for Euro-Atlantic Integration and Legal Support of the Educational and Research Institute of Professional Education of the National Academy of the National Guard of Ukraine; Zakhysnykiv Ukrainy Square, 3, Kharkiv, Ukraine, 61001.
rnesterenko1985@gmail.com, ORCID ID: 0000-0001-6357-3613 [D, E, F]

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