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Interpretation of space perception in an existential crisis: Psychological analysis of the Book of Job

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◆ **Abstract.** The article analysed a psychological model capable of providing support to military personnel who find themselves in an existential crisis – a state that threatens the integrity of the “Self”, the meaning of existence and the structure of personal values. The aim of the article was to use the example of the Book of Job to reveal the connection between a person’s state in an existential crisis and their perception of space, expressed in topological characteristics. The Book of Job was chosen as research material because it presents the complex psycho-emotional experiences of a person in a crisis situation, which are manifested in a symbolic description of space and allow to analyse the influence of the internal state on its perception. Using historical and psychological reconstruction, hermeneutic and phenomenological approaches, as well as analytical tools of dynamic psychology, a topological analysis of mental space was conducted. It has been established that changes in spatial characteristics correlate with stages of internal dynamics: the loss of spatial continuity corresponds to a fragmentation of meaning, while a narrowing of spatial extent corresponds to a limitation of the field of perception. The study also confirmed that the disruption of structure corresponds to the collapse of the hierarchy of values, and the distortion of dimension corresponds to the loss of depth of self-awareness. The feeling of finitude contributes to the formation of boundaries within which the meaning of life can be restored. An analysis of the plot of the Book of Job showed that experiences of intense emotional pain, internal protest, and states of devastation are critical psychological mechanisms that stimulate a rethinking of one’s own existence, mobilise the resources of the psyche to integrate crisis experiences, and contribute to the formation of a new meaning in life. The results of the study can be used to develop a model of therapeutic space in which the experience of pain, protest, and devastation serve as conditions for restoring meaning to life. Such a model can be applied in the psychological support of individuals who have experienced trauma, loss, or existential crisis, facilitating the integration of crisis experiences and the formation of adaptive strategies for overcoming psychological difficulties

◆ **Keywords:** deviant behaviour; continuity; topological analysis; structure; symbolism; finiteness

◆ Introduction

During periods of military action and large-scale social transformations, existential issues become particularly important for research, as such conditions highlight the need to create theoretical models for overcoming crisis situations.

In situations of radical change, familiar life guidelines, such as security, stability, and predictability of the future, lose their obviousness, giving rise to deep ontological doubts. Thus, there was a need for a thorough rethinking of the

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meaning of existence and ways to preserve inner integrity in situations of chaos and destruction. Military personnel are particularly vulnerable to such influences, as their professional activities are associated with increased risk, uncertainty, constant threat to life, and the need to make morally difficult decisions. Chronic stress, direct interaction with death and the consequences of violence create intense psychological strain that often exceeds an individual's ability to adapt. In such conditions, military personnel may experience not only acute stress reactions, but also deep existential crises associated with loss, the destruction of value systems, loss of meaning, or confrontation with the phenomenon of the senselessness of violence. The experience of losing health, loved ones, material resources or social status deprives the individual of key supports that provide a sense of identity and stability in life. Overcoming existential crises is a key process of psychological adaptation that ensures the restoration of meaning in life and the integrity of the "self". The inability to overcome existential problems correlates with the development of depressive states, social isolation, and suicidal risks. Studying these mechanisms in military personnel is of practical importance, as it allows for the development of evidence-based psychological and psychotherapeutic strategies for restoring meaning, mental stability, and adaptation in critical life situations. The Book of Job is relevant research material because of its archetypal reflection of the existential crisis of a person, manifested in deep psycho-emotional experiences and a symbolic description of space, which makes it relevant for analysing the mechanisms of mental adaptation and rethinking the meaning of life in existential psychology. J. de Joode's (2019) study systematised the spatial metaphors in the Book of Job, in particular, boundaries and containment, place and placelessness, direction and distance, and emphasised that these metaphors shape theology and the experience of suffering. J. Stala *et al.* (2023) analysed Job as a cultural and existential symbol of postmodernism, focusing on the paradigms of suffering, alienation and "loss of the world." C. Park (2024) examined the anthropological and literary problems of Job's suffering in the context of social roles, honour, shame, and spaces. It was determined how socio-spatial factors (status, exile, social field) change an individual's perception of their "place." A. Maran & M. Raj (2023) proposed an instrumental scheme applied when reading literary characters in a state of crisis (how the "place" of the hero changes), which allows tracing their internal dynamics. The study by D.W. Larsen (2020) is an example of the application of critical spatial theories by E. Sogi and A. Lefebvre to the canonical reading of biblical texts. The authors developed a methodological framework for integrating social and political geography into the exegetical analysis of texts. The philosophical and psychological article by L. IJzerman & A. Halsema (2025) defined "burnout" as the destruction of Heidegger's being-in-the-world and proposed relevant phenomenological schemes demonstrating how the loss of meaning or social role affects the experience of space.

An important area of research remains the study of deviance through the prism of the relationship between the antisocial behaviour of military personnel and their perception of space in conditions of existential crisis. Another aspect is sociocultural: research on deviance by E. Mancinelli *et al.* (2021) showed that differences in social norms and cultural distance influence the manifestation of antisocial behaviour. Despite the large amount of theoretical material on the subject, previous studies of crisis states have not provided a definitive answer to the question of the relationship between deviant behaviour and human spatial perception. The aim of this study was to use the Book of Job as an example to identify and characterise the relationship between a person's state of existential crisis and the peculiarities of their perception of space through its topological characteristics. The research hypothesis was that the spatial metaphors presented in the Book of Job (continuity, extent, structure, dimension, finiteness) change according to the stages of a person's existential crisis and reflect their internal psychological states. The text was analysed in accordance with the following objectives:

1. To analyse the structure of space in the Book of Job as a reflection of the subject's existential state, to investigate the transformations of topological characteristics (structurality, extension, finiteness, moderation, continuity), and show how their destruction correlates with destructive mental processes, including moral ambivalence and the crisis of the traditional ethical model of "guilt – suffering."

2. To identify the deep psychological mechanisms that determine the course of an existential crisis, in particular unconscious defence processes (repression, displacement, projection, devaluation, identification) and symbolic forms of expression of internal conflicts, including Job's physical symptoms as a manifestation of autoaggression, guilt, regression, and spatial isolation.

3. Justify the possibility of forming a therapeutic model based on the correction of spatial perception, showing that an existential crisis is accompanied by topological changes in the space of consciousness (breaks, collapses, stratification), and determine the potential of such approaches for working with people who have experienced traumatic events, in particular military personnel.

◆ Materials and Methods

The work applied a set of theoretical and analytical methods aimed at studying the existential crisis through the interpretation of the text "The Book of Job" as a psychological model of experiencing a radical loss of meaning, spatial disorientation, and transformation of subjective reality. The material for the study was the canonical text of the Book of Job in an interdisciplinary reading that combines psychology, hermeneutics, phenomenology, and topological analysis of the space of consciousness (Ogiyenko, 1988). The object of the study was the existential crisis as a psychological phenomenon accompanied by the destruction of the structure of inner space. The subject

was psychotherapeutic mechanisms for overcoming the crisis, reflected in the plot lines and symbolic structures of the Book of Job, in particular in the hero's interaction with spatial boundaries, corporeality, and the image of the Other. In addition to analysing the text of the Book of Job, the study drew on classical works in the fields of psychoanalysis, philosophy and existentialism, including W. James (1918) and K. Jaspers (1946). The concepts of C.G. Jung (1960; 1969) were used to identify unconscious mechanisms of adaptation, compensation, and integration of crisis experience through archetypes and symbols, and the work of V. Frankl (2020) was used to analyse meaning-making processes during an existential crisis. Methodologically, the work was based on a number of complementary approaches. First, hermeneutic analysis was used to reconstruct the semantic layers of the text that reflect the experience of crisis, the destruction of the familiar world order, and the emergence of a new configuration of mental space. Second, a phenomenological approach was used to describe Job's experience as direct evidence of changes in the structure of being – ruptures, collapses, and other transformations of the space of consciousness. Thirdly, a psychoanalytic interpretation is used to identify unconscious psychological defence mechanisms (repression, projection, displacement, identification, devaluation) that ensure the temporary preservation of the pre-crisis spatial structure. In addition, topological analysis is used to describe the spatial characteristics of consciousness through the categories of structure, extension, finiteness, dimensionality, and continuity. Through the deconstruction of the key stages of the plot of the Book of Job, the process of going through an existential crisis was modelled and compared with the psychological experience of military personnel who had survived traumatic events. The integration of these approaches provided a comprehensive understanding of the interaction of cognitive, emotional, and spatial aspects of the subject's mental experience.

◆ Results

The structure of mental space in the Book of Job as a psychological indicator of the organisation of the inner world of the individual. An existential crisis in a person is accompanied by changes in the perception of space, which manifest themselves in the transformation of its topological characteristics. In the case presented in the text of the Book of Job, the destruction of the familiar value-existential order leads to the experience of space as fragmented, disoriented, and devoid of supporting structures. The change in the topology of space reflects deep psychological processes associated with the loss of meaning, the disruption of the integrity of the personal world, and the rethinking of the relationship between man, being, and the transcendent. The pre-crisis space in which Job was inscribed was rigidly and clearly structured. This refers to a mental value system that is projected onto Job's external and internal worlds, forming a single value-oriented space. The division of this space into five semantic loci is shown in Figure 1.

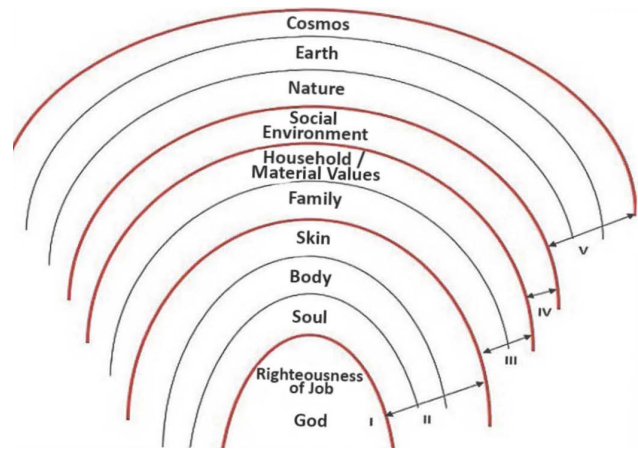


Figure 1. Job's perception of space

Source: developed by the authors

The central core ("God – righteousness") coordinates and integrates other loci, and its stability maintains the structure of the mental space. The bodily locus ("soul – body – skin") and social loci ("family," "social environment") are in constant interaction, creating conditions for adaptation or crisis. The locus "nature – earth – cosmos" sets the existential horizon that the psyche orientates itself towards during a crisis. In the religious beliefs of the Jews of Job's time (2000-1500 BC), human righteousness brings God's blessing, expressed in material goods. Material goods, in a sense, are a symbolic objectification of God's presence (de Joode, 2019). The spiritual value of the material environment is part of the religious and cultural identity of a pious person. The main issue causing Job's existential crisis is his doubt about the truth of his righteousness, caused by inability to reconcile it with suffering. Since these phenomena have no causal connection in the text, there is a need to rethink the traditional value-oriented space – in particular, human self-understanding and the idea of God's presence in human life (locus I). Job's crisis is also triggered by social unrest and natural disasters, as demonstrated in loci IV and V (Job 1:13-19). The fundamental, worldview-ethical concept of "righteousness" becomes the focus of existential issues. The loss of material well-being and family leads to the depth of emotional stress generating a psychogenic reaction – severe reactive depression, which is complemented by suicidal thoughts (Job 6:9-13; 10:18-22; 17:13-16) (locus II). Since Job sees himself as righteous, and therefore the rightful owner of all possible blessings bestowed upon him by God, the disruption of the orderly structure of the value-oriented space leads to an overload of the primitive unconscious defence mechanism of "omnipotent control". According to G.S. Blum (1953), if the desire to control the world is natural for an infant, then Job's unconscious desire to order the value-oriented space through his own righteousness can be seen as a form of his inner hatred. The connection between omnipotence and hatred was established by O.F. Kernberg (2022), thus Job controls God with his righteousness, which is symbolically

expressed in a value-oriented space. He unconsciously feels hatred towards the Creator. The loss of control over the situation and, consequently, unconsciously over God himself, leads to anxiety and causes Job to feel intense aggression. The target of Job's aggression should be God, as the legislator of righteousness and guardian of the value-oriented space, who, despite everything, has essentially violated the fundamental, ontological principles of ethics in Job's life. However, religious tradition does not allow to direct his anger at God, imposing a strict taboo on such expressions of aggression, and the sufferer suppresses it – a protective mechanism of repression comes into play. Along with repression, several other psychological defence mechanisms come into play – retaliation, devaluation, projection, identification. Job curses the day he was born and the night he was conceived, directing destructive aggression at himself (Job 6:9-13; 10:20-22; 17:13-16). In addition, Job unconsciously projects his aggression onto God, attributing to him various forms of destructive behaviour. In addition to reactive depression, compounded by existential depression and suicidal thoughts, the hero develops a pathology associated with the somatisation of mental state – Job is afflicted with “a grievous boils from the sole of his foot to the crown of his head” (Job 2:7). According to J. Bergeret *et al.* (2008), Job's focus on own skin may indicate an oral type, suggesting a disturbance in the formation of his identity. In the context of skin diseases in Job's suffering, D. Anzieu (1985) noted that scratching is one of the archaic forms of directing aggression towards the body. D. Anzieu emphasised that itching is an irresistible desire to be understood by a loved one. In his desire to be understood by God, Job simultaneously expresses hatred through skin disease, which, as a symbol of boundaries, expresses a painful separation from the world.

The psychoanalytic approach of J. Ulnik (2007) to the phenomenon of itching emphasised that it combines key characteristics – obsessiveness, connection with auto-erotic impulses, feelings of guilt and a tendency towards self-punishment, as well as an unconscious desire to harm others through self-destructive actions. Hatred of a significant object manifests itself in self-destruction, where the skin is a symbolic representation of the significant object (Hirsch, 2010). In this context, Job's skin was unconsciously sacrificed to suffering in order to preserve life. The text expresses this idea as follows: “And the Lord said to Satan: Behold, he is in your hand, only spare his soul” (Job 2:6). This formulation conceals a predictably positive outlook on the fruits of suffering in the context of an existential crisis. M. Hirsch (2010) interpreted this biblical idea as the need to give up a part in order to preserve the integrity of the whole. In the text, Job's illness is referred to as leprosy, but in 2000-1500 BC, this term covered various skin diseases, including dermatitis, eczema and psoriasis (de Joode, 2019). Given the symptoms described, including intense itching, flaking and darkening of the skin, weight loss, insomnia and pain, the most likely explanation is that the affliction described was eczema (Job 30:30). In this

context, widespread eczema may reflect a regression to an infantile state of complete dependence, a somatic conversion of repressed fears (Anzieu, 1985). In childhood, Job experienced rejection from a significant object and did not feel a desire for understanding on his part. Since the image of God is often perceived through parent-child relationships, after the shock he experienced, Job perceives that God does not understand him, which stimulates his relentless search for an encounter with beloved object in order to obtain explanations and support. The act of materialising pain becomes a symbol of suffering – Job tears his clothes. The feeling of destruction of a value-oriented space, its external and internal loci, is illustrated in the Book of Job by the image of the awakened Leviathan (Job 40:20-26). This is not only an emotionally charged symbol, but also one of the oldest archetypes that goes beyond the Jewish cultural tradition, such as Lotan, Ouroboros, and Tiamat. The psychologically associative series of images in Job includes Leviathan, a creature that opposes the Creator. Everything that contradicts God was perceived as destructive, dark, and terrible – qualities inherent in Leviathan. Although he is a water creature, this does not limit his potential for negative influence on the world as a whole. The myth of Leviathan has a cross-cultural associative connection with the primordial pre-dawn chaos, the original untamed matter that God subjugates to himself, binding its spontaneity in the fetters of deep sleep. The primordial chaos is dormant, but under certain conditions it is capable of manifesting destructive power. *Materia prima* (the foundation of all that exists) acquires a positive meaning, but retains the tension and momentum that can return the world to its original chaos. Thus, primordial chaos and Leviathan exhibit ambivalence: they are both constructive and destructive, symbolising the beginning and end of existence. This allows to associate the awakening of Leviathan not only with apocalyptic events in general, but also with eschatological expectations, as the very end of world history is caused by the activity of the water monster. Thus, the awakening of Leviathan is a form of Job's feelings and sufferings, and at the same time an ambivalent image raised from the depths of the soul to explain what is happening to the world. According to A. Houtepen (1997), the Book of Job was one of the first to demonstrate the disconnect between suffering and guilt. Job's social environment becomes a source of conflict for him: his closest friends engage in discussions with him about his righteousness, which raises the problem of suffering and guilt (locus IV).

Psychological mechanisms of searching for meaning in conditions of social and internal conflict. The analysis showed that Job experiences an actual loss of meaning in life, but through a process of discussion and reflective activity, his meaning is gradually restored, which correlates with V. Frankl's (2020) concept of the potential of suffering as a factor in the actualisation of existential meaning. The problem of meaning for Job arises not from other people, but from life itself. Relying on material values or children is unstable and shaky, but the destruction

of wealth does not mean a final loss of meaning. Suffering, on the contrary, has a positive existential effect, protecting a person from apathy and spiritual death; suffering makes a person alive (Frankl, 2020). Job's friends tear their clothes and sprinkle ashes on their heads, expressing emotional solidarity with him, but in reality, they show no compassion for him. The monologues of Job's friends demonstrate not empathy, but an existential attack: they psychologically pressure the sufferer. The point is not to get a ready-made answer to the question of suffering, but in the existential search itself, which shapes a true sense of self. Job's friends are struck not so much by his suffering as by the fact that his righteousness, if proven correct, calls into question the familiar orderliness of the value-oriented space. For them, the cause-and-effect structure linking earthly goods, man, righteousness and God may be lost. The old semiotic space in which society is inscribed is at risk of destruction, and with it, the inner world of man and his habitual sense of self as an inhabitant of this space are undergoing a crisis. Job's friends attack him in order to protect their own inner world and preserve the stability of the value-oriented space. They try to convince Job of his moral incompetence, unaware of their own fears that drive their behaviour and aggressive statements. Job becomes a living parable-mockery for those around him, he is shamed and despised (Job 19:14-19). The physical space itself in natural phenomena turns against Job. The hero is focused on the terrifying phenomena of nature: mountains move, the earth is shaken from its foundations and its pillars tremble, the storm steals and the east wind carries away (Job 27:20-21). Thus, unconscious aggression arises.

Psychologists W. James (1918) and K. Jaspers (1946) associated human consciousness with a continuous flow. C.G. Jung (1960; 1969) partially reinterpreted the model of mental flow, emphasising the conventionality of the interrelationships between mental processes. Unconscious processes often function independently of conscious experiences, while conscious processes themselves are fragmented and disjointed. C.G. Jung interpreted the image of the night sky as a metaphor for fragmented consciousness: the sky symbolises the unconscious, while individual stars and constellations correspond to manifestations of consciousness. According to the above, the attractiveness of the starry sky for Job is a projection of the fragmentation of his consciousness, which he feels in this way due to the loss of the connecting meanings of consciousness, as well as a symbol of the loss of the structure of value-oriented space. Space is deprived of its vastness and collapses into the ashes – a place outside the village where the righteous man sits. Wife comes there and urges him to end his life, and his friends come there to engage in a defensive existential discussion with Job. The ashes are a place of separation, outside the village, i.e. outside the rules and constructive meanings such as rituals, social norms and connections; it is a place of chaos, a place that is unorganised and non-sacred. Outside the settlement, space loses both its semantic and physical extent for Job, as it cannot be measured by the

sufferer's journey through depression, illness and torment. The absence of extent is the inability to endure the absence of the Other for long. For Job, the image of the Other is projected onto God, whose absence the sufferer is unable to bear patiently. Thus, Job's six-dimensional space is not only structurally destroyed, but also collapses into a single point – ashes (Job 23:8-9). It is important to emphasise that in theory, the absence of extension does not always entail the minimisation of the measurability of space. In Job's situation, both measurability and extension coincide. At the same time, space is limited by the starry sky on pillars above and hell below, and on the right and left by waters and the end of the earth, which "hangs on nothing" in the void, corresponding to locus V. In this image of the world, the structure of the psyche is symbolically represented. The sky – a symbol of the Super-Ego, exerting pressure on the pillars, which tremble. The sky – the abode of God. Hell – a symbol of the unconscious, where horrors and fears are repressed. The wet, changeable, feminine, maternal unconscious is represented by the ocean waters, and the earth is a symbol of the ego. The absence of a significant object is represented by the symbol of the earth in the void: the structure of the psyche, expressed in the described image of the world, is filled with anxiety, suspended above the abyss of chaos. In a structurally destructive space, Job searches for God, exploring space in different directions, but cannot find Him. This may be evidence in favour of the continuity of space. A spatial rupture occurs when God intervenes from heaven with his voice and utters a reproachful word to Job. This disruption of the usual spatial order creates the conditions for an authentic encounter between the subject and the significant Other, that is, with reality.

◆ Discussion

Previous works have demonstrated a wide range of approaches. For example, J. Campbell (2008) analysed the therapeutic effect of narrative, while in the current study, the narrative of the Book of Job is considered differently: it serves as an analytical model of the topological organisation of consciousness, allowing to trace the configuration of its semantic loci, the mechanisms of their disruption, and the possibilities for reconstructing internal order. C. Jung's (1960; 1969) concepts of fragmented consciousness and symbols of space are integrated into the model of the study, supplemented by an analysis of specific images (the starry sky, ashes, Leviathan), which made it possible to combine psychoanalytic and existential perspectives. T. Bogg & B.W. Roberts (2004) found a link between awareness and deviation, but their analysis did not cover aspects of perception or organisation of psychological space. T. Bogg & B.W. Roberts also linked neuroticism with reactions to crisis. In the present study, these factors were given a concrete spatial embodiment: external disasters and social conflicts transform the internal topology of space, manifesting themselves in "breaks" and "folds" of consciousness. T.C. Pratt & F.T. Cullen (2000) and J.D. Miller & D. Lynam (2006) showed that low self-control,

impulsivity, and hostility are key predictors of deviant behaviour. In contrast, the current study shows how Job's aggressive impulses are directed both at himself and at God, integrating into the spatial structure of his psyche and determining the dynamics of its internal organisation. The work of J. Stala *et al.* (2023) emphasised the role of religious beliefs in overcoming stress, but the approach of this study integrated the religious context into a topological model of the psyche, where religious identity shapes the spatial organisation of consciousness and activates psychological defence mechanisms.

C. Park's (2024) analysis outlined general psychosomatic manifestations of stress, while this study details how somatic symptoms, particularly skin diseases, function as indicators of internal isolation and regressive mental processes in Job. In this approach, bodily manifestations were considered symbolic markers of mental state. The study by A. Maran & M. Raj (2023) highlighted the protective mechanisms of the psyche in crisis situations, but in this work, such mechanisms are specified through plot analysis: they support the structure of mental space and interaction with God, including manifestations of aggression, depression, and existential anxiety. The work of L. IJzerman & A. Halsema (2025) emphasised the influence of the social environment on the psyche, while this analysis showed that the social environment forms the external space of the crisis, which correlates with the internal topology of Job's consciousness. K. Syasyila *et al.* (2024) argued that crisis is accompanied by changes in the perception of space. At the same time, this study elaborated on this statement through an analysis of structure, duration, finiteness, measurability, and continuity, demonstrating the interconnection of these characteristics with mental processes. The work of C. Ó Ciardha & T. Ward (2012) showed a symbolic reflection of mental conflicts, while this article provided a comprehensive analysis of this reflection through the images of Leviathan and Job's skin, which symbolise chaos, isolation and autoaggression. E. Mancinelli *et al.* (2021) noted that crisis causes a change in value-oriented space and moral priorities. In the current study, such transformations are interpreted through the prism of structural-topological changes in the psyche, which allows to be described as the result of a reorganisation of the internal space of consciousness. The results also agreed with the position of E.H. Erikson (1968), who noted that identity crises, as well as existential crises, can be most clearly traced not only in empirical observations or clinical cases, but also in works of art or the actions of prominent people who have found their own solutions to such crises. In this sense, the story of Job is a classic example of how a person goes through a state of disintegration, loss of connection with the world, which can be psychologically interpreted as a form of deviance, and emerges from it by offering a new level of understanding of being. Thus, the analysis has expanded previous approaches by integrating the analysis of the mental, physical, social, and symbolic aspects of the crisis through the spatial topology of consciousness, which

allows for a detailed description of the mechanisms of its passage and potential therapeutic interventions. Existential space in crisis appears not only as a metaphor for suffering, but also as a psychological topology of the disintegration of personal integrity. Modelling these processes using the Book of Job as an example made it possible to recreate the dynamics of the existential crisis and identify the key mental and somatic manifestations that accompany it. The proposed approach demonstrated that the topological structure of existential space can serve as an effective analytical framework for studying mental transformations caused by trauma, crisis, and isolation.

◆ Conclusions

The combination of topological analysis with psychoanalytic and existential concepts has made it possible to identify universal mechanisms of disintegration and reconfiguration of consciousness, which are manifested both in the narrative of the Book of Job and in contemporary contexts of human experience. It has been found that the structure of mental space plays a key role in an existential crisis. Job's pre-crisis space was organised into five loci, which ensured a clear organisation and value-oriented structure. Social upheavals and cataclysms destroy this structure, which correlates with the development of severe reactive and existential depression, as well as with the activation of unconscious psychological defence mechanisms (repression, projection, devaluation, identification). Analysis of the topological characteristics of space has revealed the following transformations: narrowing of extent, reduction of dimensionality, blurring of boundaries between internal and external, and disruption of the continuity of space. These changes reflect psychological disorganisation, loss of meaning, social orientation and alienation from the social and sacred environment. At the same time, they are accompanied by increased anxiety, fear of emptiness, and regressive manifestations of mental processes, emphasising the role of space as a marker of psychophysiological state during a crisis. Job's perception of himself as a righteous man and the rightful owner of goods leads to an overload of the mechanism of "omnipotent control." Psychological defence mechanisms include repression, retribution, devaluation, projection, and identification. Retribution manifests itself in self-punishment – cursing one's birthday, devaluing oneself and directing aggression towards oneself, while projection directs aggression towards God. Somatic manifestations, in particular skin lesions, reflect the mental state through regression, conversion of fear and internal aggression. Changes in the spatial characteristics of the psyche correlate with the dynamics of the internal state: loss of spatial continuity corresponds to a breakdown in meaning, narrowing of space corresponds to a limitation of the field of perception, disruption of structure corresponds to a breakdown in the hierarchy of values, and distortion of dimension corresponds to a loss of depth of self-awareness. The feeling of finitude determines the limits within which the

restoration of the meaning of life is possible. An analysis of the plot of the Book of Job showed that intense emotional pain, internal protest, and a state of devastation are critical psychological mechanisms that stimulate a rethinking of one's own existence, mobilise mental resources to integrate crisis experiences, and contribute to the formation of a new meaning in life. This opens up prospects for the development of psychotherapeutic strategies, in particular for supporting military personnel and others who have experienced traumatic events. Further research may focus on testing the hypothesis that therapeutic correction

of spatial perception contributes to the normalisation of mental state and effective recovery from existential crisis.

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◆ References

- [1] Anzieu, D. (1985). *The skin-ego*. Paris: Dunod.
- [2] Bergeret, J., Bécache, A., Boulanger, J.-J., Chartier, J.-P., Dubor, P., Houser, M., & Lustin, J.-J. (Eds.). (2008). *Theoretical and clinical pathological psychology*. Paris: Elsevier Masson SAS.
- [3] Blum, G.S. (1953). *Psychoanalytic theories of personality*. New York: McGraw-Hill Book Company.
- [4] Bogg, T., & Roberts, B.W. (2004). Conscientiousness and health-related behaviors: A meta-analysis of the leading behavioral contributors to mortality. *Psychological Bulletin*, 130(6), 887-919. doi: 10.1037/0033-2909.130.6.887.
- [5] Campbell, J. (2008). *The hero with a thousand faces*. Novato: New World Library.
- [6] de Joode, J. (2019). *Metaphorical landscapes and the theology of the Book of Job: An analysis of Job's spatial metaphors*. Leiden: Brill.
- [7] Erikson, E.H. (1968). *Identity: Youth and crisis*. New York: W.W. Norton & Company.
- [8] Frankl, V. (2020). *Man's search for meaning*. Kyiv: Family Leisure Club.
- [9] Hirsch, M. (2010). *My body belongs to me – and I can do with it what I want: Dissociation and enactments of the body from a psychoanalytic perspective*. Giessen: Psychosocial Publishing House.
- [10] Houtepen, A. (1997). *God, an open question: Theological perspectives in a culture of agnosticism*. Zoetermeer: Meinema.
- [11] IJzerman, L., & Halsema, A. (2025). Burnout as breakdown of one's existence in the world. *Medicine, Health Care and Philosophy*, 28, 595-606. doi: 10.1007/s11019-025-10281-8.
- [12] James, W. (1918). *The principles of psychology*. New York: Henry Holt and Company.
- [13] Jaspers, K. (1946). *General psychopathology* (4th ed.). Berlin: Springer.
- [14] Jung, C.G. (1960). *Answer to job*. New York: Meridian Books.
- [15] Jung, C.G. (1969). *On the nature of the psyche: (From collected works vol. 8)*. Princeton: Princeton University Press.
- [16] Kernberg, O.F. (2022). *Aggression in personality disorders and perversions*. New Haven: Yale University Press.
- [17] Larsen, D.W. (2020). *The use of critical spatial theory in a canonical reading of the Hebrew scriptures*. (Master's thesis, St Mary's University, Twickenham, UK).
- [18] Mancinelli, E., Liberska, H.D., Li, J.-B., Espada, J.P., Delvecchio, E., Mazzeschi, C., Lis, A., & Salcuni, S. (2021). A cross-cultural study on attachment and adjustment difficulties in adolescence: The mediating role of self-control in Italy, Spain, China, and Poland. *International Journal of Environmental Research and Public Health*, 18(16), article number 8827. doi: 10.3390/ijerph18168827.
- [19] Maran, A., & Raj, M. (2023). Integrating Oldenburg's concept of place and Soja's concept of space: A spatial enquiry of denial, repression, and closure in Ishiguro's "The Remains of the Day". *Humanities and Social Sciences Communications*, 10, article number 186. doi: 10.1057/s41599-023-01676-0.
- [20] Miller, J.D., & Lynam, D. (2006). Structural models of personality and their relation to antisocial behaviour: A meta-analytic review. *Criminology*, 39(4), 765-798. doi: 10.1111/j.1745-9125.2001.tb00940.x.
- [21] Ó Ciardha, C., & Ward, T. (2012). Theories of cognitive distortions in sexual offending: What the current research tells us. *Trauma, Violence, & Abuse*, 14(1), 5-21. doi: 10.1177/1524838012467856.
- [22] Ogiyenko, I. (Ed.). (1988). *The Bible or the Holy Scriptures of the Old and New Testaments*. Retrieved from <https://diasporiana.org.ua/religiya/9271-bibliya-abo-knigi-svyatogo-pisma-starogo-i-novogo-zapovitu/>.
- [23] Park, C. (2024). *All turned against Him: Exploring the social dimensions of Job's suffering in light of the Mediterranean ethos of honor and shame*. (Doctoral dissertation, Brite Divinity School & Texas Christian University, Fort Worth, Texas, USA).
- [24] Pratt, T.C., & Cullen, F.T. (2000). The empirical status of Gottfredson and Hirschi's general theory of crime: A meta-analysis. *Criminology*, 38(4), 931-964. doi: 10.1111/j.1745-9125.2000.tb00911.x.
- [25] Stala, J., Osewska, E., & Bochenek, K. (2023). The sufferings of the biblical Job as an icon of postmodernity: The "loneliness" of God and the human being in a consumerist paradise. *Journal of Religion and Health*, 62, 327-337. doi: 10.1007/s10943-021-01323-5.

- [26] Syasyila, K., Gin, L.L., Nor, H.A.M., & Kamaluddin, M.R. (2024). The role of cognitive distortion in criminal behavior: A systematic literature review. *BMC Psychology*, 12, article number 741. doi: [10.1186/s40359-024-02228-0](https://doi.org/10.1186/s40359-024-02228-0).
- [27] Ulnik, J. (2007). *Skin in psychoanalysis*. London: Karnac Books.

Інтерпретація сприйняття простору в екзистенційній кризі: психологічний аналіз тексту «Книга Йова»

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♦ **Анотація.** У статті аналізується психологічна модель, здатна забезпечити підтримку військовослужбовцям, що опинилися у екзистенційній кризі – стані, що загрожує цілісності «Я», сенсу буття та структурі особистісних цінностей. Метою статті було на прикладі «Книги Йова» виявити зв'язок між станом людини в екзистенційній кризі та сприйняттям нею простору, вираженого у топологічних характеристиках. «Книга Йова» була обрана як дослідницький матеріал, оскільки в ній представлені складні психоемоційні переживання людини в кризовій ситуації, що проявляються у символічному описі простору і дозволяють проаналізувати вплив внутрішнього стану на його сприйняття. За допомогою історико-психологічної реконструкції, герменевтичного та феноменологічного підходів, а також аналітичних засобів динамічної психології проведено топологічний аналіз психічного простору. Встановлено, що зміни просторових характеристик корелюють з етапами внутрішньої динаміки: втрата безперервності простору відповідає розірваності сенсу, звуження протяжності – обмеженню поля сприйняття. Дослідження також підтвердило, що порушення структурованості відповідає розпаду ієрархії цінностей, спотворення мірності – втраті глибини самоусвідомлення. Відчуття скінченності сприяє формуванню меж, у яких можливе відновлення сенсу життя. Аналіз сюжету «Книги Йова» засвідчив, що переживання інтенсивного емоційного болю, внутрішнього протесту та станів спустошення виступають критичними психологічними механізмами, які стимулюють переосмислення власного буття, мобілізують ресурси психіки для інтеграції кризового досвіду та сприяють формуванню нового сенсу життя. Результати дослідження можуть бути використані для розробки моделі терапевтичного простору, у якій переживання болю, протесту та спустошення слугують умовами відновлення сенсу життя. Така модель може застосовуватися у психологічній підтримці осіб, які пережили травму, втрату або екзистенційну кризу, сприяючи інтеграції кризового досвіду та формуванню адаптивних стратегій подолання психологічних труднощів

♦ **Ключові слова:** девіантна поведінка; безперервність; топологічний аналіз; структурованість; символізм; скінченність



Towards a unified psychotherapy in the 21st century: Paradigm shifts, educational reforms, and global challenges in the German-speaking world and beyond

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◆ **Abstract.** In light of profound global crises and evolving health policies, psychotherapy is undergoing a crucial transformation that increasingly requires integrated and evidence-based professional training systems. The purpose of this article was therefore to analyse the paradigm shift toward unified psychotherapy, examining educational reforms in the German-speaking world as a central case study within a broader international context. The investigation was based on a comprehensive analysis of scientific literature, policy documents, and international competency frameworks. Through the analysis of scholarly sources and normative documents, the study examined educational reforms in Germany and Austria that reflected a transition from fragmented, modality-oriented learning toward university-based, integrative pathways focused on intermodal competences, empirical literacy, and deferred specialisation. The theoretical foundations of this movement were described, presenting research on common factors such as therapeutic alliance, empathy, and resource activation as critical for therapeutic success beyond technique-specific effects. Furthermore, the international policy landscape was examined, with comparative examples from the United Kingdom, Norway, and Ukraine illustrating the adaptability of diverse integration strategies, while key challenges such as the adoption of AI-driven supervision systems and the complex diagnostic shift to the ICD-11 dimensional model were also highlighted. Finally, the potential benefits of unification, including a strengthened professional identity, enhanced cross-border mobility, and improved quality assurance, were weighed against significant risks such as theoretical dilution, identity conflicts, and under-resourced implementation. The results of this analysis could be used by policymakers, educational institutions, and professional associations to guide the strategic development of evidence-based, internationally coherent, and ethically sound curricula for psychotherapy training

◆ **Keywords:** psychotherapy integration; ICD-11; artificial intelligence; intermodal competences; evidence-based practice

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♦ Introduction

Psychotherapy of the 21st century finds itself at a complex and consequential juncture, shaped by the simultaneous pressures of profound global crises, rapidly evolving health policy landscapes, shifting conceptions of professional identity, and significant advances in scientific understanding of mental health and its determinants. The world is navigating a period marked by overlapping disruptions: persistent socio-political instability and polarisation, recurrent economic downturns, the lingering public health and social effects of the COVID-19 pandemic, protracted armed conflicts including the ongoing war in Ukraine, sustained patterns of forced displacement and large-scale migration, and the escalating threats associated with the global climate emergency. As stated by K. Trost *et al.* (2024), these forces are not only destabilising communities but are also redefining the very parameters within which mental health is understood, prioritised, and addressed. As a result, mental health has shifted from being perceived as a specialised, often marginal branch of healthcare to being recognised as a key dimension of human development and an essential pillar of societal resilience. The measurable and multidimensional impact of psychotherapy is increasingly recognised, including improvements in public health indicators, greater workforce productivity, stronger social cohesion through empathy and mutual trust, and enhanced democratic stability supported by active and psychologically healthy citizens. Reports by the World Health Organization underscored, that investments in mental health yielded substantial social and economic returns, linking psychological well-being to sustainable development and social resilience (WHO, 2025a; 2025b). Global governance bodies, such as the Organisation for Economic Co-operation and Development and the United Nations, had explicitly linked population mental health to the achievement of sustainable development goals, emphasising that investments in mental health produced broad social and economic benefits (OECD, 2021; Heymann & Sprague, 2023).

According to S. Siddiqui *et al.* (2022), psychotherapy is increasingly regarded not merely as a clinical intervention for individual distress but as a strategic public health instrument capable of addressing a broad spectrum of psychological and psychosocial needs. The scope of psychotherapy now extends from treating severe psychiatric disorders to supporting psychological adaptation in the face of societal upheaval, chronic stressors, and global emergencies. This broadening of focus necessitates corresponding changes in professional formation, service delivery models, and the epistemological frameworks guiding psychotherapeutic practice. Across different countries, this transformation parallels the evolution of psychologist certification systems grounded in professional standards of psychological practice. As noted by O. Voloshyna (2024), the most advanced models established in the United States of America (USA), Canada, and the United Kingdom demonstrate that comprehensive regulation requires not only standardised certification procedures but also unified practice requirements and ethical compliance frameworks. Building on these interna-

tional developments, the German-speaking world, comprising Austria, Germany, and Switzerland, offers an instructive case for examining how psychotherapy can be structurally and conceptually integrated into a coherent, adaptable, and evidence-driven professional system. The region's historical diversity of therapeutic schools, long-standing legal recognition of psychotherapy as a health profession, and strong academic traditions create both opportunities and challenges for ongoing reform (Humer *et al.*, 2020). A growing consensus has crystallised among policymakers, educators, researchers, and professional associations in favour of transitioning toward integrative and unified psychotherapy. This evolving model emphasises functional adaptability, systematic use of shared therapeutic factors, and flexibility in clinical decision-making guided by empirical evidence rather than by rigid adherence to a single theoretical orientation. Importantly, this shift is not confined to legislative texts or ministerial policy papers. According to S.M. Hingley (2020), the ongoing transformation manifests in professional discourse, educational reforms, theoretical integration, and the evolving competencies required of new practitioners. This momentum towards unification reflected broader trends in the health professions towards interdisciplinary synthesis, outcome-oriented training and the scalability of effective interventions. In the German-speaking countries, the main challenge and opportunity lay in translating this policy and academic consensus into professional practice capable of meeting the complex mental health needs of an increasingly interconnected and crisis-prone world. Accordingly, the aim of this article was to analyse how psychotherapy needed to evolve conceptually, institutionally, and epistemologically in order to remain capable of responding to changes in mental health needs within a global context characterised by instability and interdependence. The study employed a range of general scientific methods aimed at systematising and summarising changes within the field of psychotherapy. In particular, the method of retrospective analysis was applied to examine academic sources and practical materials that reflect the evolution of approaches in the discipline. The legislative frameworks of Austria and Germany were analysed, with particular attention to regulatory documents governing educational programmes for psychotherapists. Further interpretation of the reforms was carried out using the comparative-analytical method, which made it possible to identify common and divergent trends in the development of psychotherapy education systems. The final stage of the research involved the systematisation of the obtained results and the formulation of forecasts regarding future prospects of the field through the application of content analysis and elements of prognostic modelling, taking into account the contemporary political context.

♦ Projected structure of the future Austrian psychotherapy curricula

Austria's Psychotherapy Act of 1991 marked a decisive turning point in the formal recognition of psychotherapy

as an independent health profession (Federal Chancellery of Austria, 1991). Before its enactment, psychotherapy training and practice in Austria existed in a comparatively unregulated environment, shaped predominantly by private associations and modality-specific traditions. The law introduced a binding legal framework that defined psychotherapy, codified the rights and duties of practitioners, and established the list of psychotherapists, an official national register maintained by the Federal Ministry of Social Affairs, Health, Care and Consumer Protection (EAP, 2017). It institutionalised psychotherapy as a regulated health service alongside medicine, psychology, and other allied professions. One of the distinctive features of the 1991 Act was its training model, which delegated educational authority to private, school-specific institutes, each accredited to deliver instruction in a single psychotherapeutic modality. This arrangement preserved Austria's strong tradition of theoretical pluralism, allowing depth-psychological, behavioural, systemic, humanistic – experiential, and integrative schools to maintain their epistemological identities and safeguard their clinical methodologies (Federal Chancellery of Austria, 1991). By 2024, this approach had produced a mosaic of 23 officially recognised psychotherapeutic methods, reflecting a wide range of paradigms and international influences. While this pluralism ensured methodological richness, it also had unintended structural consequences. As G. Schmid *et al.* (2025) observed, because training was organised predominantly within single therapeutic modalities, trainees primarily developed a professional identification with their respective schools rather than with psychotherapy as a unified discipline. This modality-specific form of professional socialisation constrained inter-paradigmatic exchange and impeded the formation of a shared professional identity. Moreover, the two-stage structure consisting of a general foundational training phase followed by an advanced, modality-specific training phase often created logistical and financial barriers. Entry into the advanced phase required the completion of the foundational training, delaying hands-on clinical practice and imposing significant costs (Legal framework of psychotherapy training in Austria, n.d.). The decentralised, institute-based model also meant that standards of research integration, academic rigour and competency assessment varied widely between providers.

Against this backdrop, the 2023/24 reform of the Psychotherapy Act represented a comprehensive legislative overhaul that directly addressed the structural limitations of the earlier model by embedding psychotherapy education within the public university system and aligning it with the Bologna Process (Parliament of Austria, 2024). Under the Psychotherapy Act No. 49/2024, the previous two-tier sequence of foundational training and advanced, modality-specific training was replaced with a Bologna-compatible Bachelor-Master structure delivered by accredited universities, thereby creating a coherent, academically anchored pathway from initial enrolment to licensure (Federal Chancellery of Austria, 2024). The central goals of the reform were to preserve Austria's tradition of theoretical diversity while establishing a shared generalist foundation for all students; to foster a unified professional identity through cross-modal training; to embed empirical literacy and outcome evaluation into the curriculum from the outset; and to ensure full compatibility with European Union (EU) directives on the recognition of professional qualifications. The future curricula were designed to be comprehensive, evidence-based and internationally comparable. The new two-cycle structure replaced the former institute-based model of foundational training and advanced, modality-specific training with an academically standardised pathway. It sought to balance theoretical diversity with unified professional competencies, to integrate research from the beginning of training, and to align Austrian psychotherapy education with EU and Bologna standards. By aligning with European and international standards, the reformed Austrian training pathway ensures that graduates will meet or exceed the 3,200-3,500 total training hours typically required for cross-border recognition. The expected outcomes of this reform include greater methodological flexibility, improved integration of research and clinical practice, a stronger shared professional identity, and increased transparency for both domestic and international stakeholders' licensure (Federal Chancellery of Austria, 2024). In short, Austria is transitioning from a historically fragmented, institute-based training landscape to a centrally regulated, academically embedded, and internationally harmonised education system – one that aims to balance the preservation of theoretical diversity with the cultivation of a unified, evidence-driven profession (Table 1).

Table 1. Characteristics of the Austrian educational reform in psychotherapist training

Aspect	Bachelor's programme (180 ECTS/6 Semesters)	Master's programme (120 ECTS/4 Semesters)
Main focus	Generalist professional formation	Advanced clinical competence and structured specialisation
Duration and credits	180 ECTS over six semesters	120 ECTS over four semesters
Core content	Psychology, neuroscience, developmental processes, and psychopathology (in accordance with ICD-11 and DSM-5-TR)	Evidence-based interventions across modalities; case formulation using transdiagnostic and modality-specific approaches
Exposure to therapeutic schools	Multiple therapeutic schools without early specialisation to promote openness and integrative thinking	Specialisation in psychodynamic, cognitive-behavioural, systemic, humanistic, or integrative methods after the first year
Research training	Research literacy through quantitative and qualitative methods	Original clinical-research thesis integrating empirical data and reflective practice

Table 1. Continued

Aspect	Bachelor's programme (180 ECTS/6 Semesters)	Master's programme (120 ECTS/4 Semesters)
Practical components	Foundational skills in communication, counselling, and ethical reasoning, including legal frameworks such as General Data Protection Regulation compliance	Extensive supervised clinical practice between 600 and 1,000 hours in accredited settings
Interdisciplinary elements	Not specified beyond foundational exposure	Interprofessional collaboration modules with psychiatry, social work, and allied health disciplines
Assessment	Integrated research project (literature-based or empirical thesis)	Clinical-research thesis, outcome monitoring, and feedback-informed treatment
Overall purpose	Broad understanding of psychology and related sciences; promotion of openness and integrative thinking	Development of advanced professional expertise while retaining core competencies shared across the profession

Note: ECTS – European Credit Transfer and Accumulation System

Source: developed by the authors based on Federal Chancellery of Austria (2024), Parliament of Austria (2024)

The bachelor's degree in Psychotherapy (6 semesters, 180 ECTS) provides broad foundational competencies covering all recognised therapeutic schools. From the very first semester, students are introduced to the four main paradigms – psychodynamic, cognitive-behavioural, humanistic – experiential, and systemic – family therapy. Alongside these school-specific components, there is an explicit promotion of theoretical pluralism based on empirical evidence and critical comparative evaluation. The curriculum includes core modules in general and clinical psychology, medical foundations, psychopathology according to ICD-11 and DSM-5-TR, lifespan developmental psychology, therapeutic communication skills, and self-experience. A major objective is to introduce students early to scientific work: statistics, research methodology, evidence appraisal, and basic health services research are embedded from the first year. From the second year onward, the practical component increases progressively. Through skills labs, simulated patient encounters, and structured practice observation in clinical and psychosocial institutions, students acquire essential skills in diagnostic formulation, treatment planning, and intervention delivery. Parallel advanced modules address culturally and migration-sensitive psychotherapy, health promotion, prevention, and ethical decision-making. The Master's degree in Psychotherapy (4 semesters, 120 ECTS) builds on this broad base to develop advanced clinical expertise. In the first two semesters, there is an in-depth focus on complex disorders, comorbid presentations, and transdiagnostic treatment approaches. A methods specialisation track allows for targeted concentration in one or more therapeutic schools, though the choice is non-exclusive, with integrative modules remaining compulsory. Crucially, the programme integrates theory, practice, and research: students complete at least 600 hours of supervised clinical practice, produce a Master's thesis with an empirical or applied practice focus, and document their professional growth in a competency-based portfolio.

Core graduate competencies encompass a comprehensive set of professional, clinical, and reflective skills. Graduates are expected to demonstrate proficiency in ICD-11- and DSM-5-TR-compliant diagnostics and in developing nuanced, individualised case formulations. They should be capable of establishing and maintaining strong therapeutic

alliances that sensitively account for individual differences as well as cultural and social contexts. In clinical practice, they are to apply knowledge of therapeutic processes and common factors to the selection, implementation, and adaptation of interventions. Competent outcome monitoring and quality-assured documentation form an integral part of their professional responsibilities. Furthermore, graduates are expected to continuously integrate emerging scientific evidence into their practice, thereby fostering a commitment to lifelong learning and ongoing professional development. Designed with an international orientation, the curriculum offers exchange and placement opportunities via Erasmus+ and bilateral agreements with universities in the EU, Canada, and Australia, fostering not only technical proficiency but also intercultural competence among graduates (Federal Chancellery of Austria, 2024). This reform positions psychotherapy in Austria as a university-based, research-driven, and fully professionalising education. The curriculum is structured to combine theoretical depth with methodological openness, bridge empirical research and clinical practice, and ensure mobility within the European labour market. The emphasis shifts away from school-specific separation toward a shared professional identity grounded in common competencies and evidence-based standards. Germany's Psychotherapists Act (1999) constituted a landmark legislative milestone in the statutory recognition of psychotherapy as a regulated health profession. Before its enactment, psychotherapeutic services in Germany were provided through a patchwork of professional routes, often by physicians, psychologists and social workers with additional psychotherapeutic training, but without a uniform legal status or a centralised framework for licensure (EAP, n.d.). The Psychotherapists Act created, for the first time, two distinct professional categories: psychological psychotherapists and child and adolescent psychotherapists. This reform granted both groups independent licensure and the legal authority to provide psychotherapy within the statutory health insurance system, thereby institutionalising psychotherapy as an autonomous health profession within the German healthcare system (Melcop *et al.*, 2019). A central and controversial feature of the 1999 Psychotherapists Act was its restriction of reimbursable modalities under the statutory health

insurance system to three “guideline procedures”: behavioural therapy, psychodynamic therapy, and psychoanalysis. This selection was based on the scientific evidence available at the time, as evaluated by the Federal Joint Committee, Germany’s highest decision-making body in

the joint self-governance of the healthcare system. While the decision reflected the then-prevailing evidence base and aimed to ensure quality assurance, it had far-reaching structural consequences. Table 2 showed the structural components and features of the Act.

Table 2. Structural consequences of the Psychotherapists Act 1999

Consequences	Description
Exclusion of other approaches	Exclusion of other scientifically validated approaches from public reimbursement, effectively marginalising them within mainstream service provision
Delayed recognition of systemic therapy	Despite a strong international evidence base and recognised status in many countries, systemic therapy was not included in the list of officially state-regulated methods of psychotherapy in Germany (Richtlinienverfahren) until 2020, resulting in a delay of its official recognition of more than twenty years
Marginalisation of integrative and humanistic models	Emerging integrative and process-based models, as well as humanistic approaches, were relegated to private practice settings, accessible only to those able to self-fund treatment

Source: developed by the authors based on Psychotherapists Act (1999)

The regulatory framework established by the 1999 Psychotherapists Act entrenched a selective recognition of therapeutic approaches, restricting methodological diversity within publicly funded care. This resulted in the prolonged marginalisation of systemic, integrative, and humanistic models despite their international scientific validation. This modality restriction had a double impact. It affected service delivery by limiting therapeutic choices for clients within the statutory health insurance system, and it influenced academic and professional training by structuring university curricula and postgraduate programmes primarily around the three reimbursable modalities. Consequently, students and trainees who wished to pursue careers within the publicly funded healthcare system were incentivised, if not compelled, to specialise in one of the guideline procedures, perpetuating a modalities-first professional identity and inhibiting cross-school integration. Moreover, the rigid reimbursement framework created a two-tier psychotherapy market: on one side, publicly reimbursed care largely restricted to behavioural and psychodynamic/psychoanalytic methods; on the other, privately funded provision offering a broader range of scientifically sound approaches. This segmentation reinforced structural inequalities in access, as clients from lower socio-economic backgrounds were more likely to receive treatment within the statutory health insurance system-approved modalities, whereas those with greater financial resources could access a wider range of options, including systemic, integrative, and humanistic methods. The delayed recognition of systemic therapy in 2020, following a comprehensive evaluation by the Institute for Quality and Efficiency in Health Care (IQWiG, 2017), illustrated the slow pace of structural adaptation within the German psychotherapy system. Although this inclusion represented an important broadening of the publicly reimbursed repertoire, it also highlighted the need for a more dynamic and inclusive process of integrating new evidence-based methods into the official canon (von Sydow *et al.*, 2024).

From a professional development standpoint, the 1999 Psychotherapists Act provided legal regulation, title

protection, and formal recognition of psychotherapy as a health profession. At the same time, it institutionalised a restrictive framework that, until the 2020 reforms, limited methodological diversity, hindered the integration of new evidence-based approaches, and maintained structural fragmentation within the German psychotherapy system (Melcop *et al.*, 2019). These historical arrangements produced a professionally and institutionally paradoxical landscape. The coexistence of multiple paradigms within the German-speaking psychotherapy tradition sustained theoretical diversity, methodological innovation, and an extensive therapeutic repertoire. The simultaneous presence of psychodynamic, cognitive-behavioural, humanistic-experiential, and systemic orientations enabled practitioners to draw on distinct conceptual frameworks and technical approaches, thereby enriching the epistemological diversity of the field. This pluralistic structure also stimulated both intra- and inter-modality research, fostered professional reflexivity, and facilitated the contextual adaptation of emerging international models to local clinical practice (Možina, 2024). At the same time, the institutional framework that sustained this diversity reinforced rigid compartmentalisation among modalities, contributing to professional isolation and limited cross-paradigm exchange. As W. Rief *et al.* (2024) highlighted, training institutes often functioned as autonomous epistemic communities with distinct vocabularies, assessment systems, and supervisory traditions, which impeded the transfer of competencies and collaboration across schools. This fragmentation constrained clinical innovation and hindered efforts to develop unified training standards ensuring core professional competencies. Furthermore, the system demonstrated limited adaptive capacity in response to evolving scientific evidence. Despite growing research emphasis on common therapeutic factors, process-based approaches, and the integration of neuroscientific, developmental, and cultural perspectives, structural divisions between modalities impeded the systematic translation of such findings into practice and education. Consequently, a gap persisted between the expanding international evidence base and the more

slowly evolving, school-based structures of training and reimbursement in the German-speaking context (Melcop *et al.*, 2019). Psychotherapy in Austria, Germany, and Switzerland has evolved into a profession characterised by rich theoretical and methodological diversity, supported by a robust legal framework and a high degree of professional legitimacy. At the same time, the field remained structurally fragmented and systemically inflexible. According to the conclusions of M. Možina (2024), this persistent tension between diversity and coherence became a central driving force behind the movement toward unification,

as policymakers, educators, and practitioners increasingly recognised the need to reconcile pluralism with systemic integration. The emerging consensus has been that such unification must preserve the theoretical depth and distinctiveness that has been the hallmark of each tradition, while ensuring a shared foundation of competencies and a capacity for evidence-responsive adaptation that meets the demands of contemporary mental health care. The Table 3 provides a comparative analysis of key structural, pedagogical and target aspects of psychotherapeutic education and licensing reforms in Germany and Austria.

Table 3. Comparative characteristics of educational reforms in Germany (2020) and Austria (2023/24)

Aspect	Germany – Psychotherapists Act Reform (2020)	Austria – Psychotherapy Act Reform (2023/24)
Context and rationale	Aimed to overcome the fragmented, institute-based postgraduate model and variability in competencies	Replaced the two-tier “Propädeutikum – Fachspezifikum” system established in 1991, addressing cost, duration, and limited adaptability
Core structural change	Introduced a fully university-based, method-open training path with national licensure exam	Implemented a Bologna-compatible Bachelor-Master framework at accredited universities within the European Higher Education Area
Pedagogical focus	Integrated adult and child/adolescent psychotherapy; emphasised cross-modal core competencies and delayed specialisation	Early theoretical pluralism, mandatory research literacy, seamless progression from foundational to specialised content
Intended outcomes	Unified professional identity, improved research-practice integration, and greater adaptability to complex clinical demands	Academic comparability, enhanced scientific integration, faster entry into practice, and EU-wide qualification recognition
Shared objectives	Both reforms aim to dismantle modality silos, strengthen empirical literacy, and foster a cohesive professional identity	–

Source: developed by the authors based on R. Poss-Doering *et al.* (2021), L. Maier *et al.* (2024), W. Rief *et al.* (2024)

The shaping of psychotherapy’s future is inextricably linked to the architecture of its training systems. Curricula, pedagogical philosophies, and institutional governance not only transmit technical knowledge but also form the cognitive, ethical, and relational frameworks through which future therapists interpret clinical reality. In this sense, educational reform functions as a strategic lever for systemic transformation, influencing professional identity, theoretical allegiance, and readiness for evidence-based, adaptive practice. In the German context, 2020 Psychotherapists Act Reform represented a historic rupture with the decentralised, institute-based postgraduate model that had prevailed for more than two decades. That earlier system, though strong in modality-specific depth, had entrenched structural silos, hindered the translation of emerging research into practice, and resulted in high variability in foundational competencies among new entrants. As L. Maier *et al.* (2024) emphasised, the new legislation created a fully university-based, method-open degree pathway, culminating in licensure after a nationally standardised qualifying examination. According to R. Poss-Doering *et al.* (2021), the design was driven by the recognition that fragmented training ecosystems cannot meet the demands of modern mental health care, shaped as they are by rising comorbidity rates, changing demographic profiles, service-delivery reforms, and the global shift toward empirically supported interventions. Three design principles illustrate its transformative scope. First, the integration of adult and child/adolescent psychotherapy into a single qualification

dismantled a long-standing and artificial separation, enabling cross-lifespan competence and greater workforce flexibility. Second, the early embedding of cross-modal core competencies – including ICD- and DSM-aligned diagnostics, therapeutic alliance formation, collaborative treatment planning, ethical reasoning, cultural sensitivity, and outcome monitoring – shifted the emphasis toward competency-based progression rather than front-loaded theoretical instruction. Third, the deferral of methodological specialisation to postgraduate study ensured that all graduates acquire a broad, evidence-based foundation before committing to a school-specific framework (Poss-Doering *et al.*, 2021). Early evaluation data show graduates with greater openness to integration, process-based reasoning skills, and higher procedural adaptability, while the university setting closes the research – practice gap by embedding empirical inquiry into clinical formation (Rief *et al.*, 2024).

In Austria, the 2023/24 reform of the Psychotherapy Act was equally consequential. The previous two-stage structure, consisting of a general foundational training phase followed by modality-specific training, had been in place since 1991. While this model guaranteed theoretical immersion, it was cost-intensive, time-consuming, and structurally resistant to rapid incorporation of new scientific evidence. As W. Rief *et al.* (2024) noted, the new Bologna-compatible Bachelor–Master framework situated psychotherapy education entirely within accredited universities. According to the Federal Ministry of Education, Science and Research (Austria) (2024), this structure aligns training with the

standards of the European Higher Education Area, ensuring the comparability and transparency of qualifications, and is expected to facilitate future EU-wide recognition under Directive 2005/36/EC. This reform also reflects broader European efforts to modernise psychotherapy training and address workforce sustainability challenges across the continent (Možina, 2024). The reform introduces theoretical pluralism from semester one, mandatory research literacy and methodological training, and seamless progression from foundational to specialised content, removing the rigid stage boundaries that previously created redundancy and slowed entry into practice. Both reforms converge on shared strategic objectives: dismantling modality silos, building a common professional identity, increasing adaptability for complex and comorbid presentations, and embedding empirical literacy as a baseline skill. In doing so, Germany and Austria now stand alongside international leaders such as the Netherlands, Norway, and Canada, where university-clinic partnerships and competency-based licensure systems have already shown gains in workforce readiness, patient outcomes, and interdisciplinary collaboration. Importantly, these changes signal a cultural redefinition of psychotherapy – from a federation of competing epistemic schools toward a cohesive health profession grounded in shared scientific and ethical standards. Sustained investment and policy support will determine whether these educational reforms achieve their transformative potential or remain symbolic restructuring without substantive system impact (Poss-Doering *et al.*, 2021; Rief *et al.*, 2024). Overall, the reforms in Germany and Austria represent a significant step towards the modernisation and professional consolidation of psychotherapy within the European higher education and healthcare landscape. They highlight a shared regional commitment to competency-based training, integration of research and clinical practice, and the long-term sustainability of the mental health workforce.

◆ Theoretical integration and universal factors of psychotherapeutic effectiveness

The ongoing movement toward unified psychotherapy derives its most compelling empirical justification from a substantial and convergent body of research on common factors – those relational, motivational, and processual elements that consistently predict positive treatment outcomes regardless of the specific modality applied. Over more than five decades, meta-analyses, large-scale process – outcome studies, and theoretical syntheses have repeatedly shown that while method-specific techniques can be effective, they typically account for a relatively modest proportion of the variance in outcomes. By contrast, J.B. Persons *et al.* (2023) defined factors such as the quality of the therapeutic alliance, the therapist's capacity for empathic attunement, the client's expectations and hope for change, the degree of emotional activation during sessions, and the effective mobilisation of personal and social resources account for a substantially greater proportion of therapeutic success. The therapeutic alliance – comprising agreement on goals,

consensus on tasks, and the quality of the relational bond – has been repeatedly identified as one of the strongest predictors of treatment outcomes across settings, populations, and diagnoses. Therapist empathy, in its multidimensional form (affective resonance, cognitive perspective-taking, and communicative attunement), is another robust predictor, influencing both engagement and adherence. As C. Flickiger *et al.* (2018) concluded, the therapeutic alliance served as the central vehicle for change across orientations, with responsiveness and relational attunement identified as critical predictors of outcome. These findings directly challenge the mid-20th-century orthodoxy that professional effectiveness rests on loyalty to a single “pure” school of psychotherapy. Instead, as D. Meier *et al.* (2024) argued, the shift toward competency-based and process-oriented training aimed to prepare therapists to deliberately target mechanisms of change that transcended specific methods. In practice, this orientation has been operationalised in a range of process-based and transdiagnostic models. The Unified Protocol for Transdiagnostic Treatment of Emotional Disorders integrates cognitive-behavioural and emotion-focused techniques to address shared mechanisms such as maladaptive emotional avoidance, cognitive reappraisal deficits, and dysfunctional action tendencies – core processes implicated in anxiety, depressive, and related disorders (Barlow *et al.*, 2017). Acceptance and Commitment Therapy combines behavioural, cognitive, and mindfulness-based strategies to cultivate psychological flexibility – the capacity to act in alignment with personal values despite distressing internal experiences – a process relevant across numerous diagnostic categories, from chronic pain to addiction (Hayes *et al.*, 2012). According to H. Levenson (2017), Cyclical Psychodynamics exemplifies a different integrative pathway: it merges psychodynamic insights into unconscious relational patterns with interpersonal process interventions that directly engage the here-and-now therapeutic relationship, demonstrating that depth-oriented traditions can retain conceptual sophistication while adopting flexible, integrative structures. Recent conceptual advances sought to provide unifying metatheories capable of explaining why these diverse models converged on similar outcomes. F. Baier-Mosch *et al.* (2025), drawing on Self-Determination Theory, argued that effective psychotherapy – irrespective of modality – worked primarily by supporting the client's basic psychological needs for autonomy, competence, and relatedness. This motivational lens offered a parsimonious explanatory bridge between disparate therapeutic techniques, grounding them in universal human processes. In the field of child and adolescent psychotherapy, T.C. Tattersall *et al.* (2024) proposed a model that synthesised attachment theory, systemic approaches, developmental psychology, and neuroscience, identifying overlapping mechanisms such as affect regulation, secure relational bonding, and adaptive cognitive – emotional integration as central to change across modalities. However, integration without theoretical anchoring risks degenerating into unsystematic eclecticism – a “pick-and-mix” use of

techniques based on personal preference or immediate context, rather than a clear understanding of the mechanisms of change. Such an approach risks inconsistency, reduced replicability, and the erosion of accountability. Well-formulated integrative models, by contrast, combine flexibility with conceptual integrity. They provide clinicians with structured adaptability – the ability to respond to heterogeneous client needs without losing coherence in their interventions (Ryan & Deci, 2017). The relevance of these findings for educational reform is direct: curricula that emphasise early mastery of common factors, foster cross-modal process thinking, and are grounded in metatheoretical frameworks are more likely to produce graduates capable of both depth and breadth. By embedding process-based competence at the heart of training, the current German and Austrian reforms position new practitioners to engage in evidence-based integration rather than eclectic improvisation, thereby aligning clinical practice with the most robust empirical insights of contemporary psychotherapy research.

◆ International perspectives and policy contexts

While the structural reforms currently unfolding in Germany and Austria provide important national case studies for the integration of psychotherapy, they form part of a broader international movement toward competency-based professional organisation, dismantling of rigid school boundaries, and the alignment of training with evidence-based practice. Across high-, middle-, and low-income countries, the past two decades have seen intensified efforts to modernise psychotherapy education, licensure, and service delivery in response to changing public health needs, workforce shortages, epidemiological transitions, and increasing demands for flexible care models. These developments are embedded in a global policy discourse shaped by actors such as the WHO and the European Association for Psychotherapy (EAP), whose competency frameworks and mobility standards are beginning to influence national reforms worldwide (Rief *et al.*, 2024). The United Kingdom's Improving Access to Psychological Therapies (IAPT) programme is one of the most prominent examples of a national-scale reorganisation of mental health service delivery. Launched in 2008 to address the substantial treatment gap in depression and anxiety disorders, IAPT employs a stepped-care model that matches intervention intensity to clinical severity and complexity (NHS Digital, n.d.). At lower-intensity levels, guided self-help and psychoeducation are delivered by specially trained Psychological Wellbeing Practitioners; at higher-intensity levels, structured psychotherapies such as Cognitive Behavioural Therapy, Interpersonal Psychotherapy, and person-centred counselling are provided. According to M. Barkham *et al.* (2023), IAPT functioned within a culture of routine outcome monitoring, with validated measures systematically collected at every session to inform treatment planning and uphold national standards of efficacy and accountability. This integration of scalability, multimodality, and systematic evaluation has positioned IAPT as a global reference model for integrated service provision that balances

accessibility with evidence-based fidelity. Recent studies show that routine outcome monitoring and competence-based frameworks are increasingly being adopted internationally, improving accountability, training quality, and treatment outcomes (Barkham *et al.*, 2023; Rief *et al.*, 2024; NHS Digital, n.d.). In Norway and the Netherlands, reforms have moved decisively toward school-independent, competency-based licensure systems. As K.D. Martinsen *et al.* (2023) observed, professional recognition was granted on the basis of demonstrated mastery of core competencies such as diagnostic proficiency, alliance building, ethical reasoning, cultural competence, and continuous outcome evaluation rather than allegiance to a single modality. This approach enables psychotherapists to integrate methods from multiple traditions while maintaining high professional standards. Additionally, it supports lifelong learning frameworks in which practitioners are re-certified through ongoing professional development, ensuring responsiveness to emerging scientific evidence and societal needs (Rønnestad *et al.*, 2019; Možina, 2024).

Ukraine presents perhaps the most distinctive example of psychotherapy system-building in the current global context. Before 2014, psychotherapy in Ukraine was characterised by fragmentation, absence of national licensure, and limited public provision. The annexation of Crimea and subsequent armed conflict in Eastern Ukraine catalysed initial capacity-building efforts, primarily through non-governmental organisations-led psychosocial training programmes. The escalation of conflict in 2022 precipitated an unprecedented mental health crisis, marked by large-scale displacement, high trauma exposure, and significant disruption to health infrastructure (Frankova *et al.*, 2024). Supported by WHO Ukraine, the Ministry of Health has since embarked on an ambitious multi-tiered reform strategy: a foundational tier for community-level psychosocial skills, an intermediate tier for structured, supervised interventions, and an advanced tier introducing university-based Bachelor's and Master's programmes aligned with European Higher Education Area standards (WHO, 2023). Central to this vision is the proposed National Psychotherapy University, designed to standardise curricula, embed research literacy, integrate multiple evidence-based modalities, and align qualifications with the European Certificate of Psychotherapy. Importantly, trauma-specific competencies, including the treatment of complex post-traumatic stress disorder, bereavement support, and community resilience-building, are embedded across all levels of training, reflecting the recognition that post-war mental health needs will persist for decades. The Ukrainian case demonstrates that systemic, competency-based reform is achievable even under extreme geopolitical and economic constraints when guided by international collaboration and a tiered approach to workforce development. At the supranational level, the EAP (n.d.) has long advocated for a European Certificate of Psychotherapy, enabling cross-border recognition of professional qualifications based on agreed standards of training, ethics, and supervised practice. Its competency model emphasises technical

skill, cultural sensitivity, ethical responsibility, and reflective practice. Similarly, the WHO has explicitly linked competency-based frameworks for mental health professionals to health system strengthening, universal health coverage, and human rights protection. Both organisations converge on priority areas that directly reinforce the integration agenda: the development of ethically grounded, school-independent competency profiles, facilitation of professional mobility to address workforce imbalances, and embedding of outcome measurement and accountability mechanisms in both training and service delivery (WHO, 2025a; 2025b). Taken together, these international examples and policy frameworks provide both external validation and strategic alignment opportunities for the reforms in Germany and Austria. By situating national changes within this global momentum, particularly in the areas of competency definition, ethical standards, professional mobility, and outcome evidence, German-speaking psychotherapy not only modernises its own structures but also positions itself as an active contributor to a transnational and integrated psychotherapy profession capable of addressing the complex and interdisciplinary mental health challenges of the 21st century.

◆ Technological developments and digital integration in psychiatry

The digital transformation of psychotherapy mirrors broader innovation trends in mental health service delivery, where new technology-assisted and hybrid models have redefined accessibility and quality standards. Advances in artificial intelligence (AI), natural language processing, immersive simulation environments, and integrated digital health platforms are steadily moving from research prototypes into mainstream educational curricula, professional supervision frameworks, and routine clinical workflows (Lahey *et al.*, 2021). This mirrors broader trends in health care, where AI-enhanced diagnostics, telehealth, and predictive analytics have already begun redefining professional roles and standards. A prime example of psychotherapy-specific AI innovation is the Counselling Feedback in Common Factors System (CFiCS) developed by F. Schmidt *et al.* (2025). Originally piloted in Germany and Austria, CFiCS is currently being adapted for international research collaborations, but its primary implementation remains within European university-based

psychotherapy training contexts. This system applies graph-based natural language processing to analyse detailed therapy session transcripts for micro-counselling skills, including open-ended questioning, reflective listening, empathic validation, and summarisation, and maps them onto a relational skill network. The output is a visualised competency profile that allows both supervisors and trainees to identify communication strengths, gaps, and progression over time. This represents a significant shift from subjective, anecdotal supervision feedback toward objective, data-aligned competency tracking, which can be directly tied to evidence-based training benchmarks.

Complementing skill-mapping systems, outcome-driven platforms like IPAEval offer continuous, multi-perspective progress monitoring. IPAEval was developed through an international consortium led by institutions in South Korea and the United States and has since been piloted across several clinical research networks in Asia, North America, and Europe, making it an internationally validated program rather than a country-specific tool (Krishnan, 2025). Unlike static measures administered at fixed time points, IPAEval integrates therapist and client-reported data session-by-session, enabling real-time detection of clinical change trajectories. Such early-warning indicators can trigger timely adjustments in intervention strategies, potentially reducing treatment dropouts and improving long-term outcomes. Moreover, aggregated and anonymised datasets can serve as a practice-based evidence base, feeding directly into service quality assurance and national health policy planning. The integration of Large Language Models (LLMs) notably GPT-based architectures – into psychotherapy practice is a rapidly developing frontier. Surveys by F. Bal (2025) indicate that clinicians are already using these systems to draft case formulations, summarise notes, create psychoeducational materials, simulate client – therapist dialogues for training, and even explore differential diagnostic hypotheses. Early feedback suggests gains in efficiency, breadth of educational resources, and documentation quality. Yet these advantages are counterbalanced by substantial ethical, professional, and epistemological risks. Table 4 outlined the main dangers and challenges of using artificial intelligence (particularly LLMs) in clinical psychotherapy.

Table 4. Key risks associated with the integration of LLMs in psychotherapy practice

Risk category	Description
Over-reliance risk	Trainees or overburdened clinicians may substitute AI-generated content for their own critical reasoning, weakening the reflective, adaptive thinking that underpins ethical clinical work
Bias and cultural sensitivity	LLMs outputs are influenced by the biases present in their training data, potentially reinforcing stereotypes, omitting socio-cultural context, or misinterpreting culturally specific symptom expressions
Relational irreplaceability	The therapeutic relationship – rooted in empathic attunement, nonverbal communication, and timing – remains beyond the capacity of AI. While AI can inform and structure the work, it cannot replicate the affective presence and interpersonal reciprocity that are central to psychotherapeutic change

Source: developed by the authors based on F. Bal (2025)

Emerging virtual reality (VR) and augmented reality (AR) environments add another dimension to digital integration. Pilot projects are using immersive simulations for

exposure therapy, social skills training, and trauma reprocessing, as well as for training psychotherapists in complex interaction scenarios that would be difficult or risky to stage

in real life. For instance, C.M. Holmes *et al.* (2023) described the use of immersive VR simulations to train counselling students in crisis communication and empathy-based interaction, while P. Wang *et al.* (2024) reviewed clinical applications of VR for anxiety disorders, post-traumatic stress, and cognitive rehabilitation. These initiatives illustrated how VR technologies were increasingly being incorporated into psychotherapeutic education and intervention frameworks across research and training institutions. Given these developments, digital literacy must now be considered a core professional competency. This includes not only technical proficiency with AI tools but also critical appraisal skills for evaluating their validity, limits, and contextual appropriateness. Updated supervision models may incorporate joint review of AI outputs, fostering reflective discussion on when and how such tools enhance or compromise care. Regulatory frameworks are beginning to emerge. Across Europe, professional and policy discussions increasingly align with global analyses of AI governance in healthcare, which highlight the need for binding ethical standards on transparency, accountability, and clinician oversight (Palaniappan *et al.*, 2024). Professional associations in Germany, Austria, and the EU are discussing AI ethics codes for psychotherapy, covering data privacy, informed consent for AI-assisted interventions, algorithmic transparency, and accountability in adverse events. The WHO (2025a) guidance on digital mental health emphasises human-in-the-loop models that ensure AI augments rather than replaces clinical judgment, and calls for equity audits to prevent the technological exclusion of vulnerable populations. In essence, the integration of digital technologies into psychotherapy is not simply a matter of technical adoption, it is a test of the profession's adaptive capacity and ethical resilience. If guided by rigorous standards and embedded within humanistic, process-oriented practice, AI and related tools could substantially expand access, personalise care, and enhance the quality of training and supervision. If adopted without critical safeguards, they risk reducing psychotherapy to a mechanised service, stripping away the relational depth that has been shown to drive therapeutic change.

◆ Diagnostic shifts: A new approach to personality disorders in ICD-11

The adoption of the 11th Revision of the International Classification of Diseases (ICD-11) marks one of the most significant paradigm shifts in the conceptualisation and diagnosis of personality disorders (WHO, 2025c). In contrast to the ICD-10 and DSM-5 Section II, both of which employed categorical frameworks that defined discrete disorders such as borderline, narcissistic, or antisocial personality disorder, the ICD-11 introduces a fully dimensional model. This model classifies personality disturbance according to severity and trait domain qualifiers rather than fixed syndromes. Under the ICD-11 system, the diagnosis of a personality disorder proceeds in two main steps. First, clinicians determine whether there is a personality disturbance of mild, moderate, or severe intensity, based on

impairments in self-functioning (identity, self-direction) and interpersonal functioning (empathy, intimacy). Second, the presentation can be further characterised by means of trait domain qualifiers, including Negative Affectivity, Detachment, Dissociality, Disinhibition, and Anankastia, which together provide a detailed profile of the predominant maladaptive traits. An optional “borderline pattern” qualifier preserves continuity with research and clinical literature specific to borderline personality disorder, acknowledging its high clinical relevance and treatment specificity. As C.J. Hopwood *et al.* (2017) observed, the dimensional model offered several advantages over the categorical approach, reflecting empirical evidence that personality pathology existed on a continuum rather than in discrete, mutually exclusive types. It also aligns with contemporary personality science, which conceptualises traits in hierarchical models such as the Five-Factor Model. Furthermore, it allows for greater clinical nuance, capturing heterogeneity within diagnostic categories and facilitating more individualised case formulations and treatment plans.

However, the change is not merely technical; it carries deep implications for clinical practice, research, and professional training. Most evidence-based intervention protocols, particularly those developed for borderline personality disorder (such as Dialectical Behaviour Therapy, Mentalisation-Based Therapy, and Schema Therapy), were originally developed, validated, and manualised within categorical frameworks. Their inclusion criteria no longer map directly onto the ICD-11 system. Without careful translation, clinicians may face diagnosis – treatment mismatches, where established interventions are applied without a clear conceptual fit to the new model (Bach *et al.*, 2022). A further, often underestimated challenge arises from the fact that psychotherapeutic schools have historically relied on very different conceptualisations of personality disorders. Psychoanalytic traditions employed constructs such as narcissistic or histrionic personality organisation; cognitive-behavioural approaches developed distinct disorder models for borderline, obsessive-compulsive, or avoidant personality disorders; systemic, humanistic, and integrative schools often drew on phenomenological or interactional frameworks. With the ICD-11, all these syndrome-specific diagnostic anchors disappear – with the sole exception of the optional borderline pattern (Blüml & Doering, 2021). The transition to the ICD-11 dimensional model results in a dual decoupling: from the nosological structures that previously organised clinical communication and from research traditions based on categorical inclusion criteria. The main challenges concern the adaptation of existing disorder-specific manuals to dimensional frameworks, the redefinition of target populations, and the preservation of theoretical coherence across therapeutic schools. Maintaining research continuity and cross-school comparability requires the development of shared conceptual and linguistic standards. Uncritical reliance on outdated categorical terminology risks diagnostic inconsistency and interprofessional confusion, while complete abandonment of established categories may lead to the loss

of valuable empirical knowledge and evidence-based treatment models. Pragmatic transitional strategies may involve the development of hybrid training models that familiarise future clinicians with both the ICD-11 dimensional system and traditional categorical frameworks, enabling them to understand the clinical implications of each. Another important direction concerns the creation of mapping tools and bridging frameworks designed to translate disorder-specific treatment manuals into the ICD-11 structure of severity and trait domains. Systematic research on treatment indicators derived from ICD-11 trait profiles is needed to ensure the evidence-based application of existing manualised interventions within the emerging dimensional paradigm (Bach *et al.*, 2022). There is also a critical need for dual fluency in training curricula. Clinicians must be able to work within the ICD-11 system while also navigating ICD-10 and DSM-5 categories, which remain embedded in health service structures, insurance codes, and many research protocols. Without this, diagnostic dissonance may emerge as academic and training settings adopt ICD-11, while day-to-day practice continues to use categorical systems, causing confusion, impairing continuity of care, and complicating service transitions. Ethical and policy implications are equally significant. Dimensional models require fine-grained judgments about severity, which may directly affect treatment eligibility, insurance coverage, and even forensic determinations of criminal responsibility, risk, or trial competence. In occupational health, dimensional ratings may alter assessments of work capacity or disability status. From a research perspective, the ICD-11 opens avenues for studying transdiagnostic interventions that target underlying trait dimensions (e.g., emotional dysregulation, impulsivity, detachment) across multiple presentations, dovetailing with process-based and integrative models discussed earlier. As concluded by B Pan & W. Wang (2024), this transition required the reinterpretation of outcome studies based on categorical inclusion criteria and the validation of treatment effectiveness across varying severity levels and personality trait profiles. Ultimately, successful integration of the ICD-11 personality disorder model will depend on system-wide alignment – across diagnostic frameworks, intervention protocols, training curricula, and administrative systems. This is not simply about adopting new diagnostic codes; it is about embracing a fundamentally different way of conceptualising personality pathology – one that promises greater precision, individualisation, and empirical coherence, but that also requires a profession historically trained in categorical thinking to undergo profound conceptual adaptation (Simon & Bach, 2022). Whether this transition becomes a loss of school-based identity or an opportunity for genuine integrative innovation will depend on the strategies chosen now.

◆ Opportunities and risks in integrative psychotherapy reform

The movement toward unified and integrative psychotherapy, exemplified by the recent German and Austrian reforms, represents a complex and delicately balanced con-

figuration of potential benefits and structural risks. While the strategic objective is to foster a more coherent, adaptable, and evidence-based profession, the path to this goal is neither linear nor risk-free. Achieving genuine integration will require sustained investment, cross-generational dialogue, and mechanisms that protect theoretical richness while modernising competencies. One of the most significant potential benefits lies in the formation of a stronger shared professional identity. Historically, psychotherapy in the German-speaking world has been organised around modality-specific silos, with practitioners primarily identifying as psychoanalysts, cognitive-behavioural therapists, systemic practitioners, or humanistic therapists rather than as members of a unified health profession (Rief *et al.*, 2024). This segmentation has led to parallel professional cultures, inconsistent standards of practice, and a diluted collective voice in policy debates. By shifting training towards shared competencies, common theoretical ground, and a unified clinical language, unification can enhance internal cohesion and external influence. A more consolidated identity strengthens the profession's capacity to advocate mental health resources, legislative protections, and public recognition. Another clear benefit is improved interdisciplinary collaboration. According to D. Meier *et al.* (2024), in health systems where psychotherapists worked alongside psychiatrists, psychologists, social workers, and nurses, a shared competency framework that integrated diagnostic reasoning, ethical standards, and outcome monitoring reduced role ambiguity, supported coherent treatment planning, and strengthened mutual trust. This is particularly relevant in the management of complex comorbid cases, where divergent professional vocabularies and inconsistent competencies can obstruct care. Unification also carries a transnational dimension, especially within the EU. When curricula are harmonised to meet recognised European benchmarks and aligned with Directive 2005/36/EC on professional qualifications, psychotherapists gain greater mobility across borders (European Parliament & Council, 2005). For countries facing workforce shortages, this mobility can help distribute expertise more evenly. For practitioners, it expands career options beyond national markets, while also creating competitive pressure to maintain high training standards. The most critically, unification offers the opportunity for systematic quality assurance through the integration of evidence-based curricula. Embedding research literacy, process-based competencies, and routine outcome measurement from the outset of training addresses the long-standing gap between research and clinical practice. It ensures that graduates can critically appraise new findings, adapt their methods to emerging evidence, and contribute to practice-based research. The German and Austrian reforms' move into university-based training directly supports this integration, situating clinical formation within an environment of ongoing empirical inquiry. The most widely voiced concern is the potential erosion of theoretical depth.

Psychotherapy's major traditions, including psychoanalytic, behavioural, systemic, humanistic, and integrative

approaches, are not merely historical artefacts; they embody distinct conceptual frameworks, mechanisms of change, and specialised techniques refined over decades. If unification is pursued primarily as a breadth-oriented generalist curriculum without clearly defined specialisation pathways, the result could be practitioners with broad but shallow competence, insufficiently prepared for complex or treatment-resistant cases requiring deep expertise (Hingley, 2025). Closely related is the risk of identity conflict among experienced practitioners. Those whose professional formation is rooted in a single school may perceive unification as a devaluation of their theoretical heritage. Resistance could manifest in reluctance to participate in cross-school projects, disengagement from institutional reform, or even political opposition. Without deliberate strategies for inclusion – such as involving senior representatives of all major traditions in curriculum design – reform could unintentionally deepen the very divisions it seeks to bridge (Možina, 2024). A further challenge is the blurring of professional boundaries. In systems where psychotherapy overlaps with clinical psychology, psychiatry, and counselling, unified competency profiles may create uncertainty about scope of practice. According to N. Melcop *et al.* (2019), disputes over jurisdiction, insurance eligibility, and referral patterns had already emerged in contexts where professional roles were redefined without parallel regulatory clarification. Finally, the most pragmatic risk is that of under-resourced implementation. Establishing university-based programs, faculty development pipelines, and integrated supervision structures requires sustained funding. Without adequate resourcing, reforms may be reduced to symbolic rebranding – changing labels on training programs without substantive change in teaching quality, clinical exposure, or integration with service delivery. Such outcomes breed cynicism and can erode trust in both academic and professional institutions (Barlow *et al.*, 2017). Considering the identified opportunities and risks, a set of recommendations has been formulated to guide the further development of psychotherapy. Maximising opportunities while mitigating potential risks requires strategic sequencing and continuous evaluation. International experience indicates that successful reform depends on embedding specialisation pathways within unified frameworks, enabling graduates to build advanced expertise upon a foundation of core competencies. The design of curricula should remain inclusive, engaging representatives of all major traditions to safeguard theoretical diversity. Clear definitions of professional roles and scopes of practice are necessary to prevent jurisdictional overlaps and ensure coherent interdisciplinary collaboration. Sustainable progress also depends on consistent investment in faculty development, institutional infrastructure, and quality assurance mechanisms. Continuous monitoring of training outcomes is essential to link educational innovations with demonstrable improvements in clinical effectiveness and patient care. Ultimately, psychotherapy unification should be understood not as a discrete policy event but as a dynamic and adaptive process that balances breadth with depth, innovation with tradition, and efficiency with professional identity.

◆ Conclusions

This study demonstrated that the movement toward unified psychotherapy should be understood not as a fixed endpoint but as a dynamic, adaptive process balancing integration with the preservation of theoretical and methodological depth. Unification represents an evolutionary realignment that addresses contemporary mental health challenges while retaining the intellectual legacy of diverse clinical traditions. Theoretical pluralism is not an obstacle but a resource – provided it is embedded within a coherent metaframework of shared competencies, ethical standards, and outcome accountability. The findings emphasised that psychoanalytic, cognitive – behavioural, humanistic, systemic, and integrative approaches each contribute distinct conceptual, empirical, and technical strengths. The aim of unification is therefore not homogenisation, but the deliberate integration of these traditions to enhance clinical flexibility while maintaining fidelity to their mechanisms of change. Technological innovation – from AI-assisted supervision to digital outcome monitoring and simulation-based training – creates new opportunities for modernising psychotherapy. However, these tools must reinforce rather than replace core relational skills such as empathy, attunement, and interpersonal sensitivity, which remain central to therapeutic effectiveness. Similarly, the adoption of the ICD-11's dimensional model of personality disorders requires careful translation of existing protocols and diagnostic literacy across categorical and dimensional systems. This shift signifies not only a methodological update but a broader transformation in clinical reasoning toward more individualised formulations. Comparative evidence from Germany and Austria demonstrates that systemic reform is achievable under stable conditions through clear policy direction, academic – clinical collaboration, and sustained investment. Conversely, Ukraine's wartime initiative illustrates that integration can function as a form of societal resilience, enabling the development of a tiered, competency-based psychotherapy system despite limited resources and ongoing trauma. The coming decade offers a crucial opportunity to examine whether psychotherapy can achieve coherence without conformity and innovation without the loss of depth. Future research should evaluate educational, clinical, and systemic outcomes – particularly interprofessional collaboration, public trust, and adaptability to emerging mental health challenges in both stable and crisis contexts. Empirical work is also needed to identify mechanisms that preserve ethical integrity and professional autonomy within increasingly standardised systems, ensuring that unified psychotherapy remains effective, person-centred, and socially accountable. Ultimately, the long-term goal is to determine the conditions under which unified psychotherapy can evolve into a coherent, evidence-based, and resilient discipline capable of addressing the complex mental health needs of contemporary societies.

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◆ References

- [1] Bach, B., et al. (2022). The ICD-11 classification of personality disorders: A European perspective on challenges and opportunities. *Borderline Personality Disorder and Emotion Dysregulation*, 9, article number 12. doi: [10.1186/s40479-022-00182-0](https://doi.org/10.1186/s40479-022-00182-0).
- [2] Baier-Mosch, F., Weiher, G.M., & Kananian, S. (2025). Determining what is common: A theoretical account of common factors in psychotherapy through the lens of self-determination theory. *Journal of Contemporary Psychotherapy*, 55, 269-281. doi: [10.1007/s10879-025-09664-y](https://doi.org/10.1007/s10879-025-09664-y).
- [3] Bal, F. (2025). Artificial intelligence and psychotherapy. *Current Approaches in Psychiatry*, 17(4), 643-660. doi: [10.18863/pgy.1538432](https://doi.org/10.18863/pgy.1538432).
- [4] Barkham, M., De Jong, K., Delgadillo, J., & Lutz, W. (2023). Routine outcome monitoring (ROM) and feedback: Research review and recommendations. *Psychotherapy Research*, 33(7), 841-855. doi: [10.1080/10503307.2023.2181114](https://doi.org/10.1080/10503307.2023.2181114).
- [5] Barlow, D.H., et al. (2017). The unified protocol for transdiagnostic treatment of emotional disorders compared with diagnosis-specific protocols for anxiety disorders. *JAMA Psychiatry*, 74(9), 875-884. doi: [10.1001/jamapsychiatry.2017.2164](https://doi.org/10.1001/jamapsychiatry.2017.2164).
- [6] Blüml, V., & Doering, S. (2021). ICD-11 Personality disorders: A psychodynamic perspective on personality functioning. *Frontiers in Psychiatry*, 12, 654026. doi: [10.3389/fpsy.2021.654026](https://doi.org/10.3389/fpsy.2021.654026).
- [7] European Association for Psychotherapy (EAP). (2017). *The situation of psychotherapy in Austria*. Retrieved from <https://www.europsyche.org/portals/0/media/docs/Situation-Psychotherapy-in-Austria-2017-10-20.pdf>.
- [8] European Association for Psychotherapy (EAP). (n.d.). *About the European certificate of psychotherapy (ECP)*. Retrieved from <https://www.europsyche.org/ecp>.
- [9] European Parliament and Council. (2005). [Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications](https://eur-lex.europa.eu/eli/dir/2005/36/oj). *Official Journal of the European Union*, L 255, 22-142.
- [10] Federal Chancellery of Austria. (1991, January). *Federal Act on the Practice of Psychotherapy (Psychotherapy Act – PsychThG)*. Retrieved from <https://www.ris.bka.gv.at/Dokumente/Bundesnormen/NOR11010839/NOR11010839.html>.
- [11] Federal Chancellery of Austria. (2024, April). *Psychotherapy Act (Federal Law Gazette I No. 49/2024)*. Retrieved from https://ris.bka.gv.at/Dokumente/BgblAuth/BGBLA_2024_I_49/BGBLA_2024_I_49.html.
- [12] Federal Joint Committee (G-BA). (2019). *Supporting reasons for the resolution on the amendment of the Psychotherapy Directive: Systemic therapy for adults*. Retrieved from <https://www.g-ba.de/>.
- [13] Federal Joint Committee (G-BA). (2025). Retrieved from <https://www.g-ba.de/>.
- [14] Federal Ministry of Education, Science and Research (Austria). (2024). *Psychotherapy training from 2026 at public universities*. Retrieved from https://www.bmb.gv.at/Ministerium/Presse/2024_archiv/20240111.html.
- [15] Federal Ministry of Social Affairs, Health, Care and Consumer Protection (Austria). (n.d.). *Psychotherapy information platform*. Retrieved from <https://psychotherapie.ehealth.gv.at/>.
- [16] Flückiger, C., Del Re, A.C., Wampold, B.E., Horvath, A.O., & Crits-Christoph, P. (2018). The alliance in psychotherapy: Updated meta-analytic synthesis. *Psychotherapy*, 55(4), 316-340. doi: [10.1037/pst0000172](https://doi.org/10.1037/pst0000172).
- [17] Frankova, I., Bahmad, M.L., Goloktionova, G., & Suvalo, O.B. (2024). *Mental health and psychosocial support in Ukraine: Coping, help-seeking and health systems strengthening in times of war. Interdisciplinary desk review published by ARQ National Psychotrauma Centre and VU Amsterdam*. ARQ & VU: Amsterdam. doi: [10.13140/RG.2.2.33092.85123](https://doi.org/10.13140/RG.2.2.33092.85123).
- [18] Hayes, S.C., Strosahl, K.D., & Wilson, K.G. (2012). *Acceptance and commitment therapy: The process and practice of mindful change* (2nd ed.). New York: Guilford Press.
- [19] Heymann, J., & Sprague, A. (2023). Meeting the UN Sustainable Development Goals for mental health: Why greater prioritization and adequately tracking progress are critical. *World Psychiatry*, 22(2), 325-326. doi: [10.1002/wps.21090](https://doi.org/10.1002/wps.21090).
- [20] Hingley, S.M. (2025). Dialectically integrated psychotherapy: Unconscious internal models and unifying processes of change. *Journal of Contemporary Psychotherapy*, 55, 127-137. doi: [10.1007/s10879-024-09650-w](https://doi.org/10.1007/s10879-024-09650-w).
- [21] Holmes, C.M., Tariq, F., Heyward, K., & Hall, D. (2023). *Training counselors using virtual reality*. *Journal of Technology in Counselor Education and Supervision*, 3(2), article number 3.
- [22] Hopwood, C.J., et al. (2017). The time has come for dimensional personality disorder diagnosis. *Personality and Mental Health*, 12(1), 82-86. doi: [10.1002/pmh.1408](https://doi.org/10.1002/pmh.1408).
- [23] Humer, E., et al. (2020). Provision of psychotherapy during the COVID-19 pandemic among Czech, German and Slovak Psychotherapists. *International Journal of Environmental Research and Public Health*, 17(13), article number 4811. doi: [10.3390/ijerph17134811](https://doi.org/10.3390/ijerph17134811).
- [24] IQWiG. (2017). *Systemic therapy for adults: Final report N14-02 (version 1.0)*. Cologne: IQWiG.

- [25] Krishnan, M. (2025). AI-driven mental health monitoring and support system. *Journal of Integrated Engineering Sciences*, 1(2), article number 3049-3919. doi: [10.63686/Jies.v1i2006](https://doi.org/10.63686/Jies.v1i2006).
- [26] Lahey, B.B., Moore, T.M., Kaczurkin, A.N., & Zald, D.H. (2021). Hierarchical models of psychopathology: Empirical support, implications, and remaining issues. *World Psychiatry*, 20(1), 57-63. doi: [10.1002/wps.20824](https://doi.org/10.1002/wps.20824).
- [27] Legal Framework of Psychotherapy Training in Austria. (n.d.). Retrieved from <https://psy-akademie.at/ausbildung/psychotherapeutisches-propaedeutikum-a-pp/gesetzlicher-rahmen/>.
- [28] Levenson, H. (2017). *Cyclical psychodynamics and the contextual self* (2nd ed.). Washington, DC: American Psychological Association. doi: [10.1037/0000060-000](https://doi.org/10.1037/0000060-000).
- [29] Maier, L., Engesser, D., Paul, R., Reuter, K., Petermann-Meyer, A., & Singer, S. (2024). The structural reform of the psychotherapy guidelines in Germany. *Psychiatric Practice*, 51(1), 31-38. doi: [10.1055/a-2112-3549](https://doi.org/10.1055/a-2112-3549).
- [30] Martinsen, K.D., Fredriksen, A.L., Lunde-Hansen, C., Torbjørnsen, K., & Fedøy, B. (2023). A study of self-perceived change in CBT competence among Norwegian therapists undertaking a 2-year CBT training for working with young people. *The Cognitive Behaviour Therapist*, 16, article number e34. doi: [10.1017/S1754470X23000296](https://doi.org/10.1017/S1754470X23000296).
- [31] Meier, D., Tschacher, W., Frommer, A., Moggi, F., & Pfammatter, M. (2023). Growth curves of common factors in psychotherapy: Multilevel growth modelling and outcome analysis. *Clinical Psychology & Psychotherapy*, 30(5), 1063-3995. doi: [10.1002/cpp.2864](https://doi.org/10.1002/cpp.2864).
- [32] Melcop, N., von Werder, T., Sarubin, N., & Benecke, A. (2019). The role of psychotherapy in the German health care system: Training requirements for psychological psychotherapists and child and adolescent psychotherapists, legal aspects, and health care implementation. *Clinical Psychology in Europe*, 1(4), article number e2549. doi: [10.32872/cpe.v1i4.34304](https://doi.org/10.32872/cpe.v1i4.34304).
- [33] Možina, M. (2024). Psychotherapy regulation in European countries: An overview of professional frameworks, training standards, and legal recognition. *Psychotherapie-Wissenschaft*, 14(2), 93-109. doi: [10.30820/1664-9583-2024-2-93](https://doi.org/10.30820/1664-9583-2024-2-93).
- [34] NHS Digital. (n.d.). Retrieved from <https://digital.nhs.uk/>.
- [35] OECD. (2021). *A new benchmark for mental health systems: Tackling the social and economic costs of mental ill-health*. doi: [10.1787/4ed890f6-en](https://doi.org/10.1787/4ed890f6-en).
- [36] Palaniappan, K., Lin, E.Y.T., & Vogel, S. (2024). Global regulatory frameworks for the use of artificial intelligence (AI) in the healthcare services sector. *Healthcare*, 12(5), article number 562. doi: [10.3390/healthcare12050562](https://doi.org/10.3390/healthcare12050562).
- [37] Pan, B., & Wang, W. (2024). Practical implications of ICD-11 personality disorder classifications. *BMC Psychiatry*, 24, article number 191. doi: [10.1186/s12888-024-05640-3](https://doi.org/10.1186/s12888-024-05640-3).
- [38] Parliament of Austria. (2024). *Health Committee approves the academisation of psychotherapy training*. Retrieved from https://www.parlament.gv.at/aktuelles/pk/jahr_2024/pk0354.
- [39] Persons, J.B., Marker, C.D., & Bailey, E.N. (2023). Changes in affective and cognitive distortion symptoms of depression are reciprocally related during cognitive behavior therapy. *Behaviour Research and Therapy*, 166, article number 104338. doi: [10.1016/j.brat.2023.104338](https://doi.org/10.1016/j.brat.2023.104338).
- [40] Poss-Doering, R., Hegelow, M., Borchers, M.S., & Hartmann, M. (2021). *Evaluating the structural reform of outpatient psychotherapy in Germany (ES-rip trial) – a qualitative study of provider perspectives*. Durham, NC: Research Square. doi: [10.21203/rs.3.rs-685887/v1](https://doi.org/10.21203/rs.3.rs-685887/v1).
- [41] Psychotherapists Act. (1999, January). *Federal Law Gazette I (1311)*. Retrieved from <https://www.bap-berlin.de/wp-content/uploads/2022/09/PsychThG-1998.pdf>.
- [42] Rief, W., Wilhelm, M., Bleichhardt, G., Strauss, B., Frostholt, L., & von Blanckenburg, P. (2024). Competence-based trainings for psychological treatments – a transtheoretical perspective. *Clinical Psychology in Europe*, 6, article number e13277. doi: [10.32872/cpe.13277](https://doi.org/10.32872/cpe.13277).
- [43] Rønnestad, M.H., Orlinsky, D., Schroder, T., & Skovholt, T.M. (2019). The professional development of counsellors and psychotherapists: Implications of empirical studies for supervision, training and practice. *Counselling and Psychotherapy Research*, 19(3), 214-230. doi: [10.1002/capr.12198](https://doi.org/10.1002/capr.12198).
- [44] Ryan, R.M., & Deci, E.L. (2017). *Self-determination theory: Basic psychological needs in motivation, development, and wellness*. New York: Guilford Press. doi: [10.1521/978.14625/28806](https://doi.org/10.1521/978.14625/28806).
- [45] Schmid, G., Grünling, E., Haudum, B., Schildmair, U., Webersdorfer, T., & Steiner, V. (2025). *The most common mental health problems in Austria*. Retrieved from <https://psychotherapeuten-linz.at/2025/03/03/die-haeufigsten-psychischen-probleme-in-oesterreich/>.
- [46] Schmidt, F., Hammerfald, K., Jahren, H.H., & Vlassov, V. (2025). CFICS: Graph-based classification of common factors and microcounseling skills. In A. Zirikly, A. Yates, B. Desmet, M. Ireland, S. Bedrick, S. MacAvaney, K. Bar, & Y. Ophir (Eds.), *Proceedings of the 10th workshop on computational linguistics and clinical psychology (CLPsych 2025)* (pp. 106-115). Albuquerque: Association for Computational Linguistics. doi: [10.18653/v1/2025.clpsych-1.9](https://doi.org/10.18653/v1/2025.clpsych-1.9).
- [47] Siddiqui, S., et al. (2022). Scaling up community-delivered mental health support and care: A landscape analysis. *Frontiers in Public Health*, 10, article number 992222. doi: [10.3389/fpubh.2022.992222](https://doi.org/10.3389/fpubh.2022.992222).

- [48] Simon, J., & Bach, B. (2022). Organization of clinician-rated personality disorder types according to ICD-11 severity of personality dysfunction. *Psychodynamic Psychiatry*, 50(4), 672-688. doi: [10.1521/pdps.2022.50.4.672](https://doi.org/10.1521/pdps.2022.50.4.672).
- [49] Tattersall, T.C., Rolli, N., & Butwell, M. (2024). Integrative child psychotherapy: Discussion of a common core and unified theory approach. *AIMS Medical Science*, 11(2), 181-209. doi: [10.3934/medsci.2024015](https://doi.org/10.3934/medsci.2024015).
- [50] Trost, K., Ertl, V., König, J., Rosner, R., & Comtesse, H. (2024). Climate change-related concerns in psychotherapy: Therapists' experiences and views on addressing this topic in therapy. *BMC Psychology*, 12, article number 192. doi: [10.1186/s40359-024-01677-x](https://doi.org/10.1186/s40359-024-01677-x).
- [51] Voloshyna, O. (2024). The problem of psychologist certification: A comparative analysis of international experience. *Scientific Studies on Social and Political Psychology*, 30(1), 6-15. doi: [10.61727/ssppj/1.2024.06](https://doi.org/10.61727/ssppj/1.2024.06).
- [52] von Sydow, K., Beher, S., & Retzlaff, R. (2024). Systemic psychotherapy: An introduction to its theoretical foundations and clinical practice. *German Medical Journal International*, 121, 783-792. doi: [10.3238/arztebl.m2024.0194](https://doi.org/10.3238/arztebl.m2024.0194).
- [53] Wang, P., Ai, X., Zhang, X., Ma, F., Zhuang, Y., & Wang, S. (2024). Evaluating virtual reality technology in psychotherapy: Current applications and future directions. *Frontiers in Psychiatry*, 15, article number 1480788. doi: [10.3389/fpsyt.2024.1480788](https://doi.org/10.3389/fpsyt.2024.1480788).
- [54] WHO. (2023). *Updates & achievements: Ukraine*. Retrieved from https://cdn.who.int/media/docs/default-source/mental-health/special-initiative/ukraine-achievements-2022_23.pdf?sfvrsn=142f5219.
- [55] WHO. (2025a). *Mental health atlas 2024*. Retrieved from <https://www.who.int/publications/i/item/9789240114487>.
- [56] WHO. (2025b). *World mental health today: Latest data*. Retrieved from <https://www.who.int/publications/i/item/9789240113817>.
- [57] WHO. (2025c). *WHO releases 2025 update to the International Classification of Diseases (ICD-11)*. Retrieved from [https://www.who.int/news/item/14-02-2025-who-releases-2025-update-to-the-international-classification-of-diseases-\(icd-11\)](https://www.who.int/news/item/14-02-2025-who-releases-2025-update-to-the-international-classification-of-diseases-(icd-11)).

На шляху до уніфікованої психотерапії у 21 столітті: зміни парадигм, освітні реформи та глобальні виклики у німецькомовному світі та за його межами

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♦ **Анотація.** У контексті глибоких глобальних криз та змін у сфері охорони здоров'я психотерапія переживає критичну трансформацію, що дедалі більше вимагає інтегрованих і науково обґрунтованих систем професійної підготовки. Метою цієї статті було проаналізувати парадигмальні зміни на користь уніфікованої психотерапії, розглядаючи освітні реформи у німецькомовних країнах як центральний кейс у ширшому міжнародному контексті. Дослідження ґрунтувалося на комплексному аналізі наукової літератури, політичних документів та міжнародних рамок компетенцій. Шляхом аналізу наукових джерел і нормативних документів було розглянуто освітні реформи у Німеччині та Австрії, які відображали перехід від фрагментованого, орієнтованого на окремі модальності навчання до університетських інтегративних програм, спрямованих на розвиток міжмодальних компетенцій, емпіричної грамотності та відкладеної спеціалізації. Теоретичні основи цього руху були описані через дослідження спільних факторів, таких як терапевтичний альянс, емпатія та активація ресурсів, які є критично важливими для успіху психотерапії понад техніко-специфічні ефекти. Крім того, було проаналізовано міжнародний політичний ландшафт, з порівняльними прикладами з Великої Британії, Норвегії та України, що демонструють адаптивність різних стратегій інтеграції, водночас виділено ключові виклики, такі як впровадження систем супервізії на основі штучного інтелекту та складний діагностичний перехід до дименсійної моделі ICD-11. Нарешті, потенційні переваги уніфікації, включаючи посилення професійної ідентичності, підвищення мобільності фахівців через кордони та покращення контролю якості, були зіставлені з істотними ризиками, такими як теоретичне розмивання, конфлікти ідентичності та недостатнє фінансування впровадження. Результати цього аналізу можуть бути використані політиками, освітніми закладами та професійними асоціаціями для стратегічного розвитку науково обґрунтованих, міжнародно узгоджених та етично обґрунтованих навчальних програм підготовки психотерапевтів.

♦ **Ключові слова:** інтеграція психотерапії; ICD-11; штучний інтелект; інтермодальні компетенції; доказова практика



Resilience and professional vitality of military medics in the combat zone

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◆ **Abstract.** The full-scale war launched by Russia in February 2022 has highlighted the need for military medics who are able to adapt quickly to extreme conditions, master new skills, maintain resilience and effective teamwork under conditions of high physical and psychological stress. However, their activities remain understudied, which determines the relevance of the chosen topic. The aim of the study was to determine the role of resilience as a psychophysiological factor in the professional resilience of military medics in combat conditions, to identify the mechanisms of its manifestation, and to reveal the connection between personal resilience and the ability to maintain professional functionality. The problem of resilience as psychological stability and flexibility of personality, which allows one to maintain a positive attitude, supports adaptability and the ability to function in the most unfavourable conditions, was analysed. In an empirical study, taking into account the specifics of the work of military medical personnel, individual interviews were conducted and the following methods were used: the Connor-Davidson Resilience Scale, a combat stress questionnaire, and professional vitality questionnaires. Analysis of the correlations revealed psychological patterns in the manifestation of resilience and professional resilience. The results showed that 81% of the military medics studied had a fairly high level of resilience and 19% had an average level of resilience, with an average level of combat stress response of 69%, which may temporarily affect their full capacity to perform their duties. However, overall professional resilience remained at high (50%) and medium (38%) levels. This confirmed the formation of resilience as an acquired quality in conditions of combat stress, which increases the professional capacity of medics and expands their potential as specialists. Based on the results of the study, recommendations were outlined for strengthening psychological protection – both as a self-help strategy for individuals and as supportive practices for the team. The practical and theoretical value of the work lies in deepening the understanding of resilience as a key factor in maintaining psychological and professional vitality in conditions of war-related stress, as well as in providing information for the development of effective psychological support programmes for medical personnel in combat zones

◆ **Keywords:** psychological resilience; adaptability; psycho-emotional state; combat stress; recovery resources

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♦ Introduction

An acute problem in modern society was identifying the characteristics of personal resilience and its possible impact on professional ability, as an important feature in one's activities, which becomes even more significant in wartime. Resilience is a person's ability not only to avoid serious psychological disorders after losses or difficulties, but sometimes even to become stronger. To explain it, A.S. Troy *et al.* (2023) proposed a new integrative model that combines the "stress and coping" approach with emotional regulation. According to E.O. Hrishyn (2021), this phenomenon is the ability of a person to resist the destructive influence of external factors (stress, psychological trauma, loss) and reduce their negative impact on the psyche. According to the conclusions of L. Afita & T. Nuranasmita (2023), its manifestation is significantly enhanced by an adequate level of social support, which provides additional resources for overcoming stress and restoring psycho-emotional balance. This gives reason to interpret resilience as an important personal characteristic. It can be seen as an inner potential or resource for dealing with tough and traumatic life situations, which helps people adapt, recover, and change (Shcherbak, 2024; Chykhantsova, 2025). At the same time, resilience is a dynamic process of overcoming stress and difficult life situations, which also contributes to adaptation to change. L. Muzychko (2023) and F. Luthans *et al.* (2024) defined it as a component of psychological capital, which consists of psychological stability and flexibility of personality, allowing one to maintain positive functioning even in the most unfavourable conditions. Resilience, according to the work of N.D. Abramyan (2024), is considered a key factor in maintaining mental health and well-being, which attracts the attention of scientists in conditions of growing social and psychological stress, which is important for increasing the overall level of social stability. O.M. Kokun (2025) emphasised that resilience is a natural bio-psycho-social phenomenon that encompasses personal, interpersonal and social aspects of experience and development. It includes a complex set of processes that are formed and unfold over time. In general terms, resilience is associated with the ability of the psyche to recover after exposure to adverse external factors. The second factor is professional vitality – it is variable, comes with a person's experience in a particular field of activity, contributes to the ability to overcome professional challenges and remain productive, although it can also be considered as work by vocation, which provides an opportunity for self-realisation. All these abilities are important for maintaining health. Research by Z. Taherkhani *et al.* (2023) confirmed that each component of resilience has its own significance for the individual and is important in assessing the overall level of professional vitality. Therefore, identifying the interdependence between resilience and professional vitality is of interest to psychologists, sociologists and even political scientists. Research into the conditions for maintaining psychological stability and vitality in humans requires in-depth scientific

understanding. These aspects are particularly important for those who work in extremely difficult conditions of uncertainty, in particular military medics. Among the available studies, only a few works are devoted to the study of the resilience of military medics, which emphasises the need for a deeper analysis of the psychological resources that help them maintain resilience in difficult conditions. The key competence that ensures a specialist's ability to maintain performance, reliability and efficiency, as well as optimises personal and professional development and prevents professional burnout and deviations, particularly in the field of health, is professional resilience. L. Sampson *et al.* (2024) stated that such resilience helps to overcome fear, fatigue and loss, giving a person endurance, preserving their belief in the significance of their own activities, supporting internal motivation in stressful circumstances, and adding strength and inspiration to recover from traumatic events. Resilience and vitality affect a specialist's ability to maintain psychological balance, make adequate decisions, and maintain productivity in daily activities. Despite the importance of these aspects, contemporary research hardly covers the peculiarities of resilience and professional vitality specifically in military medics working in combat zones, who live under constant threat to their own lives and the lives of the wounded. This lack of scientific data justifies the relevance of the proposed study, which is based on empirical analysis and aims to identify mechanisms for maintaining effectiveness and professional resilience in extreme conditions. The aim of the study was to analyse the factors that influence the level of resilience and to identify its relationship with the professional vitality of military medics in conditions of constant combat stress. Research hypothesis: the level of resilience correlates with the level of professional vitality of military medics who are in conditions of combat stress.

♦ Materials and Methods

The study involved 26 military medics, including 9 women and 17 men, aged 29-49, who had been in the combat zone for 1.2 to 3 years. The study was conducted in accordance with the ethical standards for working with people set out in the World Medical Association's Declaration of Helsinki, in particular the principles of informed consent, confidentiality and non-maleficence (WMA, 2024). For reasons of personal safety of medical personnel, disclosure of information about the name of the unit and their location is unacceptable. Given the conditions of military medics' work, individual interviews were conducted with them before the start of the study, during which detailed explanations were provided on how to work with the methods. Each of the methods was presented sequentially to ensure correct completion and avoid possible errors in the research process. At the diagnostic stage, the Connor-Davidson Resilience Scale (CD-RISC-10) (Connor & Davidson, 2003), adapted by N.V. Shkolina *et al.* (2020), and the Combat Stress Questionnaire (Blinov, 2017) were used. A professional vitality

questionnaire was also used. Each technique is valid and equipped with keys used to calculate resilience levels and the overall integral indicator of combat stress intensity, as well as to determine the overall level of professional resilience and its components. Statistical data processing and correlation analysis using Microsoft Office Excel were used to analyse the data obtained. In particular, to assess the strength and direction of the relationship between variables (e.g., between resilience and combat stress and its components; between resilience, the overall level of professional resilience and its components), Pearson's correlation coefficient (r) was determined, and the calculation was performed using the formula:

$$r = \frac{(x_i - \bar{x})(y_i - \bar{y})}{\sqrt{(x_i - \bar{x})^2 (y_i - \bar{y})^2}}, \quad (1)$$

where, x_i – value of the first variable (resilience score for a specific participant); $\bar{x}$ – average value of the first variable (average resilience score in a sample of 26 people); y_i – value of the second variable (score, for example, on the combat stress or professional resilience scale for a specific participant); $\bar{y}$ – the average value of the second variable (respectively, the average score on the combat stress or professional resilience scale in a sample of 26 people); accordingly, $r =$ from 0.01 to +1 – direct correlation: as x increases, y always increases; when $r =$ from 0 to -1 – inverse correlation: as x increases, y always decreases. $r = 0$ – no correlation. Formula for testing the significance of the r coefficient:

$$t = \frac{r\sqrt{n-2}}{\sqrt{1-r^2}}, \quad (2)$$

Table 1. Manifestations of resilience, combat stress and overall professional resilience among military medics, %

Level	Resilience	Intensity of combat stress	Acute stress disorder	Resourcefulness	Overall professional vitality
high	81	0	23	11	50
average	19	69	77	85	42
low	0	31	0	4	8

Note: percentages reflect the share of participants in the respective categories

Source: developed by the authors

The data obtained gave grounds to assert that the vast majority of medical personnel are characterised by a high level of personal resilience and the ability to recover quickly after stressful or traumatic events. Despite experiencing intense negative emotions (sadness, fear, anger), they demonstrate the ability to process them constructively and maintain effective functioning even in conditions of uncertainty. In this case, the development of resilience is a dynamic process that enables individuals to withstand stress, resist the negative effects of stressors, and maintain their mental health (Southwick *et al.*, 2014). At the same time, the intensity of combat stress was moderate in 69% of respondents and low in 31%. According to individual indicators, 23% of the respondents experienced acute stress disorder at a high level and could show a pronounced reaction to events. 77% of the respondents demonstrated an average level of response to combat stress. That is, their reaction was largely controlled, although pronounced. At the same time, the majority of

where, r – the correlation coefficient; n – the number of subjects; t is the t -statistic used to determine p ; degrees of freedom df are needed to find p – values in the t -distribution:

$$df = n - 2. \quad (3)$$

Depending on the value of p : $p < 0.05$ – the correlation is statistically significant; $p \geq 0.05$ – the correlation is insignificant. Given the aim of the study, which was to identify the relationship between resilience and professional vitality, the analysis focused not on comparing absolute levels, but on studying the nature of the correlations between these indicators. This approach made it possible to identify psychological patterns of interaction between these factors in the specific conditions of military medics' activities – in the combat zone, which directly corresponds to the subject of the study and emphasises the importance of a comprehensive approach to assessing their professional vitality.

◆ Results and Discussion

The results obtained emphasised that the military medics who participated in the study demonstrated a sufficiently high level of resilience. A survey conducted using standardised psychodiagnostic methods provided data on their psycho-emotional state and ability to cope with stress (Blinov, 2017; Shkolina *et al.*, 2020). Analysis of the indicators showed that most respondents had a high level of resilience (81%), while the rest had an average level (19%), confirming their adaptability and resourcefulness in difficult professional conditions (Table 1).

respondents (85%) showed an average level of resilience, and 11% showed a high level of resilience. At the same time, the data obtained from the correlation analysis indicated that there was no statistically significant correlation between the level of resilience and manifestations of combat stress ($r = 0.008$, at $p \geq 0.05$), which is schematically presented in Figure 1.

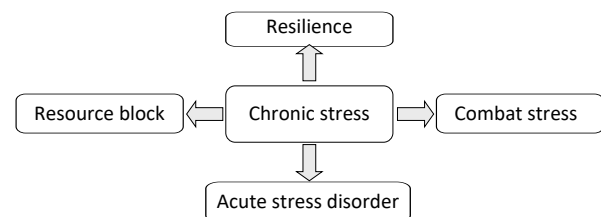


Figure 1. Correlational links between resilience and reaction to combat stress

Source: developed by the authors

Resilience is not linearly related to combat stress, and its level does not automatically reduce the level of response to combat stress. Medical personnel with different levels of resilience may exhibit similar levels of combat stress. Experiencing combat stress is a reaction to a real threat, which is constant when working in a combat zone. Resilience, on the other hand, means the ability to adapt to the effects of this stress, but not necessarily to avoid or not feel it. Therefore, military medics with high levels of resilience also responded to combat stress, but they coped with it better and faster. Accordingly, some traumatic events could moderate, while others could mask the link between resilience and combat stress. Other variables remained significant, such as: service experience, previous traumatic events, psychological training, and a sense of support from colleagues, which was confirmed in interviews with respondents. Resilience did not determine the intensity of stress experienced in combat conditions, but rather influenced the effectiveness of overcoming its consequences. To explain the role of resilience in human life, A.S. Masten (2001) introduced the concept of “ordinary magic” and emphasised that resilience is not a rare trait, but a common phenomenon. However, when a person faces various traumatic events, their ability to self-regulate and maintain stability becomes crucial for adapting to constant life stressors. It is these abilities that form the basis of resilient personality traits, which include self-esteem, adequate self-assessment, coping strategies, protective factors, and other self-support systems that help a person effectively overcome stress (Lazos, 2018). A direct correlation was also found between resilience, acute stress disorder ($r = 0.445$, at $p \leq 0.05$) and resource block ($r = 0.230$, at $p \leq 0.05$) (Fig. 1). There is also a direct correlation between resilience and acute stress disorder ($r = 0.445$, at $p \leq 0.05$). The direct, moderate correlation between resilience and acute stress disorder may seem paradoxical. This can significantly threaten psychological stability, increasing the risk of severe psycho-emotional disorders (Schwarzer, 2024). Therefore, in the work of M.F. Georgescu *et al.* (2023), resilience is defined as a protective factor that reduces the severity of acute stress reactions and post-traumatic stress disorder. However, when interpreting these results, the specificity of the sample should be taken into account – military medics who had been in conditions of high combat stress for a long time. It is important that the study was conducted in conditions of prolonged stay of participants in the combat zone and chronic exposure to traumatic events, when symptoms of acute stress reaction were present or could manifest themselves. In such circumstances, resilience manifested itself not so much as an innate personal quality, as emphasised by V. Burlaka *et al.* (2002), but as an adaptive response to stressful experiences. This is the so-called “reactive” (acquired) resilience, which does not prevent the occurrence of an acute reaction to constant negative events, but allows to remain functional despite experiencing moderate to high levels of combat stress. The same opinion was supported by Z.Ya. Kovalchuk & O.Ya. Zaverukha (2024), who demonstrated the ability of individuals to develop their

resilience by acquiring skills to overcome difficulties and improving their attitude towards challenges. Resilience is a flexible process that enables military medics to withstand stress, resist the negative effects of stressors, and maintain their mental health. Resilience is a simple daily choice that a person makes, and no matter what life circumstances or challenges they face, they will always choose the right to live (Southwick & Charney, 2012). No significant differences in resilience levels were found between male and female medical personnel who worked under combat stress conditions. This phenomenon can be explained by the shared professional environment and similar experiences of being in a combat zone – rapid and unpredictable changes in circumstances that required the coordinated work of all team members, the support of comrades, and a conscious motivation to perform their duties under stressful conditions. This is confirmed by correlation analysis data, which show a significant relationship between combat stress and manifestations of acute stress disorder ($r = 0.681$, $p \leq 0.05$). Each new stress was accompanied by a response – the body’s reaction to the event that occurred, and this reaction is normal to abnormal events, given the concern for life and health, both one’s own and those who were being helped. The brightness of the manifestation of the connections between resilience and components of professional vitality is shown in Figure 2.

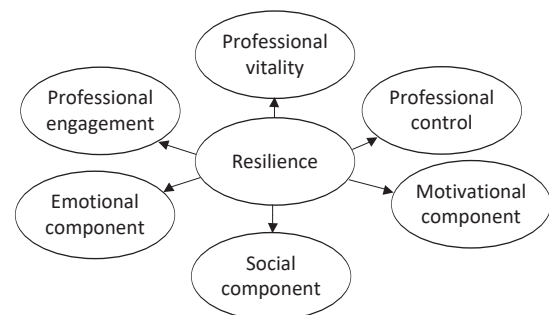


Figure 2. Correlations between resilience and professional vitality

Source: developed by the authors

The importance of resilience in the professional performance of military medics is also indicated by its close connection with both the overall level of professional vitality ($r = 0.654$, $p \leq 0.05$) and its key components. Direct correlations have been found between them and resilience, namely: the level of professional involvement ($r = 0.441$, $p \leq 0.05$), professional control ($r = 0.413$, $p \leq 0.05$), emotional component ($r = 0.640$, $p \leq 0.05$), motivational component ($r = 0.605$, $p \leq 0.05$) and social component ($r = 0.453$, $p \leq 0.05$). This indicates that despite the difficult and extreme working conditions, military medics demonstrated a sufficient level of professional resilience thanks to their resilience. These connections also emphasise that resilience is an important psychological resource that supports the ability to function effectively in conditions of chronic professional stress. The professional activity of military medics is

one of the most difficult and responsible types of work, as it involves simultaneously ensuring personal safety and providing emergency assistance to others. Although the ability to maintain mental, psychological and physical health is inherent in every person, it is the level of resilience of military medics that determines the effectiveness of their professional tasks and directly affects the preservation of the lives of the wounded in combat conditions. This makes their role particularly important and highlights the need for a high level of professionalism, stress resistance and responsibility in performing daily duties in extreme situations. Research by A. Nikolenko *et al.* (2025), conducted with the participation of students of specialisation courses in the field of mental health, showed that their professional resilience in wartime was above average, with a predominance of the motivational component and the component of professional control, which emphasises its important role in maintaining adaptability and preventing professional burnout in extreme conditions. At the same time, resilience requires a strong internal resource, which, according to A. Flood & R.J. Keegan (2022), is not an innate ability, but a skill. In other words, it is not only desirable but also an extremely necessary condition for the effective functioning of the entire professional community working in conditions of increased danger. It allows to be focused, able to work diligently and persistently, perform their professional duties and maintain their own mental health (Panchenko & Rozhkov, 2024). It is important to note that the overall level of “hardiness” is considered a style of resilience that provides stress resistance when life events change. Resilience is defined as a personality trait associated with a person’s ability to respond appropriately to stressful events and overcome them using coping strategies that transform potentially adverse circumstances into a way of mastering certain skills (Kobasa, 1982). For a healthy individual, resilience is positively associated with life satisfaction and positive affect, and negatively associated with perceived stress and negative affect (Acharya & Sethi, 2020). A study conducted by A.M. Sandvik *et al.* (2013) aimed to investigate stress responses and was based on an analysis of psychophysiological and biochemical changes in the human body. The authors showed that high resilience with a balanced profile is associated with relatively healthy immune and neuroendocrine responses to adverse situations or events. At the same time, psychological resilience is characteristic of people who remain healthy under varying degrees of psychosocial stress. The same was noted in a study by J.W. Pengilly & E.T. Dowd (2000), conducted with Norwegian Navy cadets during their field training in highly stressful conditions. It has been proven that completely healthy individuals with balanced resilience did not show any changes in their blood. Meanwhile, although high psychological resilience was observed in “unbalanced” individuals, they showed high levels only in terms of commitment to the task and control over the situation, but relatively low levels in terms of the complexity of the tasks. These changes were associated with the suppression of pro-inflammatory cytokines (IL-12), an increase in anti-inflammatory cytokines (IL-4, IL-10) and

lower levels of neuropeptide Y in the blood, which obviously corresponded to a reactive response to stress. In other words, when professional activity is perceived by an individual as a calling, a deep awareness of its significance emerges. This is always accompanied by conscious moral and spiritual values, which in military medics manifest themselves in responsibility for the lives of wounded soldiers, who are in the reliable hands of people capable of caring for them. In the medical profession, this means a willingness to take responsibility for human life in critical conditions, while remaining psychologically stable and professionally effective.

However, it should be noted that the connection between resilience and the resource block is significantly weaker ($r = 0.230$, $p \leq 0.05$), which may indicate psychological exhaustion among military medics, (Fig. 1) which was particularly evident in 4% of the subjects and in another 8% as the lower limit of the average level (Table 1). The decline in subjectively perceived resources occurs against the backdrop of high stress. Similarly, the weak correlation between the resource block and resilience ($r = 0.230$, at $p \leq 0.05$) may indicate the limited protective function of personal resources in critical conditions when external stress exceeds internal compensatory capabilities. In wartime, and especially in combat zones, medical personnel often have to work in difficult circumstances: lack of resources, high risk to the lives of medical workers and victims. Often, such stress is also associated with complicated logistics. These conditions create obstacles to evacuation, timely delivery of necessary equipment and medicines, and prompt medical care. It is only thanks to their high level of resilience and tenacity that military medics continue to provide quality medical care. Even under almost constant stress, they manage to maintain a high level of professionalism. These data indicate an urgent need to provide timely psychological support and even assistance to medical workers. The organisation of such assistance has a number of specific features due to combat conditions: disrupted working hours, limited human resources, and a constant threat to life, where every minute lost can have fatal consequences (Kovalchuk & Zaverukha, 2024). Therefore, it is important for military medics to receive brief but targeted information in the form of psychoeducation aimed at developing their resilience. This can include targeted advice, short video tutorials on self-calming techniques, grounding, and breathing practices to stabilise mental state. British historian Mike Burley emphasised that in military formations, resilience is traditionally viewed through the prism of morale. This position is also relevant for military medics, as their professional activities require a high level of resilience, which involves the development of trust, leadership, loyalty, cohesion, as well as exceptional psychological strength and endurance (Tarazona *et al.*, 2023). To maintain and develop resilience, it is necessary to remember that there are factors of psychological resilience such as: professional and physical training; emotional self-regulation; cognitive flexibility or the ability to adapt thinking to new or stressful circumstances; the ability to reassess a situation without losing sight of the goal; optimism, altruism, and a sense of mission. It is

important to focus on internal resources, which involves the use of psychological interactive practices, in particular: conscious breathing, positive reframing, and exercises to develop optimism (Myloslavskaya & Bohdanovskiy, 2023). According to the conclusions of T. Tytarenko (2025), self-healing life creation in wartime reflects the community's ability to mobilise resources for adaptation, which is a central component of resilience. Military medics in the combat zone are constantly in stressful and crisis situations, and it is the development of discipline, brotherhood, and mutual support that will allow to maintain mental and physical stability. Therefore, the ability to be part of a team whose work involves clear coordination, mutual support, division of roles, and trust between members of the unit in which the medics work remains important. This makes it possible to implement peer support models (a system of mutual assistance between people with similar life or professional experiences), which helps to identify psychological stress in colleagues in a timely manner and provide them with support without formal intervention, which is especially important when there is no time for individual psychological assistance.

◆ Conclusions

The study made it possible to identify psychological characteristics and patterns of resilience in military medics in wartime conditions and demonstrated their ability to perform their professional duties at a high level, which is confirmed by positive correlations not only with the overall level of professional resilience, but also with its individual components. At the same time, the negative effects of martial law and being in a combat zone on medical personnel were also highlighted: a levelled correlation between resilience and combat stress; individual manifestations of acute reactions to chronic stress; and a decrease in resourcefulness. War creates extreme conditions, but military medics, like other military personnel, even in situations of death and loss,

demonstrate the ability to recover, continue their professional activities and adapt thanks to their resilience. This gives reason to consider resilience as an acquired form of psychological defence and adaptability of the personality in conditions of professional activity and extreme existence, rather than as an innate trait, while retaining its dynamic nature of development. The proposed approaches to psychological influence and support are aimed at increasing individual resilience, reducing the negative effects of combat stress, and helping to maintain the functionality of medical personnel in combat conditions. The identified negative effects of combat stress on medical personnel and the appearance of signs of acute stress disorder prompted at least a brief presentation of certain recommendations for psychological protection of the individual – both for oneself and for supporting colleagues. The proposed approaches not only increase individual resilience, but also help maintain the functionality of medical personnel under combat stress. The study has both theoretical and practical value. Theoretically, it deepens the scientific understanding of psychological mechanisms of adaptation in conditions of combat stress, in particular through the study of the relationship between resilience and professional vitality. In practical terms, the results can be used to develop psychological support programmes and maintain the professional functioning of medical personnel in extremely difficult conditions, and further serve as a basis for applied research in the field of military psychology.

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◆ Conflict of Interest

None.

◆ References

- [1] Abramyan, N.D. (2024). The concept, nature of origin and components of resilience. *European Psychological Journal*, 1, 7-12. doi: 10.36919/EUPJSJO.1.2024.7-12.
- [2] Acharya, C., & Sethi, V. (2020). Exploring the relationship between hardiness, perceived stress, life satisfaction and affect among college undergraduates. *Journal of Psychosocial Research*, 15(1), 341-347. doi: 10.32381/JPR.2020.15.01.29.
- [3] Afita, L., & Nuranasmitha, T. (2023). The role of social support in promoting resilience and mental well-being. *Bulletin of Science Education*, 3(3), 269-279. doi: 10.51278/bse.v3i3.867.
- [4] Blinov, O. (2017). Combat stress questionnaire designed by O. Blinov (QCSB). *Psychological Journal*, 9(5), 32-43. doi: 10.31108/1.2017.5.9.3.
- [5] Burlaka, V., et al. (2002). *Studies of etiology, prevention and treatment of chemical addictions: Summaries of the core articles*. Kharkiv: Disa Plus. doi: 10.13140/rg.2.1.5035.6323.
- [6] Chykhantsova, O. (2025). The role of resilience as a personal resource in situations of uncertainty. *Scientific Notes of the V.I. Vernadsky Tavrichesky National University. Series: Psychology*, 36(3), 55-61. doi: 10.32782/2709-3093/2025.3/09.
- [7] Connor, K.M., & Davidson, J.R.T. (2003). Development of a new resilience scale: The Connor-Davidson resilience scale (CD-RISC). *Depression and Anxiety*, 18(2), 76-82. doi: 10.1002/da.10113.
- [8] Flood, A., & Keegan, R.J. (2022). Cognitive resilience to psychological stress in military personnel. *Frontiers in Psychology*, 13, article number 809003. doi: 10.3389/fpsyg.2022.809003.
- [9] Georgescu, M.F., Fischer, I.C., Lowe, S., & Pietrzak, R.H. (2023). Psychological resilience in U.S. military veterans: Results from the 2019-2020 National Health and Resilience in Veterans Study. *Psychiatric Quarterly*, 94, 449-466. doi: 10.1007/s11126-023-10041-y.

- [10] Hrishyn, E.O. (2021). Resistance of personality: The essence of the phenomenon, psychodiagnosis and means of development. *Bulletin of the KhNPU named after G.S. Skovoroda. Psychology*, 64, 62-81. doi: [10.34142/23129387.2021.64.04](https://doi.org/10.34142/23129387.2021.64.04).
- [11] Kobasa, S.C. (1982). The hardy personality: Toward a social psychology of stress and health. In G.S. Sanders & J. Suls (Eds.), *Social psychology of health and illness*. Hillsdale: Lawrence Erlbaum Associates. doi: [10.4324/9780203762967](https://doi.org/10.4324/9780203762967).
- [12] Kokun, O.M. (2025). *Human vitality and resilience in the modern world: Theory, research, practice*. Kyiv: H.S. Kostiuk Institute of Psychology of the National Academy of Educational Sciences of Ukraine.
- [13] Kovalchuk, Z.Ya., & Zaverukha, O.Ya. (2024). Psychological features of the development of emotional stability and resilience: Age aspects. *Scientific Bulletin of the Lviv State University of Internal Affairs (Psychological Series)*, 2, 37-44. doi: [10.32782/2311-8458/2024-2-5](https://doi.org/10.32782/2311-8458/2024-2-5).
- [14] Lazos, G.P. (2018). *Resilience: Conceptualization of concepts, review of modern research*. *Current Problems WWof Psychology*, 3(14), 26-64.
- [15] Luthans, F., Luthans, K., Luthans, B., & Peterson, S. (2024). Psychological, physical, and social capitals: A balanced approach for more effective human capital in today's organizations and life. *Organizational Dynamics*, 53(4), article number 101080. doi: [10.1016/j.orgdyn.2024.101080](https://doi.org/10.1016/j.orgdyn.2024.101080).
- [16] Masten, A.S. (2001). Ordinary magic: Resilience processes in development. *American Psychologist*, 56(3), 227-238. doi: [10.1037//0003-066X.56.3.227](https://doi.org/10.1037//0003-066X.56.3.227).
- [17] Muzychko, L. (2023). Psychological resourcefulness of the individual and its resilience. *Journal of Social and Practical Psychology*, 1, 28-33. doi: [10.32782/psy-2023-1-5](https://doi.org/10.32782/psy-2023-1-5).
- [18] Myloslavska, O., & Bohdanovskyi, S. (2023). Resilience as a component of a military serviceman's mental endurance. *Scientific Notes of Taurida National V.I. Vernadsky University. Series "Psychology"*, 34(73), 1, 197-202. doi: [10.32782/2709-3093/2023.1/32](https://doi.org/10.32782/2709-3093/2023.1/32).
- [19] Nikolenko, A., Ohorenko, V., Shusterman, T., & Kokashynskyi, V. (2025). Research on resilience and professional viability of students of specialization cycles in the field of mental health care during the war. *Psychosomatic Medicine and General Practice*, 10(2). doi: [10.26766/pmgrp.v10i2.59](https://doi.org/10.26766/pmgrp.v10i2.59).
- [20] Panchenko, V., & Rozhkov, E. (2024). Personality resilience as a systemic personal and professional property. *Collection of Scientific Papers "Logos"*, 237-242. doi: [10.36074/logos-19.07.2024.045](https://doi.org/10.36074/logos-19.07.2024.045).
- [21] Pengilly, J.W., & Dowd, E.T. (2000). Hardiness and social support as moderators of stress. *Journal of Clinical Psychology*, 56(6), 813-820. doi: [10.1002/\(SICI\)1097-4679\(200006\)56:63.0.CO;2-Q](https://doi.org/10.1002/(SICI)1097-4679(200006)56:63.0.CO;2-Q).
- [22] Sampson, L., Kim, A.H., O'Neill, J., & Tamez, M. (2024). Psychological resilience, resilient coping and health. *Preventive Medicine Reports*, 30(46), article number 102874. doi: [10.1016/j.pmedr.2024.102874](https://doi.org/10.1016/j.pmedr.2024.102874).
- [23] Sandvik, A.M., Bartone, P., Hystad, S., & Phillips, T.M. (2013). Psychological hardiness predicts neuroimmunological responses to stress. *Psychology, Health & Medicine*, 18(6), article number 1072954. doi: [10.1080/13548506.2013.772304](https://doi.org/10.1080/13548506.2013.772304).
- [24] Schwarzer, R. (2024). Stress, resilience, and coping resources in the context of war, terror, and migration. *Current Opinion in Behavioral Sciences*, 57(3), article number 101393. doi: [10.1016/j.cobeha.2024.101393](https://doi.org/10.1016/j.cobeha.2024.101393).
- [25] Shcherbak, T. (2024). Research on the resilience of volunteers during martial law. *Slobozhanskyi scientific bulletin. Series: Psychology*, 1, 200-205. doi: [10.32782/psyspu/2024.1.35](https://doi.org/10.32782/psyspu/2024.1.35).
- [26] Shkolina, N.V., Shapoval, I.I., Orlova, I.V., Kedyc, I.O., & Stanislavchuk, M.A. (2020). Adaptation and validation of the Ukrainian version of the Connor-Davidson resilience scale10 (CDRISC10): Testing in patients with ankylosing spondylitis. *Ukrainian Journal of Rheumatology*, 2(80), 66-72. doi: [10.32471/rheumatology.2707-6970.80.15236](https://doi.org/10.32471/rheumatology.2707-6970.80.15236).
- [27] Southwick, S.M., & Charney, D.S. (2012). *Resilience: The science of mastering life's greatest challenges*. Cambridge: Cambridge University Press. doi: [10.1017/CBO9781139013857](https://doi.org/10.1017/CBO9781139013857).
- [28] Southwick, S.M., Bonanno, G.A., Masten, A.S., Panter-Brick, C., & Yehuda, R. (2014). Resilience definition, theory and challenges. *European Journal of Psychotraumatology*, 5(1), article number 25338. doi: [10.3402/ejpt.v5.25338](https://doi.org/10.3402/ejpt.v5.25338).
- [29] Taherkhani, Z., Kaveh, M.H., Mani, A., Ghahremani, L., & Khademi, K. (2023). The effect of positive thinking on resilience and life satisfaction of older adults: A randomized controlled trial. *Scientific Reports*, 13, article number 3478. doi: [10.1038/s41598-023-30684-y](https://doi.org/10.1038/s41598-023-30684-y).
- [30] Tarazona, A.K. Katherine, & Piñero, M.L. (Eds.). (2023). *Resilience and innovation: Education, psychoeducation, psychosocial, entrepreneurship, and health*. Barquisimeto: UPEL IPB. doi: [10.46498/upelipb.lib.0019](https://doi.org/10.46498/upelipb.lib.0019).
- [31] Troy, A.S., Willroth, E., Shallcross, A.J., Giuliani, N.R., Gross, J.J., & Mauss, I.B. (2023). Psychological resilience: An affect-regulation framework. *Annual Review*, 74(1), 547-576. doi: [10.1146/annurev-psych-020122-041854](https://doi.org/10.1146/annurev-psych-020122-041854).
- [32] Tytarenko, T. (2025). Parameters of self-healing subcultural life-making in wartime conditions. *Scientific Studios on Social and Political Psychology*, 31(1), 25-32. doi: [10.61727/ssspj/1.2025.25](https://doi.org/10.61727/ssspj/1.2025.25).
- [33] WMA. (2024). *WMA Declaration of Helsinki – ethical principles for medical research involving human participants*. Retrieved from <https://surl.lt/fuaaeh>.

Резильєнтність та професійна життєстійкість військових медиків у зоні бойових дій

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♦ **Анотація.** Повномасштабна війна, розпочата Росією у лютому 2022 р., актуалізувала потребу у військових медиках, здатних до швидкої адаптації в екстремальних умовах, опанування нових навичок, збереження життєстійкості та ефективної командної взаємодії в умовах високих фізичних і психологічних навантажень. Однак їхня діяльність залишається малодослідженою, що визначає актуальність обраної тематики. Метою дослідження було з'ясувати роль резильєнтності як психофізіологічного чинника професійної життєстійкості військових медиків у бойових умовах, визначити механізми її прояву та виявити зв'язок між особистою стійкістю й здатністю зберігати професійну функціональність. Проаналізовано проблему резильєнтності як психологічної стійкості й гнучкості особистості, що дозволяє зберігати позитивне налаштування, підтримує адаптивність і здатність функціонувати в найнесприятливіших умовах. В емпіричному дослідженні, зважаючи на специфіку роботи військово-медичного персоналу, проведено індивідуальні інтерв'ю та використано методики: шкала стійкості Коннора-Девідсона, опитувальник бойового стресу, опитувальники професійної стійкості. Аналіз кореляційних зв'язків дозволив виявити психологічні закономірності прояву резильєнтності та професійної життєстійкості. Отримані результати показали, що для 81 % досліджуваних військових медиків характерний достатньо високий та для 19 % – середній рівень резильєнтності при середньому рівні інтенсивності реагування на бойовий стрес у 69 %, що може тимчасово впливати на повноцінну діяльність. Однак загальна професійна життєстійкість залишалася на високому (50 %) та середньому (38 %) рівнях. Це засвідчило про формування резильєнтності як набутої якості в умовах бойового стресу, що підвищує професійну спроможність медиків і розширює їхній потенціал як фахівців. На основі результатів дослідження окреслено рекомендації щодо посилення психологічного захисту – як стратегії самопомогі для окремих осіб, так і підтримуючі практики для команди. Практична та теоретична цінність роботи полягає у поглибленні розуміння резильєнтності як ключового чинника підтримки психологічної та професійної життєздатності в умовах стресу, пов'язаного з війною, а також у наданні інформації для розробки ефективних програм психологічної підтримки медичного персоналу в зонах бойових дій

♦ **Ключові слова:** психологічна стійкість; адаптивність; психоемоційний стан; бойовий стрес; ресурси відновлення



Diagnosis of the level of personality stress resistance

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◆ **Abstract.** Modern psychology increasingly focuses on the study of stress resistance as a key mental state that determines an individual's ability to counteract the negative effects of stress factors. In the context of military events in Ukraine, the study of this issue is particularly relevant for assessing the potential for effective functioning and self-realisation of individuals in conditions of increased psycho-emotional stress. The aim of the study was to conduct a comprehensive study of stress resistance characteristics and assess its level among the subjects using standardised methods. The study involved 35 male and female students of higher education institutions in Kyiv aged 16 to 22. Two methods were selected, including the assessment of stress resistance and social adaptation according to D. Holmes and K. Rahe and the determination of stress levels according to V. Shcherbatykh. The study found that modern students are most likely to have a medium level of stress resistance. At the same time, the motivation to avoid failure is evenly distributed among the sample at three levels (medium, moderately high and excessively high). Based on the analysis of the data obtained, it was established that the entire sample showed the best indicator of low stress impact. At the same time, about a third of the study participants demonstrated a high level of stress factors. Such students are in a state of stress, which requires psychological support to overcome. The results indicated the need to develop individual strategies for coping with stress, developing psychological flexibility, and increasing awareness of emotional processes. In the future, these data can be used to create psychoprophylactic programmes aimed at strengthening stress resistance and the adaptive potential of the individual in conditions of increased psychological stress

◆ **Keywords:** self-regulation; stressors; ways to increase stress resistance; young people; adaptation; socialisation

◆ Introduction

In modern conditions, there is a growing scientific interest in the problem of stress resistance, which was considered as a psychological characteristic that determines the ability of an individual to counteract the influence of stress factors. As emphasised by O. Dzhezhera & O. Yurchuk (2023), in a period of rapid economic, political and technological change, people are constantly adapting to a changing environment, as a result of which stress becomes an integral part of everyday life, and internal tension manifests itself through psychological discomfort, which can manifest itself in con-

flicts, irritation or aggression. Social changes, the restructuring of public consciousness, mental stress, and difficulties in adapting to changed environmental conditions become the most stressful factors, and an insufficient level of stress resistance can worsen a person's life, reduce their effectiveness in any activity, and lead to irreversible processes (Andriyashina, 2022). The work of P.D. McGorry *et al.* (2022) emphasises that the most common sources of stress for students are academic workload, financial instability and social isolation, which directly or indirectly affect stress resistance

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levels. A survey by E. Nikolayev *et al.* (2023) showed that students and teachers are under significant psychological pressure caused by war, uncertainty, isolation, and repressive conditions, which negatively affects their emotional well-being and performance. According to B. Baizhumanova *et al.* (2024), high levels of stress among students are a constant trend associated not only with academic workload but also with global social changes. In a study of stress, depression, and anxiety levels among Ukrainian students during the war, T. Yamchuk (2025) obtained the following main results: high levels of depression and anxiety, as well as consistently elevated stress levels. A study by I.G. Golovska & O.Yu. Hrytsyk (2025) found that in the early adolescent group (15-17 years old), 20% of participants had low stress levels, while in the older group (18-23 years old), 36.7% of participants had low stress levels. According to L.V. Nedilko & I.V. Burylo (2022), stress resistance should be considered as a structural, functional, dynamic and complex property of an individual, which is formed when a person encounters stressful factors that are often repeated in various circumstances; It depends on understanding the life situation, its adequate assessment, and the ability to predict one's actions. It generates the ability to choose rational means and ways to overcome stress. Analysis of the above publications confirmed the general trend towards an increase in psycho-emotional stress among students, which is particularly due to socio-political instability and armed conflict in Ukraine. The aim of the study was to evaluate the effectiveness of diagnosing the level of stress resistance of an individual and to determine the characteristics of stress resistance. In accordance with the set aim, the following objectives were formulated:

- 1) to conduct a theoretical analysis of the main concepts and approaches to the phenomenon of psychological resistance to stress and to reveal the psychological essence of the concept of stress resistance of an individual;
- 2) to conduct an empirical study to identify the psychological characteristics of the development and manifestation of stress resistance;
- 3) to develop psychological recommendations for improving and strengthening the level of stress resistance.

The scientific novelty of the article lies in reflecting the current state of anxiety and stress resistance among modern students, clarifying the basic principles and concepts of the subject under study, and improving psychodiagnostic tools for studying anxiety.

◆ Materials and Methods

To achieve the aim and solve the set objectives, a complex of interrelated research methods was used:

1. General theoretical – analysis of scientific literature, generalisation, systematisation of scientific research on the problem of stress resistance, interpretation of result.
2. Empirical – surveys, questionnaires, testing using specific research methods, psychological interpretation of the research material.

The methodological basis of the research was the concept of stress resistance determinants developed by

researchers V.M. Korolchuk (2010) and A.S. Stepova (2018). Thirty-five students aged 16 to 22 participated in the empirical study: 17 individuals aged 16-19 and 18 individuals aged 20-22. Dividing the groups by age made it possible to trace how different stages of life affect the reaction to and perception of stressful situations. The distribution of participants by gender showed that there were 21 females and 14 males, i.e. women accounted for 60% of the sample and men for 40%. All participants in the study were first-to fourth-year students at higher education institutions in Kyiv and Chernihiv, including: the State University of Trade and Economics, the Ukrainian State University named after M.P. Dragomanov, the Taras Shevchenko National University of Kyiv, the O.O. Bogomolets National Medical University, and the Penitentiary Academy of Ukraine. The study was conducted online using Google Forms in January-February 2025. During the survey, ethical norms and professional standards of psychological practice were observed. Participants' data were coded in accordance with the principles of confidentiality, anonymity, and protection of personal information in accordance with the provisions of the World Medical Association's Declaration of Helsinki (WMA, 2024).

The first method used was the stress resistance and social adaptation methodology developed by D. Holmes and C. Rahe, which indicates the level of stress resistance that shows how a person is able to cope with stress (Romanovskaya, 2014). A low test score indicates a high level of stress resistance and a low probability of developing psychological disorders, while a high score indicates a significant likelihood of their occurrence. The second method chosen was the stress level test by V. Shcherbatykh (Stress level test..., n.d.). This method uses tools designed to assess the level of psychological stress and its impact on the individual. The main purpose of this test is to determine the extent to which the subject feels the impact of stress on their psychological state. The test consists of several sections (intellectual, behavioural, emotional, physiological) that correspond to a specific sign of stress.

◆ Results and Discussion

Table 1 contains the results of assessing the stress resistance and social adaptation of respondents using the methodology of D. Holmes and K. Rahe. Table 1 shows that males have higher and medium stress resistance levels compared to females. Low stress resistance is more common among females, which indicates that male respondents are better able to cope with stress. The results of the age category analysis revealed minor differences in the ability to resist stressful events. This means that the highest level of stress resistance is the medium level, followed by high levels of stress resistance, while low levels are 23.5% (16-19 years) and 22.2% (20-22 years). Thus, according to the stress scale of D. Holmes and K. Rahe, in the 20-22 age group, there was an increase in indicators with medium and low levels of stress resistance compared to the 16-19 age group. The data obtained are shown schematically in Figures 1, 2 and 3

Table 1. Results of the study to determine stress resistance and social adaptation using the method developed by D. Holmes and C. Rahe

Degree of stress resistance	Indicators (number)									
	Entire sample		Females		Males		16-19 years old		20-22 years old	
	individuals	%	individuals	%	individuals	%	individuals	%	individuals	%
High	10	28.6	5	23.8	5	35.7	5	29.4	5	27.8
Medium	17	48.6	11	52.4	6	42.9	8	47.1	9	50
Low	8	22.8	5	23.8	3	21.4	4	23.5	4	22.2
Total	35	100	21	100	14	100	17	100	18	100

Source: developed by the authors

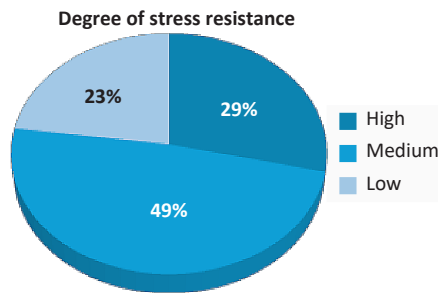


Figure 1. Research results for the determination of stress resistance and social adaptation using the D. Holmes and K. Rahe method for the entire sample

Source: developed by the authors

Figure 1 and Table 1 show that 28% (10 people) of all study participants have a high level of stress resistance, which indicates a low level of susceptibility to stress. Forty-nine per cent (17 people) of respondents showed a medium, acceptable level of stress resistance. This indicator showed a threshold level of stress resistance, which is determined by the medium degree of stress impact. According to the results of the data obtained, 23% of all respondents (8 people) achieved a low level of stress resistance. This indicator showed a characteristic high degree of stress load. Figure 2 showed gender differences in stress resistance indicators.

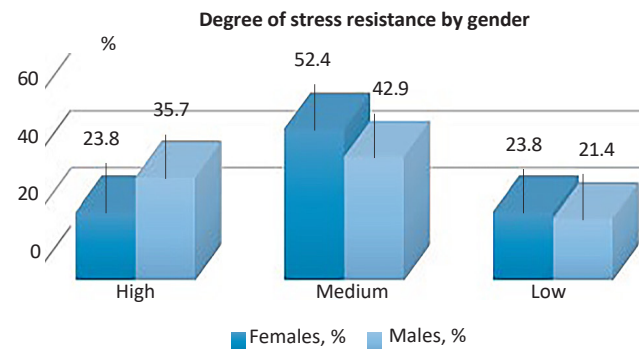


Figure 2. Research results for the determination of stress resistance and social adaptation using the D. Holmes and K. Rahe method by gender

Source: developed by the authors

A higher medium level of stress resistance was found in men than in women. Thus, the medium level of stress resistance is better among women than among men. The low level of stress resistance is approximately the same for both sexes. The results of the study by gender, presented in Figure 2, indicate a predominant level of stress resistance, mostly at the medium level, in both men and women. The results of the study to determine stress resistance and social adaptation using the method of D. Holmes and K. Rahe by age category are shown in Figure 3.

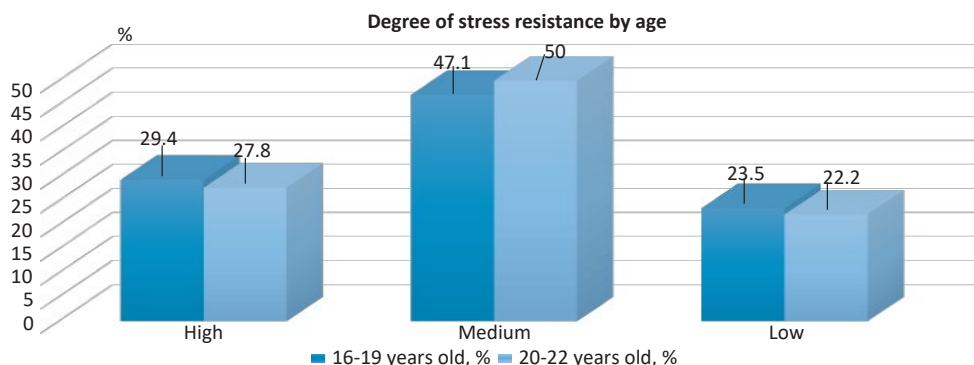


Figure 3. Research results for the determination of stress resistance and social adaptation using the D. Holmes and K. Rahe method by age category

Source: developed by the authors

Analysis of the results by age group showed that there were no significant differences in stress resistance levels depending on age. All indicators had similar values, differing

only by a small percentage. The results of the study to determine the level of stress impact using the V. Shcherbatykh method are presented in Table 2.

Table 2. Results of the study among respondents using the method for determining stress levels developed by V. Shcherbatykh

Level of stress impact	Indicators (number)									
	Entire sample		Females		Males		16-19 years old		20-22 years old	
	individuals	%	individuals	%	individuals	%	individuals	%	individuals	%
High	13	37.2	8	38.1	5	35.7	7	41.2	6	33.34
Medium	11	31.4	6	28.6	5	35.7	5	29.4	6	33.33
Low	11	31.4	7	33.3	4	28.6	5	29.4	6	33.33
Total	35	100	21	100	14	100	17	100	18	100

Source: developed by the authors

The results presented in Table 2 show that the highest stress levels are low across all categories of the study. Next are medium and high stress levels, which are approximately the same across all categories except gender. By age, the highest level of stress impact is among people aged 20-22 (33.3%). Women experience higher levels of stress than men (33.3% compared to 28.6%). The low level of stress is higher among women than men (38.1% versus 35.7%). However, the medium level of stress is higher among men (35.7%) than among women (28.6%). Respondents aged 16-19 have a higher rate of low stress levels – 41.2%, while the 20-22 age group has 33.3%. For the entire sample, the highest indicator is the low stress impact indicator (37.2%). Figure 4 shows the results of the stress level study using the V. Shcherbatykh method among the entire sample, which made it possible to assess the overall distribution of stress levels.

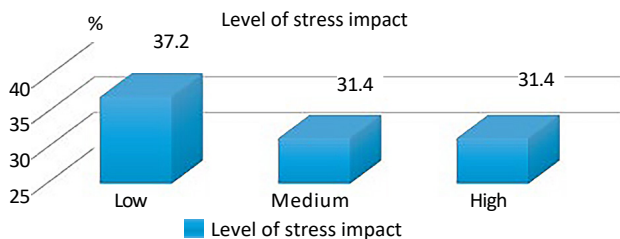


Figure 4. Research results for the determination of the level of stress using the V. Shcherbatykh method for the entire sample

Source: developed by the authors

Figure 4 shows that 37.2% of all respondents (13 people) experience low levels of stress. This indicates that the respondents experience minimal stress levels. Medium stress levels were observed in 31.4% of respondents (11 people), which may be a sign of tension in the emotional and physiological systems of the body. High stress levels were found in 31.4% of respondents (11 people) – a high indicator, which indicates the depletion of adaptive energy reserves. Figure 5 shows that students aged 16-19 did not experience significant stress during the study period. The low level indicator in the 16-19 age group is higher than that in the 20-22 age group. The medium level of stress is experienced by a larger number of young people aged 20-22. Approximately one third of respondents in both age groups experience high levels of stress. It can be assumed that this situation is directly related to the military actions on the territory of Ukraine, which causes anxiety

and reduces life satisfaction. The results of this study were consistent with the conclusions of other researchers who have studied the problem of stress resistance among students. I.G. Golovska & O.Yu. Hrytsyk (2025) conducted a study that consisted of determining the role of psychological knowledge as a determinant in the process of overcoming stress, as well as analysing its impact on the development of adaptive strategies and personal resources in crisis situations. There were more participants with low stress levels – 36.7%, with medium stress levels – 63.3%, and no cases of high stress levels were recorded. The stress levels determined in this study using V. Shcherbatykh's methodology showed similar indicators for low levels and significantly different indicators for medium and high levels, which may indicate different sensitivity of the study participants to stress factors, as well as individual characteristics of psycho-emotional stability. Such a difference in the indicators of medium and high stress levels may indicate the presence of certain external or internal factors that affect respondents in different ways – for example, differences in coping strategies, levels of social support, or personality traits such as anxiety, emotional stability, or self-control. In addition, this may indicate an uneven distribution of psycho-emotional stress among the sample, which is important to consider when analysing the results and formulating recommendations for reducing stress levels. O.K. Kravtsova (2018) defined stress resistance as a complex mental property that that develops in ontogenesis, depends on the individual typological characteristics of the nervous system and temperament, is realised through psychological defence mechanisms and coping strategies, and requires purposeful development, especially in adolescents who have experienced the effects of war. According to A.S. Stepova (2018), stress resistance is a key factor in the psychological health and success of students, especially in adolescence, when self-regulation and life values are formed. High levels of stress negatively affect learning, communication and adaptation. S.O. Bogdanov & V.A. Chernobrovkina (2017) considered the very concept of stress resistance in the context of “strengths”. In this approach, stress resistance means skills, abilities, knowledge, and discoveries that accumulate over time as a result of solving problems and overcoming challenges. This means that during and after an emergency, well-being is maintained through the resources and abilities that are already present and well developed in a particular person. Based on the results of an empirical study, S.M. Myronets (2011)

concluded that the development of conscious self-regulation is the factor that prevents the negative impact of stress on the effectiveness and reliability of the professional activities of rescuers, and the specifics of the profession have a certain impact on the development of individual characteristics of self-regulation in professionals. The results of a study by H. Dubczak (2019) showed that the main source of psychological stress among university and vocational college students is academic activity, with university students and women experiencing higher levels of stress. Ways of coping with stress often involve unhealthy practices, which highlights the need for targeted psychological support and the development of stress resistance in future professionals. O.I. Mykhaylova (2022) developed a corrective and developmental programme on stress and the formation of stress resistance in individuals, confirming the relevance of the issue under study and increasing the validity of the data obtained in the current study. Y.V. Kushnir & O.V. Yaremychuk (2022) found that 14.29% of students have a high level of stress resistance, which ensures the ability to remain calm and confident in various life situations. A medium level of stress resistance was found in 65.71% of the subjects. This level of stress resistance is expressed in the ability to actively resist everyday difficulties, allowing to successfully find a way out of difficult life situations and cope with them. Twenty per cent of respondents demonstrated a low level of stress resistance, characterised by difficulty in adapting to the surrounding reality. The data from Y.V. Kushnir & O.V. Yaremychuk correlate with the results of this study, which allows to conclude that it is valid.

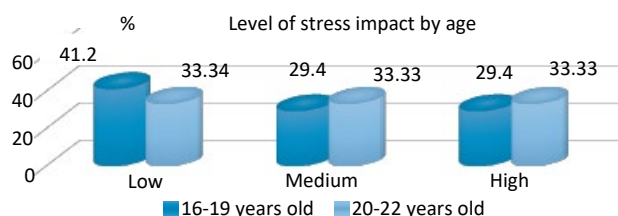


Figure 5. Research results for the determination of the level of stress using the V. Shcherbatykh method by age

Source: developed by the authors

A.I. Rudenok *et al.* (2024) identified the main components of stress resistance: emotional stability, self-regulation, cognitive resources, adaptability, social support, physical endurance, and optimistic thinking. Psychological Service of PDAU (2025) conducted an online survey of employees of Poltava State Agrarian University to determine their psycho-emotional state. An empirical study of the impact of stressors on the mental and somatic health of university employees was conducted with the aim of selecting effective psychotherapeutic tools for the development of psychological resilience using V. Shcherbatykh's stress level test. According to the results of the study, only 2.9% of respondents showed no signs of stress. In 17.6% of respondents, the indicators correspond to a state of "moderate stress", while 41.2% of those surveyed are in a

state of "severe stress". This is consistent with the results of this study, where 31.4% of respondents scored high on V. Shcherbatykh's stress test, confirming the trend towards increased psycho-emotional stress, which is particularly relevant in conditions of socio-political instability and war. According to the conclusions of V. Virchenko (2024), the increase in mental disorders among Ukrainian students during the war has a negative impact on the acquisition of knowledge and the development of professional competencies, which poses a threat to effective post-war economic recovery and requires timely and adequate measures in the field of public policy on the mental health of students. Thus, the results of this study correlate with the data of contemporary scientists, who also record a significant proportion of students with moderate and high levels of stress. According to O.M. Kokun & O. Bezverkyh (2024), stress resistance is an integral personality trait that encompasses a complex of cognitive, emotional, adaptive, and personal characteristics that enable a person to cope with stress and resist the negative effects of stressors in order to maintain mental health. In turn, R.S. Lazarus & S. Folkman (1994) considered stress resistance through the concept of coping strategies, i.e., how a person cognitively assesses a stressful situation, how they perceive stressors, and what strategy they choose to overcome their consequences. The researchers argued that coping is not a static trait, but a dynamic process that involves active interaction between the individual and their environment. In general, the results emphasised that stress resistance is a multidimensional characteristic that is shaped by both external factors (life events, social environment) and internal factors (personality traits, response type, level of self-regulation).

◆ Conclusions

Analysis of the data obtained showed that the medium level of stress resistance prevails among modern students. At the same time, the motivation to avoid failure was evenly distributed among the study participants at three levels: medium, moderately high, and high. Also, the entire sample demonstrated a better indicator of low stress impact. At the same time, it was found that approximately one-third of the subjects suffer from high stressors. Such students are in a state of stress, which requires psychological support to overcome. This indicates that the subjects are able to tolerate stress without harm to their body and psyche and experience an average threshold of stress load. With an medium level of stress resistance, a person retains the ability to function effectively and psychological resources. In this case, a person has sufficient stress resistance to combat the negative psychological states that arise during stress and the ability to counteract stressors.

The data obtained confirmed the need to develop individual strategies for overcoming stress, forming psychological flexibility, and increasing awareness in the emotional sphere. In the future, the results of the present study can be used to develop psychoprophylactic programmes aimed at increasing stress resistance and the adaptive potential

of individuals in conditions of increasing psychological stress. In particular, the high prevalence of symptoms of stress, anxiety and depression among young people indicates the need to develop and implement effective psychological and social support programmes. These could include training in emotional regulation, time management skills development, psychological counselling, and the creation of a supportive educational environment. Students with low stress resistance, maladaptive behaviour patterns or high stress levels require special attention as they are a potential risk group for psychological distress. The article adds to the scientific base of research in the field of stress resistance among students. It also emphasises the

importance of introducing institutional psychological services in higher education institutions aimed at preventing emotional burnout and developing effective strategies for coping with stressful situations.

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◆ Conflict of Interest

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◆ References

- [1] Andriyashina, N.V. (2022). [Stress resistance of the individual in modern conditions of social development](#). In *The unity of teaching and scientific research is the main principle of the university* (pp. 5-7). Kyiv: NPU named after M.P. Drahomanov.
- [2] Baizhumanova, B., Berdibayeva, S., Arzymbetova, S., Garber, A., Duanayeva, S., & Kulzhabayeva, L. (2024). Role of stress and resilience in the psychological health of students studying abroad. *Open Psychology Journal*, 17, article number e18743501309040. doi: [10.2174/0118743501309040240430064925](#).
- [3] Bogdanov, S.O., & Chernobrovkina, V.A. (2017). [Factors influencing the development of resilience in children](#). In V.M. Chernobrovkin & V.G. Panok (Eds.), *Training teachers to develop resilience / stress resistance in children in educational institutions* (pp. 15-18). Kyiv: Pulsars.
- [4] Dubczak, H. (2019). Psychological characteristics of educational stress of modern students. *Social Welfare Interdisciplinary Approach*, 2(9), 90-104. doi: [10.21277/sw.v2i9.458](#).
- [5] Dzhezhera, O., & Yurchuk, O. (2023). Psychological correction of emotional experiences of higher education students under stress by means of physical culture. *Psychology: Reality and Prospects*, 20, 39-47. doi: [10.35619/prap.rv.v1i20.341](#).
- [6] Golovska, I.G., & Hrytsyk, O.Yu. (2025). The influence of psychological education on the stress resistance of youth. *Personality Psychology*, 73, 128-133. doi: [10.32782/2663-5208.2025.73.21](#).
- [7] Kokun, O.M., & Bezverkhyy, O. (2024). Ukrainian students' personal resources and resistance to war stress: A cross-sectional survey. *Journal of Loss and Trauma*, 29(3), 976-993. doi: [10.1080/15325024.2024.2325084](#).
- [8] Korolchuk, V.M. (2010). [Substantiation of the organizational model of research on personality stress resistance](#). *Problems of Extreme and Crisis Psychology*, 7, 210-218.
- [9] Kravtsova, O.K. (2018). Stress resistance of personality as psychological phenomenon: Basic theoretical approaches. *Bulletin of Postgraduate Education "Social and Behavioural Sciences Series"*, 7(36), 98-117. doi: [10.32405/2522-9931-7\(36\)-98-117](#).
- [10] Kushnir, Y.V., & Yaremychuk, O.V. (2022). Peculiarities of the manifestation of stress resistance in individuals with different cognitive styles. *Scientific Bulletin of the Uzhhorod National University. Series: Psychology*, 4, 56-59. doi: [10.32782/psy-visnyk/2021.4.11](#).
- [11] Lazarus, R.S., & Folkman, S. (1994). *Stress, appraisal and coping*. New York: Springer.
- [12] McGorry, P.D., Mei, C., Channen, A.M., & Hodges, C. (2022). Designing and scaling up integrated youth mental health care. *World Psychiatry*, 21, 61-67. doi: [10.1002/wps.20938](#).
- [13] Mykhaylova, O.I. (2022). [Stress. Formation of personality stress resistance: Correctional and developmental program](#). Nizhyn: State University named after M. Gogol.
- [14] Myronets, S.M. (2011). [Peculiarities of conscious self-regulation in the development of acute and chronic traumatic stress in rescuers](#). *Bulletin of the National Academy of the State Border Guard Service of Ukraine. Psychological Sciences*, 3, 12.
- [15] Nediilko, L.V., & Burylko, I.V. (2022). Theoretical foundations of emotional intelligence as a factor in the development of stress resistance. In *Psychological and pedagogical problems of personality socialisation in modern conditions* (pp. 110-112). Lviv: LihaPres. doi: [10.36059/978-966-397-261-9/30](#).
- [16] Nikolayev, E., Riy, G., & Shemelinets, I. (2023). [Higher education in Ukraine: changes due to war: Analytical report](#). Kyiv: Borys Grinchenko Kyiv University.
- [17] Psychological Service of PDAU. (2025). *Results of a survey of university employees to determine their psychological and emotional state*. Retrieved from <https://www.pdau.edu.ua/content/rezultaty-opytuvannya-pracivnykiv-universytetu-z-metoyu-vyznachennya-psyhoemocynogo-stanu>.

- [18] Romanovskaya, D.D. (2014). *Prevention of post-traumatic stress disorder: Psychological aspects*. Chernivtsi: Tekhnodruk.
- [19] Rudenok, A.I., Logvina, O.A., & Isak, G.V. (2024). Stress resistance as a key psychological characteristic of the professional development of young specialists. *History of Sociology*, 65, 229-232. doi: 10.32782/2663-5208.
- [20] Stepova, A.S. (2018). *Psychological features of stress resistance of adolescents*. *Young Scientist*, 9(61), 314-315.
- [21] Stress level test (according to V.Yu. Shcherbatykh). (n.d.). Retrieved from <https://santamaria.com.ua/about/blog/test-na-viznachennya-rivnya-stresu-za-v-yu-sherbatih>.
- [22] Virchenko, V. (2024). Mental health and productivity of Ukrainian students in the time of war. *Medical Physics – the Current Status Problems the Way of Development Innovation Technologies*, 1, 370-378. doi: 10.17721/3041-1491/2024.11-48.
- [23] WMA. (2024). *WMA Declaration of Helsinki – ethical principles for medical research involving human participants*. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki/>.
- [24] Yamchuk, T. (2025). The resilience of the student community in wartime. *Scientific Bulletin of Mukachevo State University. Series “Pedagogy and Psychology”*, 11(1), 19-31. doi: 10.52534/msu-pp1.2025.19.

Діагностика рівня стресостійкості особистості

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✦ **Анотація.** Сучасна психологія дедалі більше концентрується на дослідженні стресостійкості як ключового психічного стану, що визначає здатність особистості протидіяти негативним впливам стресових факторів. У контексті воєнних подій в Україні вивчення цієї проблематики набуває особливої актуальності для оцінки потенціалу ефективного функціонування та самореалізації особистості в умовах підвищеного психоемоційного навантаження. Метою роботи було комплексне дослідження характеристик стресостійкості та оцінка її рівня серед обстежуваних за допомогою стандартизованих методик. В дослідженні взяло участь 35 студентів закладів вищої освіти м. Києва жіночої та чоловічої статі віком від 16 до 22 років. Було обрано дві методики, що включають оцінку стресостійкості та соціальної адаптації за Д. Холмсом і К. Рейгом і визначення рівня стресу за В. Щербатих. В результаті проведеного дослідження виявлено, що сучасним студентам найбільше характерний середній рівень стресостійкості. Водночас мотивація до уникнення невдачі рівномірно виражена серед вибірки на трьох рівнях (середня, помірковано висока та занадто висока). На основі аналізу отриманих даних встановлено, що вся вибірка показала кращий показник по низькому ступеню впливу стресу. При цьому близько третини учасників дослідження продемонструвало високий рівень впливу стресогенних факторів. Такі студенти перебувають у стані стресу, для подолання якого потрібно звернутися за психологічною підтримкою. Отримані результати вказують на потребу формування індивідуальних стратегій подолання стресу, розвитку психологічної гнучкості та підвищення усвідомленості емоційних процесів. У подальшому ці дані можуть бути використані для створення психопрофілактичних програм, спрямованих на зміцнення стресостійкості та адаптаційного потенціалу особистості в умовах підвищеного психологічного навантаження.

✦ **Ключові слова:** саморегуляція; стресори; способи підвищення стресостійкості; молодь; адаптація; соціалізація



Psychological cohesion as a fundamental component of military leadership

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◆ **Abstract.** In the context of Russia's armed aggression against Ukraine, the study of psychological cohesion as a key factor in the management activities of military leaders, which determines the stability, combat capability and effectiveness of adaptation of units in stressful and dynamic situations, is of particular importance. The purpose of the study was to substantiate psychological cohesion as a fundamental component of military leadership and determine the role of transformational leadership style in its emergence, maintenance and development. Special attention was paid to the analysis of the relationship between cognitive, emotional, and behavioural aspects of cohesion, and its impact on the effectiveness of junior commanders' management activities. A set of theoretical methods (content analysis, systematisation, generalisation, structuring of scientific approaches) and empirical methods (testing according to the Seashore Group Cohesiveness Index, expert assessment of the level of leadership qualities of junior commanders) were used. The study covered 145 cadets of the National Guard of Ukraine with various military service experience. It was established that psychological cohesion is a multicomponent phenomenon that covers cognitive, emotional and behavioural aspects of interaction. The study showed that in the first year of training, the level of cohesion was higher than in the second, which was explained by the processes of adaptation, self-affirmation, and the establishment of role positions in the group. Expert analysis confirmed that the development of managerial qualities of commanders, their ability to fairly distribute responsibilities, build trust and apply the principles of transformational leadership are key conditions for maintaining a high level of cohesion. The results of the study confirmed that psychological cohesion was not only a consequence of managerial influences, but also directly determines the effectiveness of military leadership. The introduction of transformational leadership trainings, the development of emotional intelligence of commanders, and the support of social justice in the team will contribute to improving the combat capability of the units of National Guard of Ukraine. The obtained data can be used to improve the training of junior commanders, develop programmes of military psychological support, and form an integral system of leadership competencies

◆ **Keywords:** transformational leadership; moral and psychological climate; commander; emotional intelligence; motivation; adaptation; management effectiveness

◆ Introduction

The contemporary military context is characterised by extreme dynamics, increasing uncertainty, and high psychological loads on personnel, which makes it difficult to perform service and combat tasks. In such circumstances, the ability of divisions to maintain internal unity, mutual trust, and stability in interpersonal relationships becomes particularly important. Harmonious psychological cohesion is one of the key resources that ensure the moral stability of

military collectives, their adaptability to crisis situations, and the ability to be professionally effective. Current military realities, in particular, the experience of countering Russia's armed aggression against Ukraine, form new requirements for the managerial activities of commanders and leaders of military units. The growing complexity of the operational environment, the need for rapid decision-making and maintaining a high level of combat readiness

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determine the need to develop not only professional, but also psychological competencies of managers. In this context, the psychological cohesion of personnel appears as a fundamental factor that determines the ability of military collectives to maintain moral stability, maintain effectiveness in stressful conditions, and ensure the performance of service and combat tasks. It manifests itself through a harmonious combination of trust, mutual respect, unity of values, and readiness for joint actions, which form a favourable moral and psychological climate in the division (Schilling, 2022). Recent research highlights the importance of leadership in building cohesion, noting that quality leadership based on the principles of transformational style provides an increased level of mutual trust, collective motivation, and readiness for joint action. In particular, the results of the empirical analysis by L. Wang *et al.* (2024) showed that the commander's use of an individualised approach, emotional support, and intellectual stimulation significantly increases the effectiveness of interpersonal interaction in military groups. Similar conclusions were obtained in the study by J.R. Barfod & J. Clifton (2025), where monitoring the activities of combat units in real-world conditions showed that transformational leadership creates a strong moral and psychological climate and promotes cohesion even in high-risk situations. Results of the systematic review by M.F. Brandebo *et al.* (2022) on long-term projects have confirmed that psychological cohesion is complex in nature and manifests itself in three dimensions-social, task-oriented, and general. The level of each of these aspects varies depending on the organisational structure, the experience of military personnel, and the specifics of the tasks performed. In addition, I. Ramírez-Bravo *et al.* (2025) found that a transformational leadership style contributes to the harmonisation of these dimensions, providing a balance between social support and result orientation.

Additional empirical data by S. Bekesiene & R. Smaliukiene (2022) confirmed that the psychological cohesion of a group, in particular, its social and task-oriented dimensions, mitigates the negative impact of stress factors on the personal development of military personnel during compulsory service. A high level of mutual support and shared responsibility contributes to maintaining moral stability and efficiency in performing service and combat tasks, even in unstable conditions. Leadership is a key mediator that can compensate for the lack of strong group connections and ensure that the team adapts to changing external circumstances. In particular, the transformational leadership style, which provides for an individualised approach, emotional support and stimulation of intellectual resources of personnel, contributes to increasing the internal unity of the unit and strengthening its psychological climate, which, in turn, reduces the level of stress reactivity and increases the ability of military personnel to collective interaction and professional growth. The study by S. Schilling (2022) found that new adaptations of cohesion models developed for British formations demonstrate

that the conventional cohesion paradigm may need to be revised in the context of contemporary hybrid and mobile structures. N.M. Sekel *et al.* (2023) determined that psychological support and mutual assistance within a group determine the level of combat endurance and psychological well-being of military personnel. Together, these data substantiate the relevance of an in-depth consideration of psychological cohesion as a fundamental component of military leadership. The study also highlighted the importance of emotional intelligence (EI) in military leadership and its impact on the psychological cohesion of units. In particular, the empirical research by R. Kumar & R. Sampath Kumar (2024) showed that EI is a critical component of effective military leadership, influencing decision-making, team cohesion, stress management, and operational outcomes. The researchers argued that leaders with a high level of EI contribute to the development of mutual trust, moral resilience, and increased productivity of personnel, which is especially important in contemporary combat conditions, where empathic leadership ensures harmonious cooperation and adaptability of units to uncertainty. The scientific originality of the study consisted in empirical confirmation of the dynamics of psychological cohesion at different stages of training cadets and determining the role of transformational leadership in its maintenance in the conditions of military units. The purpose of the study was to comprehensively analyse psychological cohesion in military collectives and determine the function of transformational leadership style and emotional intelligence in creating effective interpersonal interaction.

◆ Materials and Methods

The study was conducted in 2025 in the National Academy of the National Guard of Ukraine. A total of 145 male cadets aged 18 to 25 with 1 to 5 years of military service took part. The sample included 63 first-year cadets with up to 2 years of service and 82 second-year cadets with up to 5 years of service. The sample was formed according to the following criteria: belonging to cadet units, voluntary consent to participate, absence of disciplinary violations, and stable health. Within the framework of the study, a complex of theoretical and empirical methods was used. The theoretical block included content analysis of scientific sources, systematisation and generalisation of approaches to the study of the phenomenon of psychological cohesion, and structuring the obtained data to form hypotheses. This allowed outlining scientific approaches and identifying the main variables for empirical verification. Theoretical methods included a content analysis of scientific literature covering works on psychological cohesion in military collectives (Brandebo *et al.*, 2022; Overchuk, 2022). A significant number of publications have focused on the role of leadership in building cohesion (Schilling, 2022; Wang *et al.*, 2024). A separate area was the studies on emotional intelligence (Barfod & Clifton, 2025; Khan *et al.*, 2022). Additional aspects were revealed in papers analysing the transformational leadership style in military units

(Sekel *et al.*, 2023; Kumar & Sampath Kumar, 2024). Additionally, research in the field of maintaining the moral and psychological readiness of personnel in combat conditions was considered (Hukovsky *et al.*, 2024; Sher, 2024). Empirical methods included testing using the Seashore Group Cohesion Index, which was used to measure the level of group cohesion. The methodology involves evaluating interaction, trust, and shared values in a group on a five-point scale, the results of which were summarised as an integral indicator (from 0 to 20 points, where <10 – low, 10-15 – medium, and >15 – high). The study used an adapted Ukrainian version of the methodology, standardised for samples of military personnel. Psychometric indicators showed a sufficient level of reliability (Cronbach's internal consistency coefficient $\alpha = 0.78$) and acceptable design validity, which confirmed the possibility of correct application of the technique in military teams. The expert assessment of the leadership qualities of junior commanders was carried out by a group of 10 teachers of the academy, who acted as experts. The procedure was individual in nature: each expert separately assessed the competence of commanders according to pre-defined criteria (responsibility, organisational abilities, emotional intelligence, ability to maintain discipline and fair distribution of responsibilities). The assessment was carried out on a 10-point scale, after which the results were summarised by calculating the average values. This approach helped to avoid the influence of group pressure or the effect of conformity, and also ensured the independence of expert judgements. Data processing was carried out using descriptive statistics (average values, percentages) and using the Student's t-test

for independent samples, which determined the differences between cadets of the first and second years of study. Correlation analysis (Pearson's coefficient) was used to establish the relationship between the level of psychological cohesion and leadership qualities. The choice of experts was based on their professional experience and qualifications. The expert group included teachers with many years of experience in teaching and military work (more than 10 years of service), who were directly involved in the training of cadets and had practical experience in management activities in military units. In addition, they had the necessary psychological and pedagogical knowledge to objectively assess the level of leadership competencies. The involvement of this particular category of experts ensured high validity and reliability of the assessment. The study was conducted in compliance with the basic ethical principles of psychological research – anonymity, voluntary participation, and informed consent of participants – in accordance with the provisions of the Helsinki Declaration of the World Medical Association (WMA, 2024) and considering the national standards of professional ethics of a psychologist. The Seashore Group Cohesiveness Index was chosen because of its validity to assess group dynamics in military collectives, and expert assessment was chosen to correlate leadership qualities with the level of cohesion. The study allows the results to be reproduced provided that a similar sample and methodology are used.

◆ Results and Discussion

The results of the Seashore Group Cohesiveness Index are presented in Tables 1 and 2.

Table 1. Indicators of the group cohesion index for the first-year cadets

No.	Number of p	Group cohesion levels			Total indicator
		Low (total score)	Average (total score)	High (total score)	
1	19	–	42% (12.6 points)	58% (17 points)	15.1 points
2	14	7% (7 points)	43% (13.5 points)	50% (16.4 points)	14.5 points
3	20	–	55% (13.8 points)	45% (17.9 points)	15.9 points
4	22	–	50% (13.9 points)	50% (17.7 points)	15.8 points
Total indicator	75	1% (7 points)	48% (13.5 points)	51% (18.2 points)	15.8 points

Note: p – personnel

Source: developed by the author

Table 2. Indicators of the group cohesion index for the second-year cadets

No.	Number of p	Group cohesion levels			Total indicator
		Low (total score)	Average (total score)	High (total score)	
1	23	–	43.5% (11.1 points)	56.5% (16.9 points)	14.4 points
2	22	–	59% (13.1 points)	41% (17.9 points)	14.45 points
3	10	–	30% (14.3 points)	70% (17.1 points)	16.3 points
4	15	6.7% (6 points)	60% (10.9 points)	33.3% (17 points)	12.6 points
Total indicator	70	1% (6 points)	50% (12 points)	49% (17.2 points)	14.3 points

Note: p – personnel

Source: developed by the author

The total indicator of psychological cohesion of the first-year cadets was 15.8 points, the second-year cadets – 14.3 points. Statistical analysis using the student's

t-test revealed a significant difference between the groups ($t = 2.45$, $p < 0.05$), indicating a higher level of cohesion in the first year. The expert assessment ($n = 10$) showed an

average level of leadership qualities of commanders in the first year of training – 7.8 points (SD = 1.2), in the second year – 8.2 points (SD = 1.0). Correlation analysis revealed a moderate positive association between leadership qualities and psychological cohesion ($r = 0.65$, $p < 0.01$). In the first year of study, there was a high level of motivation and the orientation of cadets to collective interaction contribute to the formation of a favourable socio-psychological climate of the unit. During this period, the personnel actively go through the process of cohesion, which is manifested in mutual support and emotional involvement. In the second year of training, a change in the dynamics of group processes is revealed: the authority of junior commanders increases, roles within the group are determined, and criticality in interpersonal interactions increases. Subordinates go through a stage of self-affirmation, accompanied by increased individualism and competition for positions in the group. In addition, adapting to regulatory requirements and realising personal ambitions, especially among leaders of informal groups, can temporarily reduce the level of psychological cohesion. Additional factors of influence are changes in the composition of team personnel and management style. If the second-year commander is less democratic or does not strike a balance between demand and support, this can negatively affect the level of cohesion. The analysis of the expert assessment confirmed that junior commanders should have managerial qualities that ensure the effective organisation of the unit's activities and the development of leadership abilities of personnel. For second-year cadets, experts noted the increased importance of such qualities as responsibility, discipline, organisational skills, and subjective control, which ensures the ability to delegate authority. The results of the study showed that the psychological cohesion of cadet units is a dynamic and multifactorial phenomenon. Its support requires a comprehensive approach, including professional managerial skills of commanders, purposeful socio-psychological work, systematic communication, and the introduction of a transformational leadership style. This approach contributes to the development of common professional values and goals, the establishment of trusting relationships in the department and the maintenance of a high level of psychological cohesion, which increases the effectiveness of performing official tasks. Any military formation adheres to the established rules and requirements in its activities. After all, the high level of stress factors, in particular, the risk of developing post-traumatic stress disorder among both the civilian population and military personnel, emphasises the importance of proper organisation of social and psychological support and purposeful work to maintain cohesion (Naydonova *et al.*, 2024). The most important condition for the functioning of formations and units is to maintain a high level of combat readiness, in which the first and main evaluation criterion remains personnel. This refers not only to the availability of personnel, but first of all about the moral and psychological climate of the team and the individual psychological qualities of the commander or

individual members of the group, which allows conducting generalised management and performing the mission in specific conditions and with the least losses. Military leadership has a wide range of goals and objectives that distinguish it from other types of leadership and indicate differences in further development and conditions for its effective implementation. It has been repeatedly observed that a division that does not feel trust in its immediate supervisor may refuse to perform the task at hand. When conducting targeted verification of these facts, the core of the problem was precisely the lack of team cohesion, which was manifested in the low leadership qualities of the manager, and was intertwined, and sometimes reinforced by the lack of social justice in the team. Thus, the problem of developing psychological cohesion remains socially significant and scientifically relevant.

In contemporary psychology, the problem of psychological cohesion is considered through the prism of various aspects: compatibility of military personnel as a factor of effectiveness of combat operations, the influence of social cohesion on attitudes and behavioural orientations in the context of social transformations, and maintaining the mental readiness and stability of personnel in the conditions of combat operations (Deineko *et al.*, 2023; Hukovskyy *et al.*, 2024). The study by M. Moreno *et al.* (2025) showed that successful leaders in medical resource management crisis simulations are more likely to use communication, organisation, and group regulation strategies, which increases the effectiveness of team interaction. M.F. Brandebo *et al.* (2022) defined team cohesion as a characteristic of intra-group relationships, which showed the degree of consistency in participants' views, values, and attitudes towards common goals is important for the group as a whole. In military units, psychological cohesion is a dynamic characteristic that responds sensitively to external factors, in particular combat experience, structural changes and rotations in places of deployment. The above-mentioned studies have shown that units undergoing joint combat operations or intensive training (coordination) show an increase in mutual trust, authority and respect between military personnel. This is conditioned by the mobilisation of personnel to collectively overcome risk and maintain morale, which is a vital factor in effective military leadership (Sher, 2024). Instead, when returning to permanent locations, emotional and social losses of intra-group contact may occur, which reduces cohesion. The commander plays a special role here: it is he who can reduce the negative effects of stress by strengthening the internal unity of the unit through increased interaction, support, and team exercises. The paper by V. Overchuk (2022) stated that compatibility is one of the most important conditions for group cohesion and effectiveness in combat conditions. It defines cohesion as the degree of intellectual, emotional, and volitional unity of the team, which allows successfully solving the performance of combat tasks, using the psychological abilities of all military personnel. The analysis of the process of group cohesion by C.J.T. Burroughs & C.S.G. Ruth (2022)

reported that the more deeply military personnel know each other, maintain communication, perform common tasks, and participate in training, the higher the unit's level of cohesion. Thus, increased cohesion instils in fighters the belief that together they are stronger than alone.

One of the most important characteristics of cohesion is stable intra-group connections that allow identifying the leader and indicating the degree of coincidence of assessments, views, and positions of the group in relation to the person who is elected as a leader. H.Y. Egamov & K.E. Azimov (2022) determined that the level of cohesion and maturity of the team depends on the authority and pedagogical culture (skill) of the commander, in particular, his competence in combat training and psychological support of personnel. According to H.C. Knevelsrud *et al.* (2023) for successful performance of official duties, it is necessary to have developed leadership (managerial) qualities and demonstrate them in the process of personnel management; have the ability to effectively apply psychological technologies of interaction with subordinates; analyse and structure the problems of the organisation, make effective management decisions and ensure their implementation; manage the organisation and its development; identify obstacles to achieving goals and provide constructive feedback; and contribute to solving problems related to the development of competencies and overcoming problems. Management orders focus on tasks that can stimulate a sense of competence, encouraging initiative and independent actions of subordinates, and giving them the opportunity to apply their own knowledge, skills, and creativity to solve organisational problems. The relationship and trust between commanders and staff can be strengthened by showing respect even if the expected results are not achieved, demonstrating empathy for staff problems, and promoting a favourable interpersonal atmosphere. Therefore, leadership competencies are an important component, as they include the ability to inspire and motivate a team, make informed decisions, and interact effectively with colleagues. In addition, it is important to understand the culture and values of the organisation, the ability to adapt to changing conditions and the ability to create a favourable psychological climate. Compliance with job responsibilities and development of leadership skills are key factors for successful professional activity and achieving high results.

An important theoretical basis for analysing the effectiveness of military leadership is the transformational theory of leadership proposed by J. Burns and elaborated by B. Bass. The essence of this theory is the ability of a leader to inspire followers to achieve common goals by transforming their interests, increasing internal motivation, and promoting personal growth. Transformational leadership encourages followers to achieve results beyond their perceived capabilities, encouraging them to achieve significant or unexpected results by prioritising collective vision over personal interests (Ugochukwu, 2025). Unlike transactional leadership, which focuses on rewards and punishments,

transformational leadership motivates through values and development (Jun & Lee, 2023). Situational leadership is less effective for long-term cohesion (Del Pino-Marchito *et al.*, 2025). According to B. Bass, transformational leaders show idealised influence, inspiring motivation, intellectual stimulation, and individualised need consideration (Khan *et al.*, 2022). These components directly affect the cohesion of the military team, as they contribute to the development of trust, common values, and effective interpersonal interaction. Transformational commanders create a favourable moral and psychological climate, increasing the autonomy, competence, and significance of subordinates. This is especially effective when adapting a division. The study by N.M. Sekel *et al.* (2023) showed that high adapters with better physical and psychological resources (extraversion, conscientiousness) make decisions more effectively under stressful conditions, while neuroticism reduces efficiency ($p < 0.001$). N.M. Sekel *et al.* additionally reported that adaptive military personnel with high physical and psychological resources can make responsible decisions in difficult and risky conditions, while individuals with high levels of neuroticism showed reduced effectiveness. These data emphasise the need to consider individual psychological and physiological resources when forming the professionogram of special and operational military personnel. The effectiveness of leadership in military units is manifested through the personal qualities of the commander, which contribute to the development of trust, motivation, and cohesion of personnel. These qualities include: transparency and sincerity in communication, the ability to learn and develop professionally, awareness of their own strengths and weaknesses, openness and straightforwardness in actions, honesty and moral consistency, reliability and stability, modesty combined with confidence, and the establishment of close relationships that allow military personnel to share authentic aspects of their personality. This approach encourages initiative, increases intrinsic motivation, discipline, combat camaraderie, and moral resilience of the unit even in difficult task environments (Scott & Klein, 2022).

The study by F. Díez *et al.* (2023) emphasised that the effectiveness of leadership depends on many factors: situation, unpredictability, leadership skills and abilities, and the psychological characteristics of group members. The managerial qualities of the commander and the specifics of the military context are interrelated and cannot be considered separately. Successful leadership involves not only formal compliance with job requirements, but also the development of communicative, emotional, volitional, and moral qualities that ensure effective interaction with personnel. Psychological cohesion of a team is defined as a characteristic of intra-group relationships, reflecting the degree of coincidence of assessments, views, and positions of group members regarding objects, events, and values that are important for the functioning of the team. At the personal level, the psychological readiness of a serviceman to work in combat conditions is assessed, at the group level – the socio-psychological climate, which acts as an

indicator of cohesion; additionally, the leadership of the commander (trust, authority, competence) and the mental health of personnel are considered. T. Khraban (2022) confirmed that the effectiveness of military personnel is largely determined by psychological readiness and the level of team cohesion. An increased level of emotional intelligence of commanders contributes to the development of trust, reducing conflicts and creating an atmosphere of psychological security, which is critically important in combat conditions. The use of transformational leadership principles significantly increases the potential for psychological cohesion: it builds trust, increases motivation, ensures common goals and emotional unity of the team. Expert analysis has shown that the key personal qualities of commanders for effective leadership influence and personnel cohesion are empathy, determination, justice, and consistency. Thus, proper performance of official duties requires a high level of leadership competence from junior commanders. These include the ability to make informed management decisions, form team motivation, maintain a positive socio-psychological climate, and actively influence the processes of psychological cohesion as a key factor in the combat effectiveness of a unit.

◆ Conclusions

The study emphasised that psychological cohesion is a complex multicomponent psychosocial phenomenon that covers the cognitive, emotional, and behavioural levels of interaction between unit members. It not only contributes to the effective performance of tasks in a combat situation, but is also an indicator of the moral climate and sustainability of the military team. Personal qualities, leadership style, fairness in the distribution of responsibilities, and the commander's ability to communicate and emotional self-control – all this determines the level of cohesion in the unit. Transformational leadership plays a special role in the establishment of cohesive teams. Unlike authoritarian or directive styles, the transformational approach is focused on the individual development of subordinates, the development of a common vision, and the stimulation of internal motivation and trust. Expert analysis confirmed that this leadership style contributes to the growth of moral and psychological unity, the mobilisation of the potential of each serviceman, and the improvement of management efficiency. An important factor of cohesion is the joint implementation of tasks, which forms a collective identity and increases the sense of mutual support. However, the

lack of transparency in governance or a violation of the principle of social justice can destructively affect the unity of the group and reduce its combat capability.

The study deepened the scientific understanding of psychological cohesion as one of the key factors of effective military leadership. Analysis of the results revealed the following trend: a high level of cohesion among military personnel of the first year of training, which decreases in the second year. Such dynamics showed the complex, non-linear nature of the development of group unity in the conditions of a military collective. At the initial stage, there is a natural mobilisation for cohesion as a mechanism of adaptation, while further decline may be conditioned by the stabilisation of the role and place in the group, the formalisation of relationships, the approval of the authority of commanders, the processes of self-affirmation of individual members of the group, and the creation of a micro-social environment with internal group boundaries. The results obtained provided a conclusion that a high level of cohesion within a unit contributes to the formation of leadership qualities in military personnel and increases the effectiveness of military team management. It is recommended to introduce transformational leadership trainings for commanders of the National Guard of Ukraine and promote the development of a positive socio-psychological climate through team tasks and ensuring justice. The results obtained can be used to improve the training of junior commanders and increase the combat capability of NGU units. Further research should be aimed at expanding the sample at the expense of different categories of military personnel and conducting longitudinal observations, which would allow tracing the dynamics of cohesion in the service process. Another promising area is the analysis of the effectiveness of training programs for the development of transformational leadership and emotional intelligence, which can become an effective tool for improving the moral and psychological resilience of departments.

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◆ References

- [1] Barfod, J.R., & Clifton, J. (2025). Is transformational military leadership out there? An exploratory research study of military teams in action. *Armed Forces & Society*. doi: 10.1177/0095327X241309327.
- [2] Bekesiene, S., & Smaliukiene, R. (2022). Personal growth under stress: Mediating effects of unit cohesion and leadership during mandatory military training. *Sustainability*, 14(16), article number 10389. doi: 10.3390/su141610389.
- [3] Brandebo, M.F., Börjesson, M., & Hilmarsson, H. (2022). Longitudinal studies on cohesion in a military context: A systematic review. *Military Psychology*, 34(6), 732-741. doi: 10.1080/08995605.2022.2041995.
- [4] Burroughs, C.J.T., & Ruth, C.S.G. (2022). *Cohesion in the army*. Retrieved from <https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/Online-Exclusive/2022/Burroughs/BURROUGHS.pdf>.

- [5] Deineko, O., Aasland, A., Filippova, O., & Muradyan, O. (2023). Perceived social cohesion in Ukraine: Diversity and attitudes. *East/West*, 10(2), 7-40. [doi: 10.21226/ewjus775](https://doi.org/10.21226/ewjus775).
- [6] Del Pino-Marchito, A., Galán-García, A., & Plaza-Mejía, M.d.l.Á. (2025). The Hersey and Blanchard's situational leadership model revisited: Its role in sustainable organizational development. *World*, 6(2), 1-28. [doi: 10.3390/world6020063](https://doi.org/10.3390/world6020063).
- [7] Díez, F., Martínez-Morán, P.C., & Aurrekoetxea-Casaus, M. (2023). The learning process to become a military leader: Born, background and lifelong learning. *Frontiers in Education*, 8, article number 1140905. [doi: 10.3389/educ.2023.1140905](https://doi.org/10.3389/educ.2023.1140905).
- [8] Egamov, H.Y., & Azimov, K.E. (2022). [The importance of military pedagogical competence in the activities of the commander \(officer\)](https://doi.org/10.3390/ijerph19127867). *GALAXY International Interdisciplinary Research Journal (GIIRJ)*, 10(1), 786-789.
- [9] Hukovskyy, O., West, J.C., Morganstein, J.C., Augusterfer, E.F., Benedek, D.M., Boyko, O., & Adler, A.B. (2024). The combat path: Sustaining mental readiness in Ukrainian soldiers. *The US Army War College Quarterly: Parameters*, 54(2), article number 5. [doi: 10.55540/0031-1723.3285](https://doi.org/10.55540/0031-1723.3285).
- [10] Jun, K., & Lee, J. (2023). Transformational leadership and followers' innovative behavior: Roles of commitment to change and organizational support for creativity. *Behavioral Sciences*, 13(4), article number 320. [doi: 10.3390/bs13040320](https://doi.org/10.3390/bs13040320).
- [11] Khan, I.U., Amin, R.U., & Saif, N. (2022). Individualized consideration and idealized influence of transformational leadership: Mediating role of inspirational motivation and intellectual stimulation. *International Journal of Leadership in Education*. [doi: 10.1080/13603124.2022.2076286](https://doi.org/10.1080/13603124.2022.2076286).
- [12] Khraban, T. (2022). Emotional intelligence as a resource of efficiency of armed forces. *Psychological Journal*, 8(3), 55-64. [doi: 10.31108/1.2022.8.3.5](https://doi.org/10.31108/1.2022.8.3.5).
- [13] Knevelsrud, H.C., Sørli, H.O., & Valaker, S. (2023). Mission command: A self-determination theory perspective. *Military Psychology*, 36(6), 672-688. [doi: 10.1080/08995605.2023.2252718](https://doi.org/10.1080/08995605.2023.2252718).
- [14] Kumar, R., & Sampath Kumar, R. (2024). Emotions and leadership: The importance of emotional intelligence in the military. *International Journal of Engineering Technology and Management Sciences*, 8(6), 38-41. [doi: 10.46647/ijetms.2024.v08i06.006](https://doi.org/10.46647/ijetms.2024.v08i06.006).
- [15] Moreno, M., et al. (2025). The role of leadership in medical trainee team-regulation dynamics in crisis resource management simulation education. *European Journal of Psychology of Education*, 40(1), article number 27. [doi: 10.1007/s10212-024-00925-3](https://doi.org/10.1007/s10212-024-00925-3).
- [16] Naydonova, L., Dembitsky, S., & Stepanenko, V. (2024). Predictors and protectors of the risk of developing post-traumatic stress disorder in Ukrainians as a result of the Russian-Ukrainian war: Demographic aspects and war stressors. *Scientific Studios on Social and Political Psychology*, 30(2), 6-16. [doi: 10.61727/ssspj/2.2024.06](https://doi.org/10.61727/ssspj/2.2024.06).
- [17] Overchuk, V. (2022). Psychological compatibility of servicemen as the basis for the cohesion of the military collective. *Modern Engineering and Innovative Technologies*, 22(2), 59-65. [doi: 10.30890/2567-5273.2022-22-02-025](https://doi.org/10.30890/2567-5273.2022-22-02-025).
- [18] Ramírez-Bravo, I., Pulido, J.J., Díaz-García, J., Rubio-Morales, A., & López-Gajardo, M.A. (2025). What are the individual and collective consequences of transformational leadership coaching? A longitudinal structural equation model analysis with youth footballers. *Current Psychology*, 44(5), 4084-4095. [doi: 10.1007/s12144-024-07205-9](https://doi.org/10.1007/s12144-024-07205-9).
- [19] Schilling, S. (2022). Visualizing the ties that bind us: A cross-sectional thematic and visual analysis of cohesion across three British military formations. *Armed Forces & Society*, 50(3), 628-655. [doi: 10.1177/0095327X221134644](https://doi.org/10.1177/0095327X221134644).
- [20] Scott, C.L., & Klein, L.B. (2022). [Advancing traditional leadership theories by incorporating multicultural and workforce diversity leadership traits, behaviors, and supporting practices: Implications for organizational leaders](https://doi.org/10.3390/ijerph19127867). *Journal of Leadership, Accountability and Ethics*, 19(3).
- [21] Sekel, N.M., et al. (2023). Military tactical adaptive decision making during simulated military operational stress is influenced by personality, resilience, aerobic fitness, and neurocognitive function. *Frontiers in Psychology*, 14, article number 1102425. [doi: 10.3389/fpsyg.2023.1102425](https://doi.org/10.3389/fpsyg.2023.1102425).
- [22] Sher, L. (2024). The impact of relationships within combat units on post-deployment suicide risk. *Behavioral Sciences*, 14(11), article number 1040. [doi: 10.3390/bs14111040](https://doi.org/10.3390/bs14111040).
- [23] Ugochukwu, C. (2025). *Transformational leadership style: How to inspire and motivate*. Retrieved from <https://www.simplypsychology.org/what-is-transformational-leadership.html>.
- [24] Wang, L., Qian, L., Chang, S.C., Li, Z., & Nachiangmai, S. (2024). [A study on the effect of transformational leadership on job performance: A case study of Nanning development zone](https://doi.org/10.3390/ijerph19127867). In *The 8th STIU international conference* (pp. 2205-2219). Bangkok: Stamford International University.
- [25] WMA. (2024). *WMA Declaration of Helsinki – ethical principles for medical research involving human participants*. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki/>.

Психологічна згуртованість як фундаментальна складова військового лідерства

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♦ **Анотація.** У сучасних умовах збройної агресії Росії проти України особливої ваги набуває дослідження психологічної згуртованості як ключового чинника управлінської діяльності військових лідерів, що визначає стійкість, боєздатність та ефективність адаптації підрозділів у стресових і динамічних ситуаціях. Мета дослідження спрямована на обґрунтування психологічної згуртованості як фундаментальної складової військового лідерства та визначення ролі трансформаційного стилю керівництва у її формуванні, підтриманні та розвитку. Особливу увагу приділено аналізу взаємозв'язку між когнітивними, емоційними та поведінковими аспектами згуртованості, а також її впливу на ефективність управлінської діяльності командирів молодшої ланки. Використано комплекс теоретичних методів (контент-аналіз, систематизація, узагальнення, структурування наукових підходів) і емпіричних методів (тестування за методикою Сішора для вимірювання індексу групової згуртованості, експертна оцінка рівня лідерських якостей командирів молодшої ланки). Дослідження охопило 145 курсантів Національної гвардії України з різним стажем військової служби. Встановлено, що психологічна згуртованість є багатокомпонентним феноменом, який охоплює когнітивні, емоційні та поведінкові аспекти взаємодії. Дослідження показало, що на першому році навчання рівень згуртованості вищий, ніж на другому, що пояснюється процесами адаптації, самоствердженням та формуванням рольових позицій у групі. Експертний аналіз підтвердив, що розвиток управлінських якостей командирів, їх здатність до справедливого розподілу обов'язків, формування довіри та застосування принципів трансформаційного лідерства є ключовими умовами підтримання високого рівня згуртованості. Результати дослідження підтвердили, що психологічна згуртованість не лише слугує наслідком управлінських впливів, а й прямо визначає ефективність військового лідерства. Впровадження тренінгів із трансформаційного лідерства, розвиток емоційного інтелекту командирів і підтримка соціальної справедливості в колективі сприятимуть підвищенню боєздатності підрозділів Національної гвардії України. Отримані дані можуть бути використані для вдосконалення підготовки молодших командирів, розробки програм військово-психологічного супроводу та формування цілісної системи лідерських компетентностей

♦ **Ключові слова:** трансформаційне лідерство; морально-психологічний клімат; командир; емоційний інтелект; мотивація; адаптація; ефективність управління



The experience of the United States Armed Forces in preventing delinquent behaviour among military personnel

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◆ **Abstract.** Delinquent behaviour among military personnel, manifested in disciplinary violations, aggressive or unlawful actions, negatively affects the combat capability of troops, which highlights the need to develop effective systems for preventing maladaptive behaviour in combat conditions, where military personnel are in a state of chronic stress, loss and social isolation. In this context, the approach of the United States of America, which has significant historical and contemporary experience in combating such challenges, is valuable for analysing and possibly borrowing effective forms and methods of preventing behavioural deviations among soldiers. The aim of the study was to analyse the characteristics of delinquent behaviour among servicemen of the Armed Forces of the United States of America and to evaluate existing approaches to its prevention. To achieve the aim of the study, a set of theoretical methods was used, such as analysis, synthesis, comparison, generalisation and content analysis, which made it possible to identify the specifics of deviant behaviour among military personnel and to study preventive approaches and programmes implemented in the Armed Forces of the United States of America. The analysis resulted in a generalised model of a system for the prevention of delinquent behaviour that operates in the Armed Forces of the United States of America. It combines various levels of prevention, from basic preventive measures to specialised assistance and rehabilitation. The system is multi-vector and includes psychological, social, medical and legal components. Its implementation involves state structures, military command, psychologists, doctors, chaplains, mentors and other support entities. Modern prevention tools are used, including electronic services, mobile applications, remote consultations, educational programmes, crisis interventions and risk prediction technologies. The system is focused not only on eliminating the consequences of maladaptive behaviour, but also on its early detection, the development of stress resistance skills and the maintenance of an appropriate level of military discipline and psychological resilience among personnel. The generalised model of the delinquent behaviour prevention system has demonstrated the potential for integrating psychological, social, medical and legal measures into a single complex. Its practical value lies in its potential use as a guideline for improving the national system, taking into account the specifics of military service, cultural context and current legislation

◆ **Keywords:** combat stress; offences; psychological intervention; resocialisation; rehabilitation; support

◆ Introduction

Delinquent behaviour among military personnel in the armed forces is a serious challenge for the armed forces of countries around the world, especially those involved in prolonged military campaigns, peacekeeping missions

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and armed conflicts. Such experiences are accompanied by significant psychological and emotional stress for soldiers, which increases the risk of maladaptive behaviour, including suicide, desertion, sexual violence, abuse of civilians, and the abuse of psychoactive substances (PAS). Contemporary research on delinquent behaviour among military personnel attracts considerable attention from scholars in various disciplines, including military psychology, sociology, criminology, and medicine. In this context, it is particularly important to study the relationship between combat stress, post-traumatic stress disorder (PTSD) and behavioural deviations, as these factors often underlie risky behaviour. P.D. Russell *et al.* (2022) have shown that prolonged exposure to combat conditions increases the likelihood of developing anxiety and depressive disorders, which can manifest themselves in the form of aggressive or self-destructive behaviour. The psychological problems of military personnel are closely linked to the organisational aspects of military service. Research by L. Campbell-Sills *et al.* (2023) has shown that the quality of leadership in units directly affects the level of disciplinary violations, and low levels of command correlate with an increase in cases of delinquent behaviour. At the same time, J.D. Acosta *et al.* (2021) drew particular attention to the problem of stigmatisation of psychological assistance, which significantly reduces the willingness of military personnel to seek support even in critical situations. Preventive strategies that combine traditional methods and innovative approaches are being actively developed. In particular, programmes that include stress resistance training, cognitive-behavioural methods, and the use of digital tools to monitor mental health have proven to be effective. In particular, mobile applications allow for the timely identification of risks and early intervention, which is an important condition for preventing delinquent behaviour. Statistics from the U.S. Department of Defence (2023) confirm that even with the introduction of such technologies, the problem of PTSD and suicidal behaviour among military personnel remains acute.

An important direction is the development and implementation of comprehensive prevention programmes that integrate legal, social and medical mechanisms of influence. The Suicide Prevention and Response Independent Review Committee (SPRIRC) (2023) report emphasised that only a combination of these tools can ensure systemic change. J.D. Acosta *et al.* (2025) emphasised the need to develop an integrated primary prevention system that includes the training of highly qualified specialists and the creation of a stable human resource base to support military personnel. An important aspect is the accessibility of assistance, as demonstrated by C.E. Hines *et al.* (2024), the effectiveness of support programmes largely depends on the ability of military personnel to receive psychological and medical assistance at the primary level without the risk of condemnation or stigmatisation by their commanders and comrades. T. Shapovalova (2023) emphasised that public associations (such as the American Legion) play a significant role in shaping the psychosocial support system for US military

personnel, implementing comprehensive medical, psychological and socio-economic assistance programmes aimed at restoring mental health, preventing delinquent behaviour and successful reintegration into civilian life. At the same time, K. Buckingham (2023) determined that even with certain institutional mechanisms in place, factors related to alcohol and PAS abuse continue to pose a serious threat to the moral and psychological climate in military communities. The relevance of the problem is also confirmed by official statistics from the U.S. Department of Defence (2023): in 2023, there was an increase in the number of suicides among active-duty military personnel. Data from the Defence Health Agency (n.d.) showed that behavioural and mental disorders are among the most common in the military environment and have a direct impact on the combat readiness and functional stability of the army. Thus, recent studies have confirmed that delinquent behaviour among military personnel is a multifactorial phenomenon shaped by a combination of psychological, organisational and social factors. It is directly related to the mental health of military personnel, the quality of leadership, the level of social support and the availability of prevention programmes. The aim of this study was to identify the characteristics of delinquent behaviour among US Armed Forces personnel, evaluate existing approaches to its prevention, and identify elements that could be adapted for use in other countries, including Ukraine. The objectives of the study included: analysing the historical experience of the US Armed Forces in preventing maladaptive and delinquent behaviour during key armed conflicts of the 20th and 21st centuries; identifying the features of the current system for preventing delinquent behaviour in the US Armed Forces, describing its structure, levels and key programmes; developing a generalised model of a system for preventing delinquent behaviour among US Armed Forces personnel.

◆ Materials and Methods

The study was based on a theoretical and analytical approach using a set of methods that ensured a comprehensive study of the problem of delinquent behaviour among military personnel and the identification of mechanisms for its prevention in the US Armed Forces. An analysis of scientific literature and contemporary publications on the psychological, social, and legal aspects of delinquent behaviour in the military environment was conducted. The regulatory and legal acts and departmental documents of the US Department of Defence that regulate preventive measures and the functioning of personnel support programmes were systematised. A content analysis of official statistics and open reports from defence institutions and research centres (RAND Corporation, Defence Health Agency, Associated Press, etc.) was conducted, which allowed to identify the main trends, problem areas and the effectiveness of the programmes implemented. A comparative analysis of historical experience in the prevention of delinquent behaviour during key military campaigns (Korea, Vietnam, Iraq, Afghanistan) and the current state of the prevention

system in the US Armed Forces was also carried out. The results of the comparative analysis were summarised to form a comprehensive model of the delinquent behaviour prevention system. The study of modern psychological support programmes, in particular Integrated Primary Prevention (Acosta *et al.*, 2025), Comprehensive Soldier and Family Fitness (CSF2) (n.d.), Army Substance Abuse Programme (ASAP) (n.d.), Primary Care Behavioural Health (Hines *et al.*, 2024) and Military OneSource (n.d.), made it possible to identify their key elements and assess their effectiveness in the context of preventing delinquent behaviour among military personnel. The sample of empirical material was formed on the basis of official sources: statistical reports of the U.S. Department of Defence (2023), data from the Defense Health Agency (n.d.), the U.S. Army (2024), the U.S. Army Medical Center of Excellence (n.d.), the results of sociological surveys of military personnel (Chan, 2022; Adams, 2025) and other studies by independent organisations specialising in military service issues. The selection criteria were: reliability of the source, representativeness of the sample, and relevance to the research topic. The experimental basis for the study was the U.S. Armed Forces system, as the most developed and multi-level structure for the prevention of delinquent behaviour, with officially declared programmes, statistically confirmed results, and many years of practical experience in their implementation. The methodology used ensures the reproducibility of the study: other researchers, using similar data sources (official reports, regulatory documents, empirical studies, content analysis of prevention programmes), can repeat the analysis and verify the results obtained.

◆ Results and Discussion

The study of delinquent behaviour in the armed forces is an important area of scientific inquiry aimed at analysing the factors, conditions, circumstances, manifestations, and prevention of maladaptive forms of behaviour among military personnel. Among the studies of the psychological aspects of soldiers' behaviour, a leading position is held by the concept of "combat stress", proposed by military psychiatrist A.D. Glass, which emphasises the importance of preventive psychological intervention in maintaining the functional resilience of personnel (Wilson *et al.*, 1988). This approach was further developed by the cognitive theory of stress formulated by psychologists R.S. Lazarus & S. Folkman (1984), in which stress is understood as the result of interaction between an individual and their environment, where perceiving a situation as threatening and lacking sufficient resources to cope with it may provoke destructive actions. Building on the concept of "total institutions" proposed by E. Goffman & W.B. Helmreich (1961), F.D. Jones *et al.* (1995) argued that rigid military norms, when unaccompanied by psychological flexibility, can provoke behavioural deviations. A. Bandura's (1977) theory of social learning revealed the mechanisms through which personal behaviour develops via observation, imitation, modelling, and self-regulation – key elements in

successful resocialisation. A significant contribution to understanding the causes of destructive behaviour was made by A.T. Beck (1976) – psychotherapist, professor of psychiatry, and founder of cognitive behavioural therapy – whose approach substantiated the necessity of individualised support aimed at transforming negative thinking and destructive behavioural patterns. Sociologist R.D. Putnam (2000), in his concept of social capital, also highlighted the importance of social support in the reintegration of veterans, which in turn reduces the risks of delinquent behaviour. M.E.P. Seligman (2011), one of the founders of positive psychology, proposed the implementation of resilience training as a method for preventing psycho-emotional disorders among military personnel. The work of O.L. Khristuk (2014) focused on the role of psychological assistance in strengthening individual stress resilience through psychological prevention and intervention. Understanding the factors that lead to delinquent behaviour in military settings enables commanders to effectively model and predict subordinates' actions, foster a positive moral and psychological climate within their units, preserve the lives and health of personnel, and provide timely psychological support. N.Yu. Maksymova (2011) emphasised that creating a trusting environment and maintaining continuous social control help reduce social maladaptation and the risk of delinquent behaviour. E. Spain *et al.* (2021) identified the educational role of commanders as a key factor in shaping ethical conduct within the military environment. These theoretical concepts have formed the foundation for developing an effective system for preventing delinquent behaviour within the military. They underscore the importance of a comprehensive approach to prevention, encompassing psychological support, early risk detection, and effective resocialisation of service members. In this regard, the experience of the United States Armed Forces is of particular importance. According to the Global Firepower (2025), the U.S. ranks first among 145 countries worldwide in overall military strength – demonstrating not only superior military capability but also extensive experience in combat operations across various regions, including Afghanistan, Iraq, Syria, the Sahel, and Eastern Europe. As of 2025, the total number of active-duty U.S. service members stands at approximately 1.3 million (Kness, 2025).

When analysing the historical experience of the US Armed Forces in the context of preventing maladaptive behaviour among personnel, it is useful to consider the specific manifestations of these problems during key armed conflicts, particularly in Korea, Vietnam, Iraq and Afghanistan. Each of these wars was not only accompanied by psychosocial challenges that led to an increase in PAS abuse, alcoholism, violence, suicides, and desertions among military personnel, but also stimulated the development of prevention and psychological support programmes. During the Korean War (1950-1953), the main factors that negatively affected the mental state of military personnel were harsh climatic conditions, high-intensity combat with significant personnel losses, and a shortage of trained specialists in

psychological care. Alcoholism became a systemic problem: alcoholic beverages were used as a means of reducing anxiety and overcoming combat stress. Numerous cases of alcohol abuse in military units were often accompanied by disciplinary violations and led to a decrease in combat readiness (Ahaiev *et al.*, 2018). As noted by G.M. Kozhina *et al.* (2020), the use of PAS was limited due to lack of access, but there were cases of abuse of medical opiates, in particular morphine, which was used for pain relief. The level of desertion remained fairly low, but increased during periods of offensive operations. The prevention system was limited and based mainly on disciplinary measures, while psychological support was limited to the activities of chaplains who had no specialised training. Commanders classified cases of suicide and combat psychopathology as manifestations of weak will, which led to stigmatisation and a deterioration in the psychological state of military personnel. The Vietnam War (1964-1975) is considered a period when the problem of PAS use among military personnel reached critical proportions. According to estimates by the US Department of Defense, in 1971 up to 15% of personnel abused heroin or other opioids, which became a subject of public debate in American society (Ahaiev *et al.*, 2018). The use of alcohol, cannabis or psychostimulants was combined with high levels of violence against the civilian population, which had serious consequences both for the psychological state of the military personnel themselves and for the authority of the US Armed Forces. In the final stages of the war, combat units saw an increase in suicides, primarily due to loss of motivation, physical and mental exhaustion, and depressive disorders. In response to this alarming situation, the US Army launched the Army Drug and Alcohol Prevention and Control Program (ADAP-CP) in 1971, which became the basis for modern prevention systems. As part of this programme, regular testing was introduced, rehabilitation centres were established, and officers were trained in psychological leadership skills (Kowalski, 2025). The Iraq campaign (2003-2011) was characterised by the prolonged presence of military personnel in the combat zone, intense fighting in urban areas, and a significant number of casualties. Soldiers returning from Iraq had high rates of PTSD, depression, and alcohol abuse problems. Affective disorders, sleep disturbances, and anxiety symptoms also became widespread and were not always diagnosed in a timely manner (Kozhina *et al.*, 2020). There was also an increase in aggressive behaviour and domestic violence after returning from the combat zone. In response to these challenges, the US Armed Forces launched a number of secondary prevention programmes, including the ASAP programme (n.d.), which focuses on psychological education and early intervention. In addition, hotlines, psychological support groups and mobile psychological support teams were operating in the areas of deployment. However, suicide prevention hotlines were of limited effectiveness due to insufficient funding. An important initiative was the creation of the Battlemind and In Transition programmes, aimed at the resocialisation of

military personnel after their return from mission (Ahaiev *et al.*, 2018). Afghanistan (2001-2021) has been a prolonged test of the psychological resilience of US military personnel. Chronic stress, repeated rotations, the loss of comrades-in-arms, and the nature of guerrilla warfare have led to a sharp increase in suicides. One of the most difficult psychological consequences of participation in the Afghan campaign was repeated retraumatisation and a high risk of self-destructive behaviour among veterans. Alcohol abuse remained a pressing issue: despite official bans, numerous cases of violations of alcohol consumption rules on military bases were recorded (Ahaiev *et al.*, 2018). As part of preventive measures, primary psychological assistance was strengthened, in particular through the Primary Care Behavioral Health (PCBH) programme, and the Crisis Line, Military OneSource crisis response system was implemented (Reiter *et al.*, 2018). According to official recommendations from the US Department of Health and Human Services, each reported case of sexual assault was followed by the intervention of a crisis team consisting of a lawyer, psychologist and social worker (Baldor, 2023).

The high pace of training of the US Armed Forces for military operations, prolonged exposure to combat conditions, and social isolation became significant psycho-traumatic factors that led to an increase in the number of cases of deviant and delinquent behaviour among military personnel, the most common of which were desertion, suicide, substance abuse, sexual assault, and other offences. According to the Defense Health Agency (n.d.), approximately 10% of US Armed Forces personnel returning from overseas service have confirmed mental or behavioural disorders. According to a survey of military personnel from combat units who participated in missions in Iraq and Afghanistan, about 17% of the respondents met the diagnostic criteria for PTSD and showed signs of severe depression (Kozhina *et al.*, 2020). Statistics on suicides among active military personnel indicate alarming trends. According to official data from the U.S. Department of Defence (2023), there were 363 suicides in 2023, which is 12% more than in 2022 (331 cases). The trend of increasing suicides continues in the US Armed Forces during 2022-2025. The most vulnerable category is military personnel under the age of 25, especially those who have experience of combat. According to J. Griffith & C.J. Bryan (2018), the main method of suicide remains the use of firearms, accounting for about 65% of all cases. The second most common method is poisoning, in particular drug overdose, primarily opioids (about 20% of cases). In 2022, the US Armed Forces established SPRIRC, which aims to provide psychological support to military personnel, and in 2025, a record USD 250 million in funding is planned for suicide prevention programmes, which is the largest amount of funding in the history of such initiatives. These funds are intended to expand access to psychological services, in particular through the Military OneSource programme (n.d.), which provides anonymous support via a hotline and online counselling. The Marine Corps recorded 59 such cases in 2019 and 31

in 2021. At the same time, the US Navy has seen a steady increase in this type of offence, from 63 in 2019 to 157 in 2021 (Chan, 2022). This trend may be linked to longer contract terms, prolonged social isolation, and low institutional support effectiveness. However, the US Coast Guard did not record a single case of desertion between 2017 and 2021 (Jones, 2022). It is important to note that statistical data on the number of desertion cases in the US Armed Forces for 2023-2025 is not publicly available. Alcohol and drug abuse by military personnel is a pressing issue for the US Armed Forces. According to data from the US Department of Defence, in 2018, 34% of military personnel surveyed reported excessive alcohol consumption, and 9.8% reported regular heavy drinking. The highest rates were recorded among Marine Corps personnel, and the lowest in the Air Force (Aycok *et al.*, 2023). In some units of the US Army, 22% of military personnel reported dangerous or excessive alcohol consumption, which correlates with sleep disturbances and dissatisfaction with service. In addition, according to statistics, 2.4 million veterans had an alcohol use disorder, and 1.7 million abused drugs in the past year (Mosel, 2025).

Sexual violence remains an equally serious problem. However, for the first time in eight years, 2023 saw a decline in the number of official complaints, which is likely a result of the reforms implemented, in particular the transfer of powers to investigate such cases to independent military prosecutors. M. Adams (2025) notes that in 2024, 8,195 such reports were registered, which is less than in 2023 (8,515 cases). At the same time, the number of reports of such incidents by victims has increased: while in 2021 only 20% of victims sought help, in 2023 this figure reached 25%. The highest number of cases of unwanted sexual contact was recorded among women under the age of 24. To minimise the above risks and threats, the US military proposed a comprehensive prevention system focused on both preventing offences and rehabilitating military personnel. One of the achievements was the introduction of the Integrated Primary Prevention system, which brought together specialists from various fields: psychologists, social workers, military medics and chaplains (U.S. Navy, n.d.). In 2024, units were formed within the prevention system, comprising more than 2,000 specialists who monitor the moral climate, conduct interventions and organise educational events in military units (Acosta *et al.*, 2025). The historical basis for modern prevention activities is ADAPCP, which was launched in the US Armed Forces back in 1971. In 2001, it was transformed into ASAP, whose main goals are to maintain the combat readiness of personnel, provide psychological education, rehabilitation and support to military personnel. Particular attention is paid to the development of mechanisms to control the use of PAS at all levels of the military hierarchy (Zhao *et al.*, 2025). The Primary Care Behavioral Health programme (Reiter *et al.*, 2018) deserves special attention. It operates within the primary health care system and provides access to psychological support without long waiting times. This approach helps to reduce the

stigma of mental disorders and disorders among military personnel and creates a trusting environment for seeking help. During 2022-2023, 67% of military personnel with early signs of behavioural disorders received help within three days of seeking it (Defence Health Agency, n.d.).

Significant changes have also taken place in the military justice system, which is one of the key mechanisms for maintaining discipline and law and order in the US Armed Forces. Its legal basis is defined by the Uniform Code of Military Justice (UCMJ), the main regulatory act governing the legal aspects of military service in the US Armed Forces. It establishes standards of conduct for military personnel, qualifies disciplinary and criminal offences, and provides for investigation and punishment procedures. The UCMJ includes provisions on military courts, extrajudicial disciplinary measures applied by commanders at the unit level, and administrative sanctions. The Code applies to all branches of the US Armed Forces and is an integral part of their legal and disciplinary system. The UCMJ is supplemented by US Department of Defence directives (Absher, 2022). In 2023, legislative changes came into force that transferred the investigation of sexual offences among military personnel from commanders to independent military prosecutors. This reduced conflicts of interest, prevented the concealment of facts, and strengthened trust in the justice system. As noted by L.C. Baldor (2023), as a result of these changes, there was a 16% decrease in the number of confirmed cases of sexual assault in 2023 compared to the previous year. The US Armed Forces operate a continuously improving multi-level Combat and Operational Stress Control (COSC) system, which brings together specialised institutions, budgetary institutions, army structures at all levels, and organisations that support military families. The task of this system is not only to correct mental disorders, but also to preventively reduce the risks of maladaptive and deviant behaviour among military personnel, which may be the result of prolonged combat stress or social isolation (Brusher, 2007). At the military unit level, COSC includes a comprehensive psychophysiological training programme CSF (n.d.), as well as continuous monitoring of the mental state of military personnel. This programme includes training, counselling and first aid provided by junior commanders, medics (equivalent to medical instructors in the Armed Forces of Ukraine), chaplains and Master Resilience Trainers (MRT) (n.d.), who are trained in specialised centres. S.K. Knust *et al.* (2025) noted that the medical service structure at the division and brigade levels includes mobile mental health units (Mental Health Section, MHS), which consist of the following specialists: a divisional psychiatrist, a social psychologist, a clinical psychologist, an administrator, and four mid-level medical assistants. The main tasks of these units are to teach methods of increasing psychological resilience within the CSF, monitoring health status, identifying the need for qualified assistance, conducting short-term interventions at the pre-hospital stage, rehabilitating and supporting military personnel, medically triaging individuals with acute

mental disorders for further evacuation, and conducting measures to restore the combat readiness of units. According to the U.S. Army (2024), mobile Combat Stress Control (CSC) units operate at the corps level, consisting of a management structure and prevention and rehabilitation departments. The unit is headed by a commander, assisted by a chaplain, medical officer, senior officer, patient care administrators, chemical protection specialist, and technical staff. The prevention unit includes social and clinical psychologists, administrators and assistants, while the rehabilitation unit includes psychiatrists, occupational pathologists, nurses and assistants. These units are capable of

reinforcing frontline medical facilities, setting up tents for short-term medical and psychological assistance in combat zones, and acting as psychiatric wards in hospitals. In addition, CSCs assist the command in monitoring the condition of military personnel, planning and coordinating resources for psychological support, and are directly linked to the prevention of delinquent behaviour, as reducing combat stress and providing timely rehabilitation for soldiers significantly reduces the risk of PAS abuse, aggressive behaviour, disciplinary violations and desertion. The US Armed Forces currently operate a multi-level model of prevention of delinquent behaviour among military personnel (Fig. 1).

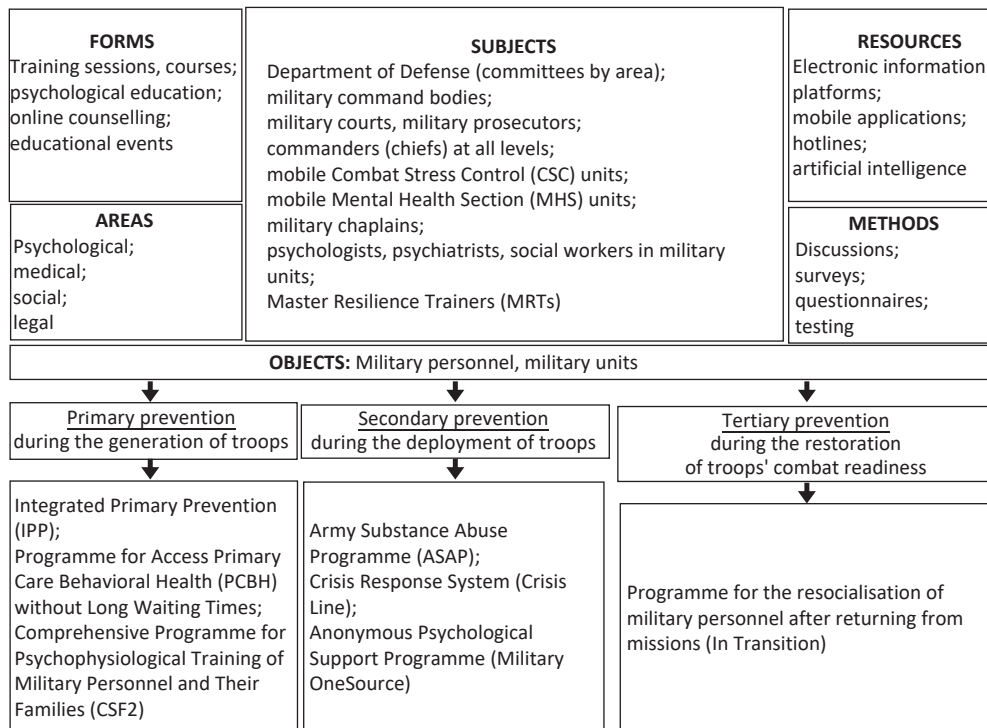


Figure 1. System for preventing delinquent behaviour among servicemen of the United States Armed Forces

Source: developed by the authors

The system has a clear structure and covers primary, secondary and tertiary levels of prevention, integrated into the processes of training, deployment and restoration of combat readiness of troops. It includes such key programmes as Integrated Primary Prevention, Primary Care Behavioural Health, Comprehensive Soldier and Family Fitness, Army Substance Abuse Programme, Military OneSource, Crisis Line and In Transition. Various entities are involved in the implementation of the system, from the Ministry of Defence, military command bodies, military courts and prosecutors to commanders, psychologists, medics, chaplains and mentors. The means of influence are electronic platforms, mobile applications, hotlines, and artificial intelligence tools, while forms of preventive work include training, courses, psychological education, online counselling, and educational activities. The system focuses on psychological, medical, social and legal aspects and is based on surveys, testing,

questionnaires and interviews. The results show that the model provides a comprehensive approach to preventing deviant behaviour and creates conditions for maintaining military discipline, moral readiness and psychological resilience among personnel. Thus, the experience of the US Armed Forces shows that effective prevention of delinquent behaviour requires a systematic approach that combines psychological, social, medical and legal measures. The generalised model of the American system can serve as a valuable guideline for improving national practices for preventing maladaptive behaviour among military personnel, taking into account the specifics of combat conditions, cultural characteristics and the regulatory and legal framework.

◆ Conclusions

The results of the conducted analysis indicate that the system for preventing delinquent behaviour within the

United States Armed Forces is complex and multi-level, encompassing legal, medical, psychological, and social dimensions. The system provides for preventive diagnosis of behavioural deviations, regular monitoring of the psychological state of service members, and the creation of a trusting environment that encourages individuals to seek assistance. Psychological support, educational initiatives, independent investigations, and interagency cooperation ensure the flexibility and effectiveness of this system amid modern military risks and threats. An important aspect is the shift in focus from punishment to prevention, implemented through the organisation of mobile prevention teams and the direct presence of mental health specialists within military units. The effectiveness of the U.S. Armed Forces' system for preventing delinquent behaviour is confirmed by statistical data, and the preventive programmes introduced contribute to maintaining military discipline at an appropriate level, as well as to the psychological adaptation of service members to contemporary challenges such as post-traumatic stress disorder (PTSD). However, it has also been established that, despite the scope and diversity of preventive measures, the system for preventing delinquent behaviour in the U.S. Armed Forces is not without shortcomings. One of the problematic issues remains the biased attitude towards service members with mental disorders, which discourages soldiers from seeking timely assistance, particularly in combat units. Additionally, disparities in access to psychological support have been identified across different branches of the armed forces – most notably in the Navy, where desertion rates are increasing. The artificial intelligence tools and online programmes currently in use have limited capabilities and cannot replace the need for personal communication with specialists. Despite legislative changes, incidents of sexual violence remain a systemic problem, especially among young women,

highlighting the insufficient short-term effectiveness of the reform process. The scientific novelty of this research lies in the systematisation of the multi-level components of the prevention system and in the generalised concept that views prevention not as a set of isolated measures but as a comprehensive policy of safety and support for military personnel. The study has certain limitations, particularly restricted access to internal data and the absence of empirical field research, which complicates the assessment of causal relationships between preventive measures and levels of delinquent behaviour. The adaptation of identified approaches to other national contexts requires consideration of cultural, organisational, and regulatory differences. Thus, the generalised model of the system for preventing delinquent behaviour among service members of the United States Armed Forces can be regarded as a reference point for improving national approaches. Its practical significance lies in its capacity to ensure early identification of risks, foster a supportive and trustworthy environment for seeking help, optimise interaction between command and specialists, and strengthen the psychological resilience of personnel. The prospects for further research on this topic involve developing an adapted preventive model tailored to the needs of the Armed Forces of Ukraine, which would contribute to enhancing military discipline and combat effectiveness under operational conditions.

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None.

◆ References

- [1] Absher, J. (2022). *The Uniform Code of Military Justice (UCMJ)*. Retrieved from <https://www.military.com/join-armed-forces/the-uniform-code-of-military-justice-ucmj.html>.
- [2] Acosta, J.D., Chinman, M., & Shearer, A.L. (2021). *Countering sexual assault and sexual harassment in the U.S. military: Lessons from RAND research*. Santa Monica, CA: RAND Corporation.
- [3] Acosta, J.D., et al. (2025). *Evaluating the U.S. military's progress toward an integrated primary prevention workforce*. *RAND Health Quarterly*, 12(2), article number 10.
- [4] Adams, M. (2025). *Sexual assaults in military dropped nearly 4% overall in 2024 as 3 service branches saw increases*. Retrieved from <https://www.stripes.com/theaters/us/2025-05-01/military-sexual-assaults-pentagon-17645590.html>.
- [5] Ahaiev, N.A., Kokun, O.M., Herasymenko, M.V., Pishko, I.O., & Lozinska, N.S. (2018). *Experience in the US Army and the Army of other countries to prevent loss of personnel for reasons not related to the purpose of the assignment. Methodical guide*. Kyiv: Research Center for Humanitarian Problems of the Armed Forces of Ukraine.
- [6] Army Substance Abuse Program (ASAP). (n.d.). Retrieved from <https://www.armyresilience.army.mil/ASAP/index.html>.
- [7] Aycock, C.A., Mallawaarachchi, I., Klesges, R.C., Wang, X.-Q., Cassidy, D.G., Wiseman, K.P., Krunnusz, A.E., Kundu, D., Patience, M.A., Burns, R.E., & Talcott, G.W. (2023). Decreasing alcohol use among young adults presenting for service in the U.S. Air Force: An epidemiological surveillance study. *Military Psychology*, 36(6), 701-710. doi: 10.1080/0895605.2023.2259283.
- [8] Baldor, L.C. (2023). *Independent lawyers begin prosecuting cases of sexual assault and other crimes in the US military*. Retrieved from <https://apnews.com/article/e6cb6e700338b1471501777a09ca467e>.

- [9] Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice Hall.
- [10] Beck, A.T. (1976). *Cognitive therapy and the emotional disorders*. New York: International Universities Press.
- [11] Brusher, E.A. (2007). *Combat and operational stress control*. *Journal of Clinical Psychology in Medical Settings*, 9(2), 109-126.
- [12] Buckingham, K. (2023). *Military psychologist talks facts, prevention of substance, alcohol misuse among service members*. Retrieved from <https://www.army.mil/article/265016/military-psychologist-talks-facts-prevention-of-substance-alcohol-misuse-among-service-members>.
- [13] Campbell-Sills, L., et al. (2023). Effects of prior deployments and perceived resilience on anger trajectories of combat-deployed soldiers. *Psychological Medicine*, 53(5), 2031-2040. doi: 10.1017/S0033291721003779.
- [14] Chan, M. (2022). *Navy desertions have more than doubled amid suicide concerns, as sailors feel trapped by contracts*. Retrieved from <https://www.nbcnews.com/news/us-news/navy-desertions-doubled-suicide-concerns-sailors-feel-trapped-contract-rcna28516>.
- [15] Comprehensive Soldier and Family Fitness (CSF). (n.d.). Retrieved from <https://www.usar.army.mil/CSF/>.
- [16] Defence Health Agency. (n.d.). *Behavioral health disorders among U.S. military service members*. Retrieved from <https://ph.health.mil/PHC%20Resource%20Library/cphe-bsh-bh-disorders-in-u.s.-military-factsheet.pdf>.
- [17] Global Firepower. (2025). *2025 United States of America military strength*. Retrieved from https://www.globalfirepower.com/country-military-strength-detail.php?country_id=united-states-of-america.
- [18] Goffman, E., & Helmreich, W.B. (Eds.). (1961). *Asylums: Essays on the social situation of mental patients and other inmates*. New Brunswick, NJ: AldineTransaction.
- [19] Griffith, J., & Bryan, C.J. (2018). Preventing suicides in the U.S. military. *Psychological Services*, 15(3), 251-261. doi: 10.1037/ser0000225.
- [20] Hines, C.E., Watson, N., Brooks, Z., & Tucker, T. (2024). Review of mental healthcare provision by primary care physicians in the Department of Defence (DoD). *Journal of Public Health (Berlin)*. doi: 10.1007/s10389-024-02234-x.
- [21] Jones, D. (2022). *A surge in Navy deserters*. Retrieved from <https://www.realclearDefence.com/2022/05/23/a-surge-in-navy-deserters-833718.html>.
- [22] Jones, F.D., Sparacino, L.R., Wilcox, V.L., Rothberg, J.M., & Stokes, J.W. (Eds.). (1995). *War psychiatry: Textbook of military medicine*. Washington, DC: Office of the Surgeon General.
- [23] Khristuk, O.L. (2014). *Psychology of deviant behavior: A teaching and methodical manual*. Lviv: Lviv State University of Internal Affairs.
- [24] Kness, R. (2025). *How big is the U.S. active-duty military in 2025? Here's the breakdown by branch*. Retrieved from <https://news.clearancejobs.com/2025/07/29/how-big-is-the-u-s-active-duty-military-in-2025-heres-the-breakdown-by-branch/>.
- [25] Knust, S.K., Booth, L.C., Toner, K.A., Novosel-Lingat, J.E. M., & Adrian, A.L. (2025). Master resilience trainer course quality improvement evaluation. *Military Psychology*, 37(3), 220-230. doi: 10.1080/08995605.2024.2346449.
- [26] Kowalski, R. (2025). *Military Drug Program historical timeline – key phases*. Retrieved from <https://ivlc.squarespace.com/committeeblog/military-drug-program-historical-timeline-key-phases>.
- [27] Kozhina, G.M., Druz, O.V., Zelenska, K.O., & Chernenko, I.A. (2020). A modern model of the formation of post-stress disorders in combat participants. *Medicine Today and Tomorrow*, 86(1), 39-45. doi: 10.35339/msz.2020.86.01.05.
- [28] Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New York: Springer.
- [29] Maksymova, N.Yu. (2011). *Psychology of deviant behavior: A textbook for university students*. Kyiv: Lybid.
- [30] Master Resilience Training (MRT). (n.d.). Retrieved from <https://www.armyresilience.army.mil/ard/r2/Master-Resilience-Training.html>.
- [31] Military OneSource. (n.d.). Retrieved from <https://www.militaryonesource.mil/>.
- [32] Mosel, S. (2025). *Statistics on veterans and addiction*. Retrieved from <https://surl.li/nvkwfh>.
- [33] Putnam, R.D. (2000). *Bowling alone: The collapse and revival of American community*. New York: Association for Computing Machinery. doi: 10.1145/358916.361990.
- [34] Reiter, J.T., Dobmeyer, A.C., & Hunter, C.L. (2018). The primary care Behavioral Health (PCBH) Model: An overview and operational definition. *Journal of Clinical Psychology in Medical Settings*, 25, 109-126. doi: 10.1007/s10880-017-9531-x.
- [35] Russell, P.D., Judkins, J.L., Blessing, A., Moore, B.A., & Morissette, S.B. (2022). Incidences of anxiety disorders among activeduty service members between 1999 and 2018. *Journal of Anxiety Disorders*, 91, article number 102608. doi: 10.1016/j.janxdis.2022.102608.
- [36] Seligman, M.E.P. (2011). *Flourish: A visionary new understanding of happiness and well-being*. New York: Free Press.
- [37] Shapovalova, T. (2023). Comparative analysis of war veterans' adaptation programs to civilian life in Ukraine, Great Britain and the USA. *Social and Legal Studies*, 6(3), 161-170. doi: 10.32518/sals3.2023.161.
- [38] Spain, E., Mukunda, G., & Bates, A. (2021). The battalion commander effect. *The US Army War College Quarterly: Parameters*, 51(3), article number 10. doi: 10.55540/0031-1723.3083.

- [39] Suicide Prevention and Response Independent Review Committee (SPRIRC). (2023). *Final report of the Suicide Prevention and Response Independent Review Committee*. Washington, DC: U.S. Department of Defence.
- [40] U.S. Army Medical Center of Excellence. (n.d.). Retrieved from <https://medcoe.army.mil/life-connection-behavioral-health>.
- [41] U.S. Army. (2024). *Ready and resilient: 254th COSC(T) support Fort Bliss soldiers' combat operational stress*. Retrieved from https://www.army.mil/article/273601/ready_and_resilient_254th_cosct_support_fort_bliss_soldiers_combat_operational_stress.
- [42] U.S. Department of Defence. (2023). *Department of Defence releases its annual report on suicide in the military for 2023*. Retrieved from <https://www.Defence.gov/News/Releases/Release/Article/3964785/department-of-Defence-releases-its-annual-report-on-suicide-in-the-military-for/>.
- [43] U.S. Navy. (n.d.). *Primary Prevention*. Retrieved from <https://www.mynavyhr.navy.mil/Support-Services/Culture-Resilience/Primary-Prevention/>.
- [44] Wilson, J.P., Harel, Z., & Kahana, B. (1988). *Human adaptation to extreme stress: From the Holocaust to Vietnam*. New York: Springer. doi: 10.1007/978-1-4899-0786-8.
- [45] Zhao, S., Yao, D., Wan, Y., Wu, G., & Jin, H. (2025). *AdapCP: Collaborative inference with adaptive CNN Partition on distributed edge servers*. New York: Association for Computing Machinery. doi: 10.1145/3765961.

Досвід Збройних Сил Сполучених Штатів Америки щодо профілактики делінквентної поведінки військовослужбовців

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✦ **Анотація.** Делінквентна поведінка військовослужбовців, що проявляється у порушеннях дисципліни, агресивних чи протиправних діях, негативно впливає на боєздатність військ, що актуалізує необхідність розробки ефективних систем профілактики дезадаптивних проявів у бойових умовах, де військові перебувають у стані хронічного стресу, втрат і соціальної ізоляції. У зазначеному контексті підхід Сполучених Штатів Америки, які мають значний історичний і сучасний досвід боротьби з подібними викликами, є цінним для аналізу та можливого запозичення ефективних форм та методів профілактики поведінкових девіацій воїнів. Метою дослідження став аналіз особливостей делінквентної поведінки серед військовослужбовців Збройних Сил Сполучених Штатів Америки та оцінка існуючих підходів до її запобігання. Для досягнення мети дослідження застосовано комплекс теоретичних методів, такі як аналіз, синтез, порівняння, узагальнення та контент-аналіз, що дозволило виявити специфіку відхильної поведінки військовослужбовців і дослідити превентивні підходи та профілактичні програми, реалізовані у Збройних Силах Сполучених Штатів Америки. Результатом проведеного аналізу стала узагальнена модель системи профілактики делінквентної поведінки, що функціонує у Збройних Силах Сполучених Штатів Америки. Вона поєднала різні рівні запобігання – від базових превентивних заходів до спеціалізованої допомоги та реабілітації. Система вирізняється багатовекторністю і включає психологічний, соціальний, медичний та правовий компоненти. До її реалізації залучаються державні структури, військове командування, психологи, медики, капелани, наставники та інші суб'єкти підтримки. Застосовуються сучасні інструменти профілактики, зокрема електронні сервіси, мобільні застосунки, дистанційні консультації, освітні програми, кризові інтервенції та технології прогнозування ризиків. Система орієнтована не лише на усунення наслідків дезадаптивних проявів, а й на їхнє раннє виявлення, формування навичок стресостійкості та підтримання належного рівня військової дисципліни й психологічної стійкості особового складу. Узагальнена модель системи профілактики делінквентної поведінки продемонструвала потенціал інтеграції психологічних, соціальних, медичних і правових заходів у єдиний комплекс. Її практична цінність полягає у можливості використання як орієнтиру для вдосконалення національної системи з урахуванням особливостей військової служби, культурного контексту та чинного законодавства

✦ **Ключові слова:** бойовий стрес; правопорушення; психологічна інтервенція; ресоціалізація; реабілітація; підтримка



Axiological dimension of group work in overcoming a personal crisis

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◆ **Abstract.** Contemporary socio-cultural transformations, which cause personal crises and loss of purpose, highlight the need for an axiological dimension in psychotherapeutic assistance. The purpose of the study was to determine how the axiological dimension of group work contributes to overcoming crisis states and affects personal changes. The research was conducted within the framework of a theoretical and methodological approach using a complex of general scientific methods of cognition. The main method used was a theoretical analysis of scientific sources, which helped to systematise and generalise theoretical approaches to understanding the axiological dimension of group work in overcoming a personal crisis. A comparative analysis of leading psychological theories and models (Schwartz, Tajfel and Turner, Feldman) was carried out, which revealed the mechanisms of functioning of values in group interaction. The analysis of these approaches revealed how shared values serve as the basis for creating a safe space where deep self-knowledge, reflection and transformation of the individual in crisis conditions is possible. It was found that values are not only personal guidelines, but also tools for regulating group interaction, determining psychological security, promoting social acceptance, and activating growth resources in a crisis. The form of group work was an effective tool in supporting and rehabilitating a person in a crisis state. It was revealed that values function as regulators of interpersonal interaction, ensuring internal cohesion and external effectiveness of group work. The inclusion of a participant in a value-unified group creates conditions for reflection, rethinking identity, and restoring life's semantic perspective. However, effectiveness is largely determined by the value component, which determines the motivation, nature of communication and quality of relationships in the group

◆ **Keywords:** group psychotherapy; crisis psychology; personality transformation; psychological support; social identity; therapeutic interventions; value systems

◆ Introduction

Contemporary society is in a state of deep socio-cultural transformations, accompanied by increased personal crises, loss of value orientations, and a sense of existential uncertainty. The growing number of people experiencing internal conflicts related to the loss of meaning, identity, or life priorities requires finding effective approaches to overcoming such conditions. In this context, the axiological dimension of psychotherapeutic assistance, which involves a deep understanding and rethinking of the value structures of the individual, becomes particularly important. The problems of the axiological dimension in group psychotherapy in the context of overcoming a personal crisis are

interdisciplinary in nature and were developed in philosophical, psychological, and applied psychotherapeutic contexts by American, Austrian, and Ukrainian researchers. In their study H.O. Homych & O.V. Voitenko (2024) focused on the role of K. Rogers and his concept of value congruence within humanistic psychology, which substantiates the importance of unconditional acceptance, empathy, and authenticity as the foundations of psychological security and personal growth. Research by K. Rogers became the basis for an axiological approach in group therapy, contributing to the development of an environment in which values can be openly expressed and revised. The ideas of

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V. Frankl (2020) were significant, for whom values were the core of personality and the key to overcoming an existential crisis, and the search for meaning was the main mechanism of inner healing. His approach is actively used in logotherapy methods of group psychotherapy. In turn, existential psychology with its leader I. Yalom sees group therapy as a space for value rethinking through live interpersonal interaction, where the group is a mirror for self-awareness, their values, guilt, and responsibility, which, as indicated by O.S. Rybak (2020), promotes self-reflection, empathy development, acceptance, and overcoming isolation in crisis states. Representatives of self-psychology emphasise the role of empathic interaction in the development of personal identity. Thus, the founder of this area, G. Kohut, describes how support and reflection from others contribute to the stabilisation of the "I" and the reconstruction of basic value ideas. Therapeutic relationships act as a means to restore the integrity of the individual after a traumatic experience. Simultaneously, a positive attitude to the future plays a significant role, which is a determining factor in recovery (in particular, post-traumatic growth in combatants), as it increases their confidence in their own capabilities, contributes to effective overcoming of life difficulties, forms an optimistic vision of prospects, and provides better social adaptation in crisis conditions (Reva & Titova, 2024).

O. Baidarova & V. Kachan (2025) examined support groups as a resource for psychosocial care in extreme settings, emphasising the role of shared survival values and mutual assistance in shaping personality resilience. O. Kityuk & T. Fedotova (2021) analysed methods of psychological support of the individual, focusing on the role of value interaction between the client and the psychologist in the process of restoring personal integrity. L.Y. Nianko & V.V. Nianko (2024) reviewed the features of psychological support in war situations, focusing on how shared values of security and survival create the basis for group cohesion and mutual support. M. Slyusarevskyy & L. Hryhorovska (2022) identified psychological support for participants in the educational process in war conditions, emphasising the importance of value congruence in the educational environment for maintaining psychological well-being. V.V. Vyshnovskiy & I.M. Perih (2025) identified the impact of psychological interventions on a person's psychological health in war conditions, determining the role of shared values in group therapy as a factor in restoring personal stability. Y. Pylypchuk & L. Ponomarenko (2024) investigated the problem of rehabilitation of military and civilian personnel from psychological trauma, emphasising the role of group values in the processes of recovery and social reintegration. In the process of group interaction, a complex dynamic of group identity development unfolds, which creates the basis for rethinking one's own experience through correlation with the experience of other participants. Such interaction allows rebuilding the value-normative structure of the individual, filling it with new semantic content that meets the actual challenges and internal needs of the individual. Thus, the appeal to the axiological dimension of

group work allows not only to increase its effectiveness in overcoming the personal crisis, but also to rethink the very foundations of psychotherapeutic assistance towards deeper consideration of existential, cultural, and social factors. The purpose of the study was to substantiate the potential of group work as an effective means of overcoming a personal crisis. Research objectives: to analyse theoretical and empirical approaches to the functioning of values in a group; to find out the meaning of value congruence, group identity, and trust for effective overcoming of a personal crisis; to show how common values and the axiological space of a group contribute to reflection, rethinking identity, restoring life meanings, and developing psychological stability.

◆ Materials and Methods

The research was carried out within the framework of a theoretical and methodological approach using a set of general scientific methods of cognition to systematise and conceptualise the axiological dimension of group work in overcoming a personal crisis. The information base of the study was scientific publications on psychology, psychotherapy, and axiology (Maksymenko, 2006; Tytarenko, 2007). The studies of group therapy theorists and contemporary research on the problems of value orientations of the individual were used (Pryshlyak, 2019; Rybak, 2020). Theoretical analysis of scientific sources was used to systematise and generalise existing approaches to understanding the role of values in group psychotherapy work. This method helped to identify the main areas of research on the axiological dimension of group interaction and identify theoretical gaps in this problem. Comparative analysis of leading psychological theories and models (S. Schwartz, G. Tajfel, and J. Turner, A. Feldman) was used to identify the mechanisms of functioning of values in group interaction and their impact on the processes of overcoming the personal crisis. The synthesis was used to integrate diverse theoretical propositions into a holistic conceptual scheme for understanding the role of the value component in group psychotherapy work. The classification method was used to systematise theoretical models according to the criteria of their focus on values, the form of manifestation of value orientations, and the role in overcoming the personal crisis. Structural and functional analysis revealed the relationships between various components of the axiological dimension of group interaction – psychological security, value congruence, group identity, and personal transformation processes. The methodological basis of the research was the principles of a systematic approach for considering group work as an integral system of interrelated elements, where the value component performs an integrative function. The principle of historicism provided an analysis of the evolution of views on the role of values in psychotherapeutic practice from classical humanistic approaches to modern integrative models. The principle of complementarity helped to combine various theoretical approaches to create a multidimensional understanding of the problem under study, covering individual, interpersonal, and group aspects of value interaction.

◆ Results and Discussion

The axiological dimension of group work is a value-based aspect of interaction between participants, which consists in understanding, rethinking and harmonising personal and common values for psychological growth, restoring identity and overcoming a personal crisis. The analysis of scientific sources allowed identifying a number of characteristics of the axiological dimension of group work. In particular, in crisis states, there is a violation of the value system of the individual, but the group creates conditions for its rethinking and restoration (Tytarenko, 2007). An important factor is value congruence: the group environment promotes the alignment of personal beliefs with group norms, which reduces internal conflicts and maintains authenticity (Maksymenko, 2006). Simultaneously, the implementation of the axiological dimension is possible only under the condition of psychological security, which is provided by an atmosphere of trust, open self-expression, and reflection. A sense of belonging to a group forms group identity and community, and common values act as guidelines for later life (Chepelieva, 2014; Lytvynchuk, 2021). Through group reflection, feedback, and behaviour modelling, the value-normative structure is reconstructed, which helps to overcome confusion and return to an active life (Homych & Voitenko, 2024). The axiological dimension of group interaction has been studied within a number of theoretical models: Schwartz's model of universal values, group synergy theory, Tajfel and Turner's theory of social identity and categorisation, and Feldman's model of group norms. Schwartz's model of values is one of the key in contemporary axiopsychology, classifying 10 basic values based on their role in human life (power, security, achievement, hedonism, stimulation, independence, universalism, benevolence, tradition, and conformism) by universal motivational goals. It is used in group psychotherapy, especially in dealing with personal crises, when the value system is destabilised. Values are grouped into a two-dimensional structure: self-realisation ↔ self-growth and preservation ↔ openness to change. In a crisis, there is often a conflict or loss of significance of values, which makes it difficult to adapt and requires rethinking (Lechner *et al.*, 2024). During a crisis, a person's value system often loses consistency: they may stop acting on previously significant motives (for example, family, success, stability), or experience conflict between conflicting values. C.M. Lechner *et al.* (2024) noted that the Schwartz's model in group work allows: diagnosing value gaps, structuring reflection through exercises and discussions, and promoting the development of value congruence. This helps participants to understand internal priorities and align them with behaviours that promote emotional recovery.

As a possible example of applying this model in group work, the exercise "Circle of values" is used, where participants receive cards with the names of 10 basic Schwartz's values and choose the 3 most important ones for themselves at a given time. Next – those that were important before the crisis. The discussion takes place on the following questions: what has changed? What helps you hold on now?

Are there any contradictions between values that prevent us from moving forward? The role-playing game "Solving a conflict of values" also demonstrates the application of this model. The participant is faced with a dilemma: stay with their family (safety, goodwill) or change their profession (independence, stimulation). The group models both situations and provides feedback, helps to see unconscious values and priorities. Thus, the Schwartz's model is not only a theoretical scheme, but a practical tool for group therapy, which allows: understanding changes in one's own values; identifying internal contradictions; finding support points for restoring the integrity of the individual. The theory of group synergy considers a group as an integral system that can create a new quality of interaction that exceeds the amount of individual contributions. In overcoming a crisis, it provides insight into how shared energy, support, and value dialogue contribute to healing and personal transformation. The core principles are emergence, complementarity, shared value field, and collective experience (Rybak, 2020; Kutsyi & Partyko, 2025). In a situation of personal crisis, a person often experiences loss of meaning, isolation, and value disorientation. O. Kutsyi & N. Partyko (2025) emphasised that it is in group interaction that synergy becomes a transformation resource. It helps to find common values and new meanings, creates conditions for psychological security, and restoration of trust. In addition, group synergy activates value reflection through dialogue, metaphors and feedback, and also contributes to the development of a group identity in which a person feels belonging and acceptance. An illustrative example is the exercise "Collective mosaic", which could give each group member the opportunity to bring/name an object or word that symbolises a value that is important to them, in order to create a shared "Mosaic of values". Participants discuss what values unite and complement each other. So there is a synergistic effect: there is a new idea of the "collective self" of the group and the space for identification. The theory of group synergy helps to see group therapy as a source of new integrity. In this process, the group's values can become a temporary or permanent reference point for a person in crisis. Group interaction helps to restore the internal semantic framework. In addition, there is an effect that individual work cannot achieve – a joint search for meaning. Psychological aspects of synergy in a group include the coincidence of values between participants, the presence of clear rules and connections, well-coordinated cooperation, mutual support and recognition. An important condition is to have a leader or facilitator who coordinates actions, defines roles, and supports a common goal. Synergy is also enhanced when each participant feels responsible and belongs to the group (Kutsyi & Partyko, 2025).

Tajfel and Turner's model of group identity and social categorisation explains how a person shapes their self through group membership, and how this can affect behaviour, self-esteem, and feelings of security. Group identity is an important source of psychological well-being, especially during periods of instability. The model includes two main

concepts: social categorisation – automatic division of people into “we” and “they”, which helps to navigate society, but can cause prejudice; and social identity-identification with a group, which affects self-esteem and acceptance of its values and norms (Tytarenko, 2007; Homych & Voitenko, 2024). Analysis by N.V. Chepelieva (2014) revealed that during a period of personal crisis, a person often loses a clear understanding of themselves, experiences a loss of belonging, doubts their values, and experiences isolation. Under such conditions, the researcher suggests that participation in a supportive therapeutic group can restore positive social identity (through “I am part of the community”), enable a person to rethink their values in dialogue with others, and strengthen self-esteem and personal integrity. As a possible example in practice, the exercise “I and we” can be considered. Participants are asked to write three words about themselves, three words about the group, and three words about where “I” and “group” intersect. Then there is a discussion: where do I feel like I belong, and where do I feel separate? What is important to me in our group? Such work activates awareness of group identity, its values, and also creates a sense of belonging and support. An additional illustrative example is the group reflection “When I felt like I belonged”. Participants share the moment when they first felt like part of a group. This creates a field of trust and openness, and allows redefining identity through the experience of acceptance. Thus, the Tajfel and Turner’s model allows seeing that group identity is not only a social fact, but also a therapeutic resource, especially when it is based on shared values, a safe environment,

dialogue, and acceptance. In a crisis period, when the “I” is shaken, the group becomes a place where a person can rediscover themselves through others, and gradually restore the integrity of the individual.

Feldman’s model of group norms explains how common rules and values are formed in a group that regulate participants’ behaviour, maintain cohesion, convey important meanings for the group, and ensure psychological security. In times of crisis, clear norms help a person feel supported, avoid condemnation, rethink values and find new supports through common moral principles and group membership (Tytarenko, 2007; Chepelieva, 2014). The process of joint development of group norms plays a key role in the development of team cohesion, determining the rules of interaction and maintaining the stability of internal relations. Already at the first meeting, participants together with the coach create a list of rules (for example, punctuality, confidentiality, “I – message”, etc.), which forms responsibility and involvement in building a value field. It is also important to discuss violations of norms – this is not a punishment, but a reason for reflection, which increases psychological security and supports the value framework of the group. The exercise “Our group’s values” can be considered an example of an effective approach, where participants form a common list of values that are important to them. Thus, Feldman’s model and theoretical assumptions indicate that group norms are not only rules, but also carriers of common values that help to overcome a personal crisis, restore trust and stability. The grouped data of the analysed models are presented in Table 1.

Table 1. Theoretical models and the role of values in group interaction

Model	Authors	Main provisions	Role of values
Model of universal values	S. Schwartz	10 basic values are grouped into 4 clusters; values have a motivational core	They form internal motivation, influence the style of interaction; common values contribute to trust in the group
Group synergy theory	D. Johnson, F. Johnson	Group achieves more through combining potentials; there is a synergy effect	Shared values (trust, support) are a condition for synergy and group growth
Theory of social identity and categorisation	A. Taffel and J.C. Turner	Person identifies with a group that has significant characteristics. Categorisation forms “we” versus “them”	Group values become part of self-identification; re-evaluating yourself through belonging to a group helps to overcome the crisis
Group norm model	A. Feldman	Norms arise in response to the group’s needs, expectations, and interaction history	Norms are a form of expression of group values; regulate acceptable behaviour, provide psychological security

Source: compiled by the author

Table 2 compares models to reveal more deeply the multidimensional nature of the axiological approach in group work when overcoming a personal crisis. Models cover both internal priorities (Schwartz) and social

context (Feldman, theory of synergy, social identity). This shows that values are both an internal resource and a group support mechanism that allows creating a holistic system of crisis assistance.

Table 2. Comparison of models

Criteria	Schwartz’s model	Synergy	Social identity	Feldman’s model
Model type	Individual axiological	Dynamic group	Socio-psychological	Normative behavioural
Focus on values	Core of personality	Condition for effective interaction	Identification tool	Behaviour regulator
Form of manifestation of values	Personal priorities	Shared goal, trust	“We are an identity”	Group rules
Role in the crisis	Understanding meaning, motivation for change	Support and resource enhancement	Reassessment of the “self” through the group	Ensuring stability and ethics of interaction

Source: compiled by the author

Systematisation and comparison of the four theoretical concepts in Table 1 and Table 2 revealed their complementarity in explaining the value mechanisms of group therapy. Schwartz's concept highlights the intrapsychological processes of transformation of individual worldview priorities, while the synergistic approach reveals the collective effects of combining individual potentials around common ideals. The theoretical framework of social categorisation demonstrates how inclusion in a significant community restructures self-perception through the assimilation of group standards, while the normative concept shows practical ways to implement value principles in specific rules of coexistence. Each paradigm emphasises different facets of axiological influence – from intrapsychic changes in worldview orientations to the development of interpersonal connections and the establishment of organisational standards of behaviour, which together creates a multi-level support system for people in a state of existential disorientation. Important studies have highlighted the influence of psychological security, value congruence, and cultural and value attitudes on the effectiveness of group dynamics and overcoming personal crises. A. Lytvynchuk (2021) noted that in the “transformational environment” of the 21st century, the subjective sense of personal security changes significantly, which determines the need for in-depth scientific research. A.C. Edmondson & Z. Lei (2014) defined psychological security as a reduction in interpersonal risk in conditions of uncertainty. They identified the premise of teamwork as an intermediary between the organisational climate and knowledge exchange, as a consequence of interaction in different teams, and as a regulator of resistance to innovation. A. Carmeli & J.H. Gittell (2009) found a link between “high-quality relationships” and security levels that affect employees' ability to learn from mistakes. Research by S.B. Wanless (2016) views security more broadly – as a resource for personal development and part of social capital. In 2020-2021, researchers' attention shifted to the healthcare sector in the context of the COVID-19 pandemic, which actualised the issue of psychological safety in extreme conditions (O'donovan & McAuliffe, 2020).

Current research focuses on the role of shared values in creating a safe environment where value congruence contributes to effective teamwork, which is critical in coping with crises (Edmondson & Lei, 2014). Analysis by O.S. Rybak (2020) showed the relevance of the Hofstede model for contemporary socio-cultural challenges, since its five key orientations (individualism – collectivism, short- and long-term orientation, femininity-masculinity, attitude to uncertainty, orientation to power) are productive tools for understanding group dynamics and overcoming personal crisis. O.Yu. Pryshlyak (2019) emphasised that “according to Hofstede's theory of cultural dimensions, the main indicators of national cultures are: the index of the distance of power; the level of integration into social relations (individualism/collectivism); the social roles of the sexes; the attitude to uncertainty; long-term orientation; condescension/self-restraint”. These orientations help to better understand the motivations, expectations, and interaction

styles of participants, which forms a psychologically safe environment – the basis for personal transformation. For example, individualism or collectivism affects the need for support or reflection; time orientation affects expectations about the pace of change; femininity or masculinity affects emotional openness; uncertainty response affects the need for structure; power orientation affects expectations about group leadership style. This methodology has also found application in the paper by L.M. Karamushka (2022) for the analysis of transformations of mental states in crisis, in particular military conditions. O.M. Kochubeinyk (2023), in turn, analysed the influence of national and cultural characteristics on the development of the identity of refugees in the process of their integration into another society. Understanding cultural parameters such as distance to power, avoiding uncertainty, and individualism/collectivism is essential for building effective group interventions with a value component. Empirical research confirmed the importance of value congruence, that is, the correspondence between the personal values of a participant and the dominant values of a group or organisation. Meta-analysis by A.L. Kristof-Brown *et al.* (2005) demonstrated that this correspondence directly correlates with emotional engagement, intrinsic motivation, and overall well-being of participants. Research on emotional health and congruence confirms the importance of consistency of personal and group values for psychological well-being (Sannikova, 2024). In the context of a personal crisis, when the internal value system is subject to revision, belonging to a group dominated by consonant value orientations acts as a stabilising factor and a source of meaning. It is value congruence that is one of the main predictors of trust, openness, and active participation in group processes. Thus, the integration of concepts of value congruence and cultural parameters helps to deepen the understanding of the mechanisms through which a group becomes not only a social system, but also an axiological space that helps to overcome the crisis, restore personal integrity, and develop a new identity.

◆ Conclusions

The study proved that values are extremely important for a person, because they act as a source of motivation, and their awareness and implementation provide an opportunity for personal development and a sense of satisfaction from life. It was determined that values play a key role in regulating group interaction, because they create a sense of psychological security, activate hidden resources of the individual, promote social adaptation and self-acceptance in crisis situations. It was established that the group form of work is an effective tool for supporting and rehabilitating a person experiencing a crisis state. The effectiveness of group interaction was determined not only by its structural or procedural parameters, but also by the value component that determines the motivation, nature of communication, and quality of relationships in the group. It was proved that the combination of different psychological models helps to integrate intrapersonal, interpersonal, and social aspects of

the axiological influence of a group in a personal crisis. The analysis of theoretical approaches, in particular, the Schwartz's model of universal values, the theory of group synergy, the theory of social identity and categorisation of Tajfel and Turner, and the Feldman model of group norms, showed that common values serve as the foundation for creating a safe space where self-knowledge, reflection, and transformation of the individual in crisis circumstances are possible. Values serve as a regulator of interpersonal interaction, ensuring the cohesion and effectiveness of group work. It was established that common values form a positive group identity, contribute to the development of norms of mutual respect, empathy and trust, which are key factors for overcoming a personal crisis. Accordingly, in the conditions of group interaction, a person can reintegrate into the social space, update their own value system, and form new life meanings, which increases their psychological stability. The results of the study confirm that the

axiological approach to the analysis of group work opens up new opportunities for understanding the mechanisms of personal support in critical periods of life and substantiates the expediency of including value interventions in psychological practice. The prospects for further research consist in an in-depth study of the mechanisms of value influence on group dynamics and the development of innovative psychological interventions aimed at increasing the stability and adaptability of the individual in crisis situations.

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◆ References

- [1] Baidarova, O., & Kachan, V. (2025). Survive and live during war: Support groups as a resource for psychosocial assistance. *Bulletin: Social Work*, 1(10), 5-15. doi: 10.17721/2616-7786.2024/10-1/1.
- [2] Carmeli, A., & Gittell, J.H. (2009). High-quality relationships, psychological safety, and learning from failures in work organizations. *Journal of Organizational Behavior*, 30(6), 709-729. doi: 10.1002/job.565.
- [3] Chepelieva, N.V. (2014). *Understanding and interpretation of life experience as a factor of personality self-projection*. *Science and Education*, 9, 22-26.
- [4] Edmondson, A.C., & Lei, Z. (2014). Psychological safety: The history, renaissance, and future of an inter-personal construct. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 23-43. doi: 10.1146/annurev-orgpsych-031413-091305.
- [5] Frankl, V. (2020). *Man's search for authentic meaning: A psychologist in a concentration camp*. Kharkiv: Klub Simeinoho Dozvillia.
- [6] Homych, H.O., & Voitenko, O.V. (2024). *Activation of individual psychological resources under conditions of social deprivation*. In *Activation of individual psychological resources under various socialization conditions* (pp. 8-32). Pereiaslav: Hryhorii Skovoroda University in Pereiaslav.
- [7] Karamushka, L.M. (2022). *Individual mental health during war: How to preserve and maintain it*. Kyiv: H.S. Kostiuk Institute of Psychology of NAES of Ukraine.
- [8] Kihtyuk, O., & Fedotova, T. (2021). Psychological support of personality: Methods and features of work of the clinical psychologist. *Psychological Prospects Journal*, 38, 63-75. doi: 10.29038/2227-1376-2021-38-63-75.
- [9] Kochubeinyk, O.M. (2023). *Emergency situation as a social construction*. Kyiv: Institute of Social and Political Psychology of the National Academy of Pedagogical Sciences of Ukraine.
- [10] Kristof-Brown, A.L., Zimmerman, R.D., & Johnson, E.C. (2005). Consequences of individual's fit at work: A meta-analysis of person-job, person-organization, person-group, and person-supervisor fit. *Personnel Psychology*, 58(2), 281-342. doi: 10.1111/j.1744-6570.2005.00672.x
- [11] Kutsyi, O., & Partyko, N. (2025). *Synergistic effect of motivation in the prospects of its use in practical organisational psychology*. *Veritas: Legal and Psychological-Pedagogical Research*, 1(1), 68-77.
- [12] Lechner, C.M., Beierlein, C., Davidov, E., & Schwartz, S.H. (2024). Measuring the four higher-order values in schwartz's theory: Validation of a 17-item inventory. *Journal of Personality Assessment*, 106(5), 651-664. doi: 10.1080/00223891.2024.2311193.
- [13] Lytvynchuk, A. (2021). Psychological safety of personality as a current problem of contemporary psychology. *Visnyk of the Lviv University. Series: Psychological Sciences*, 9, 154-161. doi: 10.30970/PS.2021.9.20.
- [14] Maksymenko, S.D. (2006). *Genesis of personality actualization*. Kyiv: KMM.
- [15] Nianko, L.Y., & Nianko, V.V. (2024). Psychological support in times of war. *Scientific Journal of Lviv State University of Internal Affairs. Psychology Section*, 1, 40-46. doi: 10.32782/2311-8458/2024-1-6.
- [16] O'Donovan, R., & McAuliffe, E. (2020). A systematic review of factors that enable psychological safety in healthcare teams. *International Journal for Quality in Health Care*, 32(4), 240-250. doi: 10.1093/intqhc/mzaa025.
- [17] Pryshlyak, O.Yu. (2019). *Analysis of G. Hofstede's cultural dimensions theory*. In I.V. Kozubovska & F.F. Shandor (Eds.), *Sociology and social work under conditions of national and regional challenges: Materials of reports and presentations of the international scientific-practical conference* (pp. 80-81). Uzhhorod: RIK-U.

- [18] Pylypchuk, Y., & Ponomarenko, L. (2024). The problem of rehabilitation of military and civilians from psychological traumas in the works of Ukrainian teachers and psychologists. *Scientific-Pedagogical Studies*, 8, 99-124. [doi: 10.32405/2663-5739-2028-8-99-124](https://doi.org/10.32405/2663-5739-2028-8-99-124).
- [19] Reva, M., & Titova, T. (2024). Peculiarities of post-traumatic growth of combatants with different attitudes towards the future. *Psychology and Personality*, 14(1), 129-140. [doi: 10.33989/2226-4078.2024.1.298774](https://doi.org/10.33989/2226-4078.2024.1.298774).
- [20] Rybak, O.S. (2020). *Cultural-value orientations of students with different levels of ethnic identity*. (Doctoral dissertation, Ivan Franko National University of Lviv, Lviv, Ukraine).
- [21] Sannikova, O. (2024). Emotional health and congruence: Problems of determination. *Science and Education*, 1, 68-74. [doi: 10.24195/2414-4665-2024-1-11](https://doi.org/10.24195/2414-4665-2024-1-11).
- [22] Slyusarevskyy, M., & Hryhorovska, L. (2022). Psychological support for education process participants the conditions of war. *Herald of the National Academy of Educational Sciences of Ukraine*, 4(1). [doi: 10.37472/v.naes.2022.4129](https://doi.org/10.37472/v.naes.2022.4129).
- [23] Tytarenko, T.M. (2007). *Life crises: Counseling technologies* (Part 2). Kyiv: Hlavnuk.
- [24] Vyshnovskiy, V.V., & Perih, I.M. (2025). The influence of psychological interventions on human psychological health in war conditions. *Scientific Notes of TNU Named After V.I. Vernadsky. Series: Psychology*, 36(75), 35-40. [doi: 10.32782/2709-3093/2025.1/07](https://doi.org/10.32782/2709-3093/2025.1/07).
- [25] Wanless, S.B. (2016). The role of psychological safety in human development. *Research in Human Development*, 13(1), 6-14. [doi: 10.1080/15427609.2016.1141283](https://doi.org/10.1080/15427609.2016.1141283).

Аксіологічний вимір групової роботи в подоланні особистісної кризи

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✦ **Анотація.** Соціокультурні трансформації сучасності, що спричиняють особистісні кризи і втрату орієнтирів, актуалізують потребу в аксіологічному вимірі психотерапевтичної допомоги. Метою дослідження було визначення, як аксіологічний вимір групової роботи сприяє подоланню кризових станів та впливає на особистісні зміни. Дослідження проведено в межах теоретико-методологічного підходу з використанням комплексу загальнонаукових методів пізнання. Основним застосованим методом був теоретичний аналіз наукових джерел, що дозволив систематизувати і узагальнити теоретичні підходи до розуміння аксіологічного виміру групової роботи у подоланні особистісної кризи. Проведено порівняльний аналіз провідних психологічних теорій і моделей (Шварца, Таджфела і Тернера, Фельдмана), що розкрив механізми функціонування цінностей у груповій взаємодії. Аналіз цих підходів розкрив, як спільні цінності слугують основою для створення безпечного простору, де можливе глибоке самопізнання, рефлексія та трансформація особистості в кризових умовах. Було встановлено, що цінності є не лише особистісними орієнтирами, а й інструментами регулювання групової взаємодії, що визначають психологічну безпеку, сприяють соціальному прийняттю та активізують ресурси зростання в кризі. Форма групової роботи є ефективним інструментом у підтримці та реабілітації особистості, що переживає кризовий стан. Виявлено, що цінності функціонують як регулятори міжособистісної взаємодії, забезпечуючи внутрішню згуртованість і зовнішню ефективність групової роботи. Включення учасника до ціннісно-уніфікованої групи створює умови для рефлексії, переосмислення ідентичності та відновлення життєвої смислової перспективи. При цьому ефективність значною мірою визначається ціннісним компонентом, який окреслює мотивацію, характер спілкування та якість стосунків у групі

✦ **Ключові слова:** групова психотерапія; психологія кризи; трансформація особистості; психологічна підтримка; соціальна ідентичність; терапевтичні інтервенції; ціннісні системи



Transgenerational transmission of stress among internally displaced persons: Empirical analysis and family psychoeducation

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◆ **Abstract.** The relevance of the issue stems from the fact that the psychological consequences of forced displacement, in particular chronic stress and intensified post-traumatic symptoms, may give rise to mechanisms of transgenerational transmission of trauma due to the psycho-emotional interdependence of family members. The aim of the study was to examine the transgenerational transmission of stress in Ukrainian families of internally displaced persons under martial law and to develop an appropriate psychoeducational programme. The hypotheses put forward on the basis of a theoretical analysis of the source base were empirically tested. A high level of stress and trauma was found among the study group (26 people, including 13 adults aged 41 to 48 and 13 children aged 10 to 11). Half of the adults who are internally displaced persons tend to assess their current life as unpredictable, and the level of post-traumatic stress symptoms in children indicates a high probability of disorder. A statistically significant positive correlation was also found between the level of stress perceived by parents and the overall level of psycho-emotional distress in their children, confirming the mechanism of transgenerational transmission of stress. The empirical data obtained and the analysis of current psychological research formed the basis for the development of an appropriate family psychoeducational programme, which aims to improve the psycho-emotional state of children by supporting parental perception of stress and family dynamics. The programme includes components aimed at raising participants' awareness of stress and stress disorders, developing coping strategies and promoting post-traumatic growth. The practical significance is represented

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in the development of a family psychoeducational programme that combines the principles of working with the negative psychological consequences of war and the opportunities for post-traumatic growth in wartime conditions. The results of the study can be used to create programmes of social and psychological support for families of internally displaced persons, which will contribute to the mental health of families both in Ukraine and abroad

♦ **Keywords:** family dynamics; forced displacement; children's psycho-emotional distress; parental stress; resilience; post-traumatic growth

♦ Introduction

Military conflicts increase the relevance of the problem of forced displacement of persons due to a sharp increase in the number of refugees. The psychological consequences and social stigmatisation of the term "refugee" complicate the integration and adaptation of displaced persons (Fransen & De Haas, 2022; Salim, 2024). The relevance of the problem of forced displacement of persons in Ukraine has increased since 2014, following the annexation of Crimea and the occupation of eastern territories, and has significantly worsened with the start of Russia's full-scale invasion. Millions of Ukrainians have been forced to leave their homes, seeking refuge in other regions of the country or abroad. According to V. Andriiash *et al.* (2023), more than 5 million people have been granted internally displaced person (IDP) status, i.e. those who need protection due to threats to their lives, safety and rights in frontline or occupied areas. As noted by J.C. Morganstein *et al.* (2022), in addition to the direct physical threat in frontline and relatively safe regions, the population of Ukraine is under significant psychological stress as it faces the consequences of military action, including the destruction of homes, loss of family members and disruption of social ties, which creates a high level of stress. The above factors, combined with a sense of instability and the inability to plan for the future, cause severe chronic stress that affects all family members. This leads to the accumulation of traumatic experiences and the spread of post-traumatic stress symptoms among all age groups, including children and their parents. According to national statistics, the number of patients diagnosed with post-traumatic stress disorder (PTSD) in 2023 increased almost fourfold compared to 2021, and in January-February 2024, almost as many new cases were registered as in the whole of 2021, with the disorder being recorded among all age groups and both sexes (Significant increase in PTSD cases in Ukraine..., 2024). In the parent-child system, there is a cyclical relationship between mental health, and post-traumatic stress itself can be a two-way process. This process is called "transgenerational transmission of trauma" and mediates family health (Reese *et al.*, 2022). Traumatic experiences of parents can lead to functional disorders that affect the mental health of their children. At the same time, the research by P. Hyland *et al.* (2023) emphasised that in wartime, caring for a child who already has emotional or behavioural problems increases the risks to the mental health of parents.

A. Kotsakis Ruehlmann *et al.* (2023) noted that transgenerational transmission of trauma occurs through both psychosocial and biological mechanisms. Thus, prenatal

stressful events experienced by a pregnant woman may be associated with changes in DNA methylation in newborns. These modifications underlie the manifestation of further adverse effects in children. According to the findings of G. Uwizeye *et al.* (2023), intrauterine exposure to extreme stress is associated with poorer mental health in adulthood. C.J. Mulligan *et al.* (2025) found that children who did not directly experience a traumatic event themselves may inherit altered epigenetic mechanisms. In these studies, war is viewed as a complex biopsychosocial traumatic phenomenon that affects the entire family system. Thus, psychological support should include not only individual therapy but also family-oriented practices. The studies by L. Dell'Osso *et al.* (2022) and A. Kadri *et al.* (2022) have shown that the experience of war can be understood not only as destructive, since along with PTSD there is also PTSG (post-traumatic growth), i.e. positive psychological changes, the resources of which are, for example, deepening relationships and re-evaluating life priorities. Social and psychological support is an important factor in such changes and post-traumatic personal transformations. The family, as an integral system, has built-in mechanisms for adaptation, support and recovery, but effective promotion of post-traumatic growth requires an understanding of its principles and practical aspects. Despite the confirmed transgenerational transmission of trauma in global practice, modern Ukrainian psychology needs empirically based systemic interventions aimed at stabilising and increasing the resilience of IDP families. The aim was to empirically analyse the transgenerational transmission of war-related stress in Ukrainian IDP families and to develop an appropriate psychoeducational programme aimed at increasing the resilience and well-being of these families. The aim of the study was specified through the following objectives: to conduct a theoretical analysis of the phenomenon of transgenerational transmission of stress and its characteristics caused by war in IDP families; to empirically study the correlations between adult stress and children's psycho-emotional distress; and to develop a family psychoeducational programme aimed at increasing resilience and promoting post-traumatic growth.

♦ Materials and Methods

A cross-sectional empirical study was conducted in February-March 2025 at IDP assistance centres in Kharkiv, the "Zhyvy" public organisation, and some participants took part in remote surveys using online questionnaires. The empirical sample was formed using a targeted selection

method: it included parents who are legal representatives of children and have IDP status as a result of armed aggression (aged 41 to 48), as well as their children (aged 10 to 11). A total of 26 people took part in the study, including 13 parents and 13 children. The empirical collection of results was carried out in parallel. Participants filled out questionnaires in person at IDP assistance centres and the “Zhyvy” public organisation. Respondents who joined remotely filled out the questionnaires using the online tool Google Forms. In both face-to-face and online formats, all participants completed the questionnaires independently and separately, simultaneously and individually, which minimised the mutual influence of parents and children and the bias of responses. Data collection was carried out by research psychologists, which ensured compliance with the procedure and correct communication with the participants. The empirical study was conducted in accordance with the norms and provisions of the World Medical Association’s Declaration of Helsinki (WMA, 2024). Participation in the study was voluntary, anonymous, and confidential. The conceptual hypothesis of the study was that traumatic experiences of war and forced displacement cause transgenerational transmission of stress in the family systems of Ukrainian IDP families, where high levels of parental stress negatively affect the psycho-emotional state of children. The psychodiagnostic component of the empirical study was aimed at testing the hypothesis of a positive correlation between the level of perceived stress in adult IDPs and manifestations of psycho-emotional distress in their children, in particular symptoms of intrusion and avoidance. Spearman’s rank correlation coefficient was used to test the hypotheses. The choice of this non-parametric criterion was due to the small sample size, the atypical distribution of data (skewed towards high scores), the relevance of working with ordinal scores rather than raw values, and the need to determine the presence of a monotonic relationship. Microsoft Excel was used to calculate the data obtained.

Parental perceived stress (independent variable), which records the overall emotional burden of parents as a result of the traumatic experience of IDPs, was studied using the Ukrainian version of Cohen’s Perceived Stress Scale (Veldbrekht & Tavrovetska, 2022). This version of the methodology contains ten questions about the frequency of negative thoughts and feelings that have manifested themselves in the subject over the past month, which makes it possible to diagnose the degree of subjective assessment of the current life situation as uncontrollable and unpredictable. The psychometric properties of the Scale were confirmed in wartime conditions and a high internal consistency was determined using Cronbach’s alpha ($\alpha = 0.840$). The methodology has proven construct and predictive validity, correctly distinguishing resilient individuals from vulnerable ones, and its indicator is a predictor of mental disorders. Positive correlations between the Scale and the frequency of traumatic events confirm that the psychodiagnostic tool accurately measures the specified theoretical

construct. A shortened version of the Children’s Rating Inventory of Experiences (CRIES-8) in the Ukrainian adaptation from the Children and War Foundation (n.d.) was used to assess the impact of traumatic events on children. The study indicators were presented in scales that determine intrusive symptoms as well as avoidance symptoms. The appropriateness of choosing this particular methodology was based on its suitability for the age range of the subjects (children aged 8 years and older). According to S. Perin *et al.* (2005), this particular version of the methodology has proven clinical validity, classifying 75% to 83% of respondents as having/not having a diagnosis of PTSD. This confirms its effectiveness for screening for traumatic distress in children. As an auxiliary method, an interview was conducted with each participant, which allowed to identify the event that caused stress and its time of origin.

◆ Materials and Methods

As a result of diagnostics using the Ukrainian version of Cohen’s Perceived Stress Scale, it was determined that the average score in the subgroup of parents was 26.84 points, which is close to the high level (0-13 points corresponds to a low level, 14-26 points to a moderate level, and 27-40 points to a high level). The distribution of respondents by levels of perceived stress allowed to determine that only a small number of respondents had low levels of stress according to the questionnaire. In contrast, half of the sample of adult IDPs had high levels of stress, and one-third had moderate levels (Fig. 1).

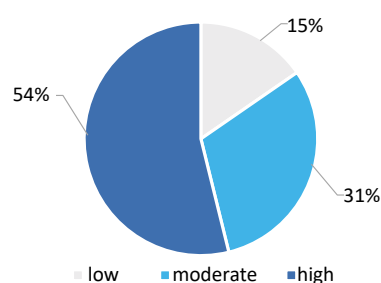


Figure 1. Distribution of adult IDPs surveyed according to the level of perceived stress (based on the Ukrainian version of Cohen’s Perceived Stress Scale)
Source: developed by the authors

Figure 1 shows that more than half of the adult sample tends to assess their current life as unpredictable, uncontrollable, and overwhelming. These results indicate a high level of subjective stress and reduced self-regulation ability, which can lead to decreased emotional regulation and increased vulnerability to psycho-emotional disorders, including anxiety, depressive symptoms, and distress. Prolonged exposure to high levels of subjective stress is also associated with cognitive impairment, reduced effectiveness of coping strategies, and depletion of adaptive resources. The results of the diagnosis of the children of the surveyed IDPs were presented in Table 1.

Table 1. Mean group scores of study participants on the subscales of the shortened version of the Child Rating Inventory of Event Severity (CRIES-8)

Level of manifestation in the subgroup	Subscale	
	Intrusion	Avoidance
Low	6.00	5.33
High	15.90	14.40

Source: developed by the authors

The overall level of post-traumatic symptoms in children is 25.92 points. This corresponds to a high probability of PTSD, since the control score on the scale is 17. The mean group profile of symptoms is 13.62 points on the Intrusion subscale and 12.31 points on the Avoidance subscale. The distribution of the subjects according to the level of PTSD manifestation showed that 77% of the child sample had a high probability of PTSD, and only 23% had a low probability. Thus, the child subgroup demonstrates pronounced traumatic symptoms. The children have experienced events that have had a significant psychological impact on them. In conversations with children, it was determined that war (in particular, the start of a full-scale

invasion), forced departure from their hometown/village, death of loved ones, separation from family, shelling, bullying in new educational institutions, etc. were identified by children as stressful events. A slightly higher level of manifestation on the Intrusion subscale compared to the Avoidance subscale may indicate repeated experiences of traumatic events, violent reactions to stimuli that remind them of these events, recurring nightmares, etc. Statistically significant correlations established using Spearman's rank correlation coefficient confirmed the association between the level of perceived stress among adult IDPs and the overall indicator of psycho-emotional distress among their children (Table 2).

Table 2. Correlation between the level of perceived stress in adult IDPs and the probability of PTSD and its symptoms in their children

	PTSD in children		
	Total score	Intrusion	Avoidance
Level of perceived stress in adult IDPs	0.70*	0.38	0.66*

Note: * $p \leq 0.05$

Source: developed by the authors

The link between the level of perceived stress in adult IDPs and the severity of avoidance symptoms in children indicates the possible influence of parental state on the child's behavioural responses, in particular on the assimilation of avoidance patterns manifested in the concealment of emotions and avoidance of discussing traumatic events. The tendency of a significant proportion of adults to perceive their current life as unpredictable and uncontrollable, as well as their elevated stress levels, may affect their behavioural responses, in particular contributing to irritability and emotional tension. Such manifestations can modify the child's behaviour: they may refrain from expressing their emotions in order not to increase tension in the family or to avoid negative reactions, which subsequently forms strategies of emotional blocking and avoidance. Thus, the symptoms are preserved because the child's psyche is unable to process the trauma, which in the long term can lead to complications in the course and duration of PTSD. At the same time, avoidance as a protective strategy can lead to a child who has experienced forced displacement seeking not only to avoid references to the traumatic event, but also to deep emotional experiences in general, as well as emotional detachment from parents and peers. The empirical results obtained are consistent with the study of children's emotional and behavioural reactions after migration by A.S. Andrade *et al.* (2023). The authors noted that chronic stress, interrelated with economic difficulties,

discrimination, loss of social contacts, and the burden of parental responsibility for the survival of children, is typical for migrant families and arises as a result of displacement, exhausting the family system. The findings of this study showed that, on the one hand, emotionally exhausted adult IDPs transmit their stress to their children, and on the other hand, the manifestation of PTSD symptoms in children leads to an increase in the level of perceived stress in adults.

Based on the analysis of the data, a family educational programme was developed, conceptually aimed at psychological influences that take into account the dependence of the reduction of a child's psycho-emotional tension on the level of parental perceived stress and family stress dynamics. Raising awareness of the peculiarities of the functioning of the psyche in crisis periods of life, in particular, the period of forced migration, is important for self-regulation of behaviour and the creation of a supportive environment (Kostruba & Kostruba, 2024). According to I.S. Todorova & D.V. Bulchenko (2024), obtaining understandable, professional, reliable information about mental health, ways to develop coping strategies, building relationships, etc. is one of the ways to improve well-being and relationships. In times of crisis, when the available information may not always be verified and a person's level of self-criticism may decrease under the influence of stress, it is important to include psychoeducation in support programmes for IDPs. The family psychoeducational programme is a comprehensive

systemic intervention consisting of five thematic modules focused on working with parents and the parent-child dyad. Module 1 aims to inform participants about the nature of stress and the consequences of traumatic events, their impact on the psycho-emotional state and functioning of the family. Module 2 involves learning emotional self-regulation skills and stabilising the psycho-emotional state in stressful situations. Module 3 focuses on developing adaptive coping strategies that contribute to the effective overcoming of stress factors. Module 4 includes rebuilding family communication, strengthening mutual support and social support as protective factors. Module 5 is aimed at activating the internal and external resources of the family and promoting the post-traumatic growth of its members. The programme is not intended to replace psychotherapeutic intervention, but to increase its effectiveness by providing parents with knowledge and tools to support family resilience. A key practical element is the "Guide to Promoting PTG in IDP Families". It contains structured, professional, and understandable information that helps destigmatise the difficult experiences of IDPs by explaining them as a natural reaction to traumatic circumstances. Practical recommendations are aimed at reconceptualising trauma, developing new coping skills, promoting family unity, and finding meaning and hope. The implementation of the guide and the comprehensive programme increases the level of understanding of the need for psychological treatment. The effectiveness of this approach is confirmed by data from a study of psychological interventions for PTSD, depression and anxiety in forced migrants by M. Molendijk *et al.* (2024), which indicates the advisability of including psychoeducation in the support of this category of clients, along with cognitive-behavioural therapy and desensitisation and eye movement desensitisation and reprocessing methods. According to the above-mentioned researchers, in such cases, the effects obtained were significant and persisted after the completion of psychotherapy.

A comparison of the results of stress assessment in the subgroup of adult IDPs with data from other Ukrainian studies, in particular N.P. Chelobitko & I.V. Yastremska (2024), showed a higher percentage of individuals with high levels of perceived stress in the present study (54% vs. 24%). This may indicate the specificity of the sample, as it included adults – parents who experience additional stress and responsibility for the safety and well-being of their children in conditions of uncertainty caused by the state of war. The prevalence of PTSD among internally displaced persons in Mogadishu (Somalia) revealed their consistency, indicating the almost inevitable impact of psychological stress and traumatic events on the lives of IDPs regardless of country, culture or reason for displacement. The traumatic experience of IDPs is seen not as a one-off event, but as a chronic process that can lead to high levels of PTSD and general psycho-emotional distress, as confirmed by a comparison of data from Ukraine and Somalia. According to the results of this study, 77% of children are likely to show signs of PTSD. These data are confirmed by the

results of the analysis by C. Spaas *et al.* (2022) on the mental health problems of refugees and migrants in European educational institutions. On the other hand, C. Spaas *et al.* found that discrimination is associated with an increase in mental health problems among refugee and migrant groups. These data are consistent with those obtained in this study of IDP children, which identified manifestations of bullying in new schools, which was a stressful event for children. Social rejection is a form of discrimination, so it can be hypothesised that bullying will exacerbate transgenerational trauma. However, this requires further research. An analysis of the emotional state of adolescents conducted by L.A. Strashok *et al.* (2024) revealed a dominant feeling of fear for the lives and fate of relatives among both IDPs and local residents. The high level of perceived stress among parents identified in this study likely exacerbates this fear. Almost half of the adolescents surveyed demonstrated or experienced their own aggressive reactions, which is consistent with the results of this study, as anger can be an intrusive reaction to high levels of stress and a risk factor for bullying. Accordingly, the development and implementation of psychoeducational programmes is considered necessary to support the mental health of IDPs on a global level. The work of L. Stark *et al.* (2022) emphasised that suicidal intentions among adolescents decrease with increased resilience, hope and school belonging, while more stressful life events and lower school belonging increase the risk of suicidal thoughts. The issue of separation from family also appears to be important. The results of this study correlate with the findings of C. Spaas *et al.* (2022), who studied the mental health of young refugees and migrants in European educational institutions. Family separation appears to be a more significant factor in PTSD among refugees than among migrants. The participants in this study have experienced/are experiencing separation from their loved ones. It is assumed that the high level of stress in adult internally displaced persons as a result of this separation may exacerbate the transgenerational transmission of trauma to children. Based on the analysis of the studies, it can be assumed that there are gender-specific manifestations of PTSD, in particular that the subgroup of forcibly displaced women belongs to a high-risk group, as transgenerational trauma potentially overlaps with gender vulnerability.

◆ Conclusions

The study emphasised that the experience of war and migration is a profound biopsychosocial traumatic phenomenon. Such circumstances affect the family system, disrupting its functioning. By identifying not only the negative consequences of traumatic events, but also the potential of PTG, the importance of providing social and psychological support to IDP families to increase their resilience and well-being was emphasised. The family, as a unique system, has built-in recovery mechanisms, which justifies the use of not only individual but also family-oriented interventions. The conceptual hypothesis confirmed in the study concerned the understanding of the traumatic

experience of war and, in particular, the experience of forced displacement as a factor causing transgenerational transmission of stress in the family system of Ukrainian internally displaced persons. Given the statistically significant correlation between the level of perceived stress of parents and the psycho-emotional distress of their children, as well as the high levels of distress in the study sample (54% of parents with high stress levels and 77% of children with a high probability of PTSD symptoms), it is assumed that the emotional exhaustion of parents is transmitted to their children. The increase in children's stress, in turn, exacerbates parental stress. In addition, a statistically significant correlation between the level of perceived stress in parents and symptoms of PTSD avoidance in children suggests that high parental stress contributes to the consolidation of traumatic experiences in children. Based on the empirical data obtained and a comparative analysis of current research, a family psychoeducational programme was developed to support PTSD, which can be used for further practical developments. A limitation

of the study was the small sample size and the cross-sectional data, which, compared to longitudinal studies, are not able to show the full specificity of the development of PTSD dynamics. Prospects for further research lie in an in-depth study of the gender characteristics of PTSD manifestations in IDP children with a larger sample size to test the hypothesis of increased risk for girls due to the overlap of transgenerational trauma and gender vulnerability.

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◆ Conflict of Interest

None.

◆ References

- [1] Andrade, A.S., Roca, J.S., & Pérez, S.R. (2023). Children's emotional and behavioral response following a migration: A scoping review. *Journal of Migration and Health*, 20(7), article number 100176. doi: 10.1016/j.jmh.2023.100176.
- [2] Andriash, V., Hromadska, N., & Malikina, O. (2023). The main problems of internally displaced persons in Ukraine. *Scientific Works of Interregional Academy of Personnel Management. Political Sciences and Public Management*, 4(70), 5-12. doi: 10.32689/2523-4625-2023-4(70)-1.
- [3] Chelobitko, N.P., & Astremska, I.V. (2024). Stress disorders in internally displaced persons in conditions of martial law. *Habitus*, 67, 229-232. doi: 10.32782/2663-5208.
- [4] Children and War Foundation. (n.d.). *Revised child impact of events scale (CRIES-8)*. Retrieved from https://i-cbt.org.ua/wp-content/uploads/2017/11/cries8_ukr_1.pdf.
- [5] Dell'Osso, L., Lorenzi, P., Nardi, B., Carmassi, C., & Carpita, B. (2022). Post traumatic growth (PTG) in the frame of traumatic experiences. *Clinical Neuropsychiatry*, 19(6), 390-393. doi: 10.36131/cnforitieditore20220606.
- [6] Fransen, S., & De Haas, H. (2022). Trends and patterns of global refugee migration. *Population and Development Review*, 48(1), 97-128. doi: 10.1111/padr.12456.
- [7] Hyland, P., Vallières, F., Shevlin, M., Karatzias, T., Ben-Ezra, M., McElroy, E., Vang, M.L., Lorberg, B., & Martsenkovskiy, D. (2023). Psychological consequences of war in Ukraine: Assessing changes in mental health among Ukrainian parents. *Psychological Medicine*, 53(15), 7466-7468. doi: 10.1017/S0033291723000818.
- [8] Kadri, A., Gracey, F., & Leddy, A. (2022). What factors are associated with posttraumatic growth in older adults? A systematic review. *Clinical Gerontologist*, 48(1), 4-21. doi: 10.1080/07317115.2022.2034200.
- [9] Kostruba, N., & Kostruba, A. (2024). Social support as a factor of mental health in wartime conditions: Communication and interaction. *Scientific Studios on Social and Political Psychology*, 30(1), 39-45. doi: 10.61727/ssppj/1.2024.39.
- [10] Kotsakis Ruehlmann, A., et al. (2023). Epigenome-wide meta-analysis of prenatal maternal stressful life events and newborn DNA methylation. *Molecular Psychiatry*, 28(12), 5090-5100. doi: 10.1038/s41380-023-02010-5.
- [11] Molendijk, M., Baart, C., Schaffeld, J., Akçakaya, Z., Rönnau, C., Kooistra, M., de Kleine, R., Strater, C., & Mooshammer, L. (2024). Psychological interventions for PTSD, depression, and anxiety in child, adolescent and adult forced migrants: A systematic review and frequentist and Bayesian meta-analyses. *Clinical Psychology & Psychotherapy*, 31(4), article number e3042. doi: 10.1002/cpp.3042.
- [12] Morganstein, J.C., Bromet, E.J., & Shigemura, J. (2022). The neuropsychiatric aftermath of exposure to weapons of mass destruction: Applying historical lessons to protect health during the war in Ukraine. *Psychological Medicine*, 53(11), 5353-5355. doi: 10.1017/S0033291722002872.
- [13] Mulligan, C.J., Quinn, E.B., Hamadmad, D., Dutton, C.L., Nevell, L., Binder, A.M., Panter-Brick, C., & Dajani, R. (2025). Epigenetic signatures of intergenerational exposure to violence in three generations of Syrian refugees. *Scientific Reports*, 15(1), article number 5945. doi: 10.1038/s41598-025-89818-z.
- [14] Perrin, S., Meiser-Stedman, R., & Smith, P. (2005). The children's revised impact of event scale (CRIES): Validity as a screening instrument for PTSD. *Behavioural and Cognitive Psychotherapy*, 33(4), 487-498. doi: 10.1017/S1352465805002419.

- [15] Reese, E.M., Barlow, M.J., Dillon, M., Villalon, S., Barnes, M.D., & Crandall, A. (2022). Intergenerational transmission of trauma: The mediating effects of family health. *International Journal of Environmental Research and Public Health*, 19(10), article number 5944. doi: [10.3390/ijerph19105944](https://doi.org/10.3390/ijerph19105944).
- [16] Salim, S. (2024). The burden of trauma in the life of a refugee. *Frontiers in Public Health*, 12, article number 1298544. doi: [10.3389/fpubh.2024.1298544](https://doi.org/10.3389/fpubh.2024.1298544).
- [17] Significant increase in PTSD cases in Ukraine: Almost 4-fold increase in 2023 compared to pre-war levels. (2024). Retrieved from <https://unn.ua/en/news/significant-increase-in-ptsd-cases-in-ukraine-almost-4-fold-increase-in-2023-compared-to-pre-war-levels>.
- [18] Spaas, C., et al. (2022). Mental health of refugee and non-refugee migrant young people in European secondary education: The role of family separation, daily material stress and perceived discrimination in resettlement. *Journal of Youth and Adolescence*, 51(5), 848-870. doi: [10.1007/s10964-021-01515-y](https://doi.org/10.1007/s10964-021-01515-y).
- [19] Stark, L., Seff, I., Yu, G., Salama, M., Wessells, M., Allaf, C., & Bennouna, C. (2022). Correlates of suicide ideation and resilience among native- and foreign-born adolescents in the United States. *Journal of Adolescent Health*, 70(1), 91-98. doi: [10.1016/j.jadohealth.2021.07.012](https://doi.org/10.1016/j.jadohealth.2021.07.012).
- [20] Strashok, L.A., Mikhanovska, N.H., Danylenko, H.M., Sydorenko, T.P., Isakova, M.Yu., Zavelia, E.M., & Vodolazhskyi, M.L. (2024). Dynamics of the psychological state of internally displaced school-age children and adolescents. *Modern Pediatrics. Ukraine*, 7(143), 68-74. doi: [10.15574/SP.2024.7\(143\).6874](https://doi.org/10.15574/SP.2024.7(143).6874).
- [21] Todorova, I.S., & Bulchenko, D.V. (2024). Conceptual principles of psychoeducation as a method of psychological assistance. *Scientific Innovations and Advanced Technologies*, 7(35), 1103-1116. doi: [10.52058/2786-5274-2024-7\(35\)-1103-1116](https://doi.org/10.52058/2786-5274-2024-7(35)-1103-1116).
- [22] Uwizeye, G., Rutherford, J.N., & Thayer, Z.M. (2023). Associations between duration of first trimester intrauterine exposure to genocide against the Tutsi and health outcomes in adulthood. *American Journal of Biological Anthropology*, 181(3), 341-351. doi: [10.1002/ajpa.24708](https://doi.org/10.1002/ajpa.24708).
- [23] Veldbrekht, O.O., & Tavrovetska, N.I. (2022). The Perceived Stress Scale (PSS-10): Adaptation and approbation in wartime conditions. *Journal of Modern Psychology*, 2, 16-27. doi: [10.26661/2310-4368/2022-2-2](https://doi.org/10.26661/2310-4368/2022-2-2).
- [24] WMA. (2024). *WMA Declaration of Helsinki – ethical principles for medical research involving human participants*. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki/>.

Трансгенераційна передача стресу внутрішньо переміщених осіб: емпіричний аналіз та сімейна психоедукація

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♦ **Анотація.** Актуальність проблеми обумовлена тим, що психологічні наслідки вимушеного переміщення, зокрема хронічний стрес і посилення посттравматичної симптоматики, можуть формувати механізми трансгенераційної передачі травми внаслідок психоемоційної взаємозалежності членів родини. Метою було дослідження трансгенераційної передачі стресу в українських родинах внутрішньо переміщених осіб в умовах воєнного стану та розробка відповідної психоедукативної програми. Емпірично перевірено гіпотези, висунуті на основі теоретичного аналізу джерельної бази. Виявлено високий рівень стресу та травматизації серед досліджуваної групи (26 осіб, з яких 13 дорослих віком від 41 до 48 років і 13 дітей віком від 10 до 11 років). Половина дорослих, які є внутрішньо переміщеними особами, схильна оцінювати своє теперішнє життя як непередбачуване, а рівень посттравматичних стресових симптомів у дітей свідчить про високу ймовірність наявності розладу. Також було визначено статистично значущий позитивний взаємозв'язок між рівнем стресу, що сприймають батьки, та загальним рівнем психоемоційного дистресу у їхніх дітей, що підтверджує механізм трансгенераційної передачі стресу. Отримані емпіричні дані та аналіз сучасних психологічних досліджень стали основою для розробки відповідної сімейної психоедукативної програми, в межах якої передбачено покращення психоемоційного стану дітей через супровід батьківського сприйняття стресу й сімейної динаміки. Програма включає компоненти, спрямовані на підвищення обізнаності учасників щодо стресу та стресових розладів, розвиток копінг-стратегій та сприяння посттравматичному зростанню. Практична значущість представлена у розробці сімейної психоедукативної програми, що поєднує принципи роботи з негативними психологічними наслідками війни та можливостями посттравматичного зростання в умовах воєнного часу. Результати дослідження можуть бути використані для створення програм соціально-психологічного супроводу родин внутрішньо переміщених осіб, що сприятиме підтримці ментального здоров'я родин як в Україні, так і поза її межами

♦ **Ключові слова:** сімейна динаміка; вимушене переміщення; психоемоційний дистрес дітей; батьківський стрес; резильєнтність; посттравматичне зростання



The phenomenon of war trauma: Ethnocultural factors and experimental evidence

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◆ **Abstract.** The relevance of the study was determined by the need to adapt existing methods for diagnosing post-traumatic stress disorder (PTSD) and its treatment to Ukrainian realities and the context of the Russian-Ukrainian war, which causes multiple traumas in both military personnel and civilians. The aim was to identify ethnocultural factors and experimental evidence in the context of war trauma. The methods of analysis were the PCL-C questionnaire and the Plutchik-Kellerman defence mechanisms questionnaire. The role of ethnopsychological factors, in particular national identity, collective memory, and cultural mechanisms for coping with stress, in the formation and experience of traumatic experiences was determined. The severity of post-traumatic stress disorder and defence mechanisms that help adapt to war conditions were analysed in a sample of Ukrainian students. PTSD is considered a delayed or prolonged psychological reaction to traumatic/stressful events that go beyond normal human experience. Such events may include disasters, combat operations, road accidents, sexual, physical or psychological abuse. Adverse factors, such as fatigue, exhaustion, and neurological diseases, may increase the risk of developing the disorder, but are not the main ones. Therefore, PTSD can manifest itself through repeated reliving of the trauma through memories, nightmares, flashbacks, destruction of reminders of the event, increased anxiety, irritability, disruption of routine, and emotional detachment. The study found that higher education students of different genders showed differences in the use of psychological defence mechanisms. Women were more likely to experience regression – a return to infantile behaviour patterns to reduce anxiety – as well as projection – transferring their own negative traits onto others. Men predominantly repressed traumatic experiences and rationalised – attempting to logically justify their own failures. The study of cultural factors in the experience of trauma has become key to understanding the variability of its manifestations and developing culturally sensitive approaches to diagnosis and therapy. In the Ukrainian context, resilience was based on collectivism, family support, and traditional values, which determined the effectiveness of overcoming the psychological consequences of trauma. The practical significance of the study lies in the use of these resources to create psychological assistance programmes that combine modern psychotherapeutic methods with national and cultural characteristics

◆ **Keywords:** psychological assistance; extreme situations; post-traumatic stress disorder; psychological defence; psychophysiological symptoms; coping; ethnopsychology

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◆ Introduction

The war and large-scale humanitarian crises in Ukraine have a direct and indirect impact on people's mental health. Psychological trauma is defined in different ways, but common definitions indicate that a critical traumatic incident is often sudden and unexpected or accumulates over time, causing a person to question whether they can control its outcome and their ability to cope with the consequences, and leaving people struggling with emotional, psychological, behavioural, physical and spiritual symptoms. Trauma can be physically or psychologically threatening and affect a person's sense of safety, security, survival, or sense of self. Psychological trauma involves intense feelings that affect a person's cognitive structures and perceptions of their worldview, meaning, and life purpose. The analysis of psychological trauma in the context of war is particularly relevant, as war events cause profound emotional experiences. Despite the significant amount of research devoted to psychological trauma, its interconnection with experiences of grief, loss, spirituality, and post-traumatic growth, which are integral components of the lifelong recovery process, should be taken into account. In scientific literature, spirituality is increasingly seen as an important factor with potential for reflection, therapeutic intervention, and assessment in the context of working with psychological trauma. After traumatic events, people show increased vulnerability to spiritual crises, existential distress, and rethinking their value system (Romash *et al.*, 2022). Internal displacement, moving to another country, various types of violence, shelling, and the death of relatives during armed conflicts can significantly increase the risk of mental health problems. The impact of armed conflict increases the risk of post-traumatic stress disorder, but it does not always occur in the context of trauma, depression, and anxiety disorders. Since 2014, the experience of living under occupation along the contact line, the so-called "grey zone", the impact of all types of violence and various losses, damaged infrastructure, in particular railway and energy infrastructure, poor economic conditions and displacement have led to higher rates of mental disorders in eastern Ukraine, as well as among internally displaced persons (IDPs). In 2016, 32% of IDPs in Ukraine reported symptoms of PTSD, and 22% experienced depression, as confirmed by diagnostic questionnaires. In contrast, among the general population at the start of the war, the prevalence of PTSD was 8% and that of depression was 6.3%. Indirect consequences of armed conflict include limited access to healthcare, economic hardship, reduced living standards, negative social changes, and deterioration in physical health, including complications from chronic diseases (Holton & Snodgrass, 2023). However, there are several risk factors for developing mental health problems after experiencing trauma. For example, a study by J. Kurath *et al.* (2025) showed that refugees who reported higher levels of social isolation were more likely to experience symptoms of depression and anxiety. In conflict-affected areas, social isolation can be exacerbated by the destruction of infrastructure,

displacement, and the breakdown of social networks and support systems. This can make it difficult for people to access mental health services and support and increase their risk of developing mental health problems. PTSD occurs as a prolonged or delayed reaction to stressful and traumatic situations, both short-term and long-term, especially those of a destructive nature, which can cause severe stress in a person. Adverse factors such as exhaustion, fatigue, and neurological diseases can reduce the severity of the syndrome or, conversely, exacerbate its course, but this is not proof that they are factors in the onset of PTSD.

According to M. Kanal & S.B. Rottmann (2021), typical symptoms of PTSD include flashbacks, nightmares, freezes, numbness/stupor, emotional exhaustion/depression, withdrawal from people and avoidance of situations, and behaviour reminiscent of a traumatic reaction. Typical behaviours include hyperarousal, hypervigilance, increased reaction to insomnia, fear, anxiety, etc. Depression and anxiety are often associated with the above symptoms, and suicidal thoughts may also be common. Research by L. Taylor & K.K. Turner (2025) showed that symptoms indicating the onset of PTSD are preceded by a latent period of two weeks to 2-4 months after the trauma. The disorder varies, but with systematic and comprehensive treatment, recovery occurs in most cases. However, there are also cases where the disease changes the behaviour and emotional-volitional sphere of the personality and becomes persistent in its manifestation (F62.0 according to ICD-11) and chronic. Traumatic events usually cause initial psychological distress, which in most cases subsides within a few weeks after the trauma. However, for some people affected by such events, the consequences of trauma develop into PTSD, with a conditional average risk of development of about 4%. The main symptoms include intrusive memories, avoidance of unpleasant triggers, changes in mood and cognitive functions, as well as changes in arousal and reactivity levels. This condition is associated with serious health consequences, functional impairments, an increased risk of comorbidities and mortality, and a decline in quality of life as a result of the illness (Habib *et al.*, 2022). An analysis by N.F. Al-Kubaisy & U.K.A.J. Al Qaisy (2020) of the individual impact of trauma on the civilian population revealed PTSD symptom trajectories, with peak scores typically occurring within one year of the trauma and, in some cases, up to six years. Many of these issues have been overlooked or dismissed by traditional psychiatry and other mental health disciplines. This was because, within existing medical models, trauma was seen as a universal human experience, both in terms of the widespread occurrence of stressful events and the generally accepted neurological response of the body to such situations. In particular, the emphasis was on the involvement of the emotional centres of the brain, such as the hypothalamic-pituitary-adrenal axis, the amygdala, and various endocrine functions. However, T. Filges *et al.* (2024) found significantly greater complexity in the functioning of the central nervous system in responses

to trauma and stress. They also showed the devastating effects of acute and chronic trauma, including a lowered anxiety threshold and atrophy of the hippocampus and cingulate cortex. Retrospective epidemiological data from World Health Organisation mental health studies indicate that the average duration of PTSD symptoms is about six years (Kessler *et al.*, 2017). However, their duration varies significantly depending on the type of trauma: symptoms are more prolonged in cases of war-related experiences and less prolonged in cases of accidents. The consequences of PTSD not only have a significant individual impact on a person's psychological well-being, but also create a significant economic burden and social costs due to the loss of a person's ability to work. Despite this, only a limited number of prospective longitudinal studies have been devoted to studying the long-term consequences of PTSD more than ten years after traumatic events. Thus, the aim of this article was to study not only the theoretical aspects of PTSD symptoms, but also the mechanisms of psychological defence in individuals who have experienced trauma, taking into account cultural competence and the use of non-traditional or alternative methods of treatment and support.

◆ Materials and Methods

In a survey conducted between October 2024 and May 2025 at regional higher education institutions (HEIs) in

the Cherkasy region, 118 applicants aged 18 to 21 responded. In terms of gender, the ratio was 79 females to 39 males. The study was conducted online and anonymously. In accordance with the provisions of the World Medical Association's Declaration of Helsinki, the empirical study adhered to the principles of professional ethics and ensured the personal responsibility of researchers for their activities, as well as using proven methods approved by the central bodies of the Ukrainian Psychological Association (WMA, 2024). The manifestation of PTSD symptoms was diagnosed using the PCL-C questionnaire. The methodology was designed to study the symptoms of post-traumatic stress disorder in the context of medical and psychological rehabilitation, and can also be used for preliminary diagnosis of PTSD. The questionnaire contained 17 items, which respondents rated on a 5-point scale: 0 – never, 4 – very often. According to the PCL-C, the severity of symptoms over the past month was assessed. Both the overall PTSD score and the severity of symptoms for each cluster (according to DSM-5) were determined. Since as of 2025 there are no normative indicators for the PCL-C methodology for Ukrainian civilians, this study was based on the results of samples of students from higher education institutions in France and the United Kingdom from the study by A.R. Ashbaugh *et al.* (2016) who had experienced traumatic events (Table 1).

Table 1. Indicators of PTSD symptoms in higher education students who have experienced psychological trauma

PCL-C Scale	Sample of students (United Kingdom) (n = 388)				Sample of students (France) (n = 262)			
	m	sd	min	max	m	sd	min	max
Intrusion	5.6	4.9	0	20	5.8	4.5	0	18
Avoidance	2.7	2.4	0	8	2.7	2.5	0	8
Cognitive alterations	7.1	6.9	0	28	6.7	6.5	0	26
Arousal	5.5	5.3	0	24	5.2	5.3	0	24
Overall	20.9	19.5	0	80	20.4	18.8	0	76

Note: n – number of respondents in the sample; m – mean value; sd – standard deviation; min – minimum value; max – maximum value

Source: developed by the authors based on research by A.R. Ashbaugh *et al.* (2016)

These indicators were used as a comparative basis for interpreting the results of the Ukrainian sample. This methodology took the form of a self-report, with respondents filling in the items themselves and the researcher explaining certain items that were unclear if necessary. To study the characteristics of students' defence mechanisms in the context of traumatic experiences, Plutchik's "Lifestyle Index" methodology, adapted by Grebennikov, was used. Psychological defence mechanisms were considered as derivatives of emotions, each of which is formed to regulate one of the basic emotions. To study defence mechanisms, the activity of which can serve as an indirect indicator of the level of intrapersonal conflict, the Plutchik-Kellermann questionnaire was used, which made it possible to assess the level of tension, hierarchy and overall severity of psychological defence mechanisms. The data obtained were subjected to statistical analysis

using Pearson's correlation r-criterion, Student's t-criterion and Mann-Whitney U-criterion, which made it possible to identify both linear relationships between variables and differences between groups in terms of parametric and non-parametric indicators. Further interpretation of the results was carried out in qualitative measurement with subsequent content generalisation. Statistical data processing and graphical visualisation of the results were performed using the SPSS 21.0 program.

◆ Results and Discussion

At the initial stage of the study, the severity of PTSD symptoms was assessed using the PCL-C questionnaire. Both the overall index of PTSD severity and indicators for three main criteria were determined: B – intrusion, C – avoidance, D – arousal. The results for the total indicator of respondents are presented in Table 2.

Table 2. Results according to the total score of the PCL-C method ($n = 118$)

Number of points	Number of respondents and %
Up to 30	36; 30.51
30-35	38; 32.20
36-44	44; 37.29
More than 45	0

Source: developed by the authors

Respondents could receive a minimum score of 17 and a maximum score of 85, with 34 points being the arithmetic mean for this questionnaire. A diagnosis of PTSD can only be confirmed with scores above 45 points. The results presented in Table 2 show that most participants (74 people) scored between 30 and 35 points, which indicates the absence of critical PTSD symptoms, while 44 participants scored between 36 and 44 points, indicating the presence of certain

symptoms that may lead to PTSD. Therefore, they should receive psychological support/assistance upon request to protect themselves from re-traumatisation. A larger number of respondents had IDP status and had left the combat zones. In particular, no respondents were found to require specialised assistance at relevant medical facilities. Table 3 presents the results of the study on the use of psychological defence mechanisms, taking into account the gender aspect.

Table 3. Gender aspect of indicators of the use of psychological defence mechanisms according to Plutchik's "Lifestyle Index" methodology, adapted by Grebennikov

Types of psychological defence	Gender	Mean	Student's t-test	p (significance level)
Repression	Female	6.571	2.633	0.001
	Male	9.176		
Regression	Female	7.546	2.273	0.003
	Male	4.834		
Displacement	Female	5.571	0.571	0.566
	Male	5.756		
Denial	Female	4.71	0.386	0.628
	Male	4.18		
Projection	Female	7.57	2.331	0.002
	Male	5.13		
Compensation	Female	3.286	2.372	0.002
	Male	6.176		
Hypercompensation	Female	5.71	0.597	0.481
	Male	5.59		
Rationalisation	Female	2.714	2.594	0.001
	Male	4.235		

Source: developed by the authors

The results presented in Table 3 showed that female respondents are more prone to regression and projection, while male respondents are more prone to repression, compensation and rationalisation (the differences are statistically significant at $p < 0.05$). Women tend to revert to childish behaviour in stressful situations and attribute their own negative traits to other people, while men tend to artificially forget traumatic memories by transferring them to the unconscious, create pseudo-arguments to explain failure, and achieve alternative successes in order to maintain their positive self-esteem. Over time, growing evidence of the neurological consequences of trauma has not diminished the importance of new research on ethnocultural variations in clinical parameters such as onset, manifestation, course, and outcomes of diseases. These variations required careful analysis to understand their causes. Although numerous studies in the fields of cross-cultural psychology, psychological anthropology,

and transcultural psychiatry have already revealed significant ethnocultural differences in disorders such as depression, anxiety, and psychotic states, the issue of ethnocultural variations in PTSD remained unacceptable to the broader scientific community (Vredevelt *et al.*, 2023). This is because recognition of ethnocultural characteristics threatened two key concepts. First, the universality of the biological basis of mental disorders, and second, the fundamental assumptions of a new model of understanding PTSD, which was based on the idea of the universal nature of traumatic experiences. Assuming the existence of ethnocultural influences on the development of trauma and PTSD would have forced a re-evaluation of the role of cultural factors in the formation of disorders and, in general, would have emphasised the flexibility of the human psyche and brain. Such assumptions contradicted the established model of "disease" in psychiatry. As identified by C.D. Wilson-Mendenhall & K.J. Holmes (2023),

this model sought to establish psychiatry as a medical discipline with clear diagnoses, detailed symptoms, and standardised treatment protocols. The foundations of this approach were formed in the 1980s thanks to the influence of the neo-Kraepelinian school. As a result, there is still some resistance to the idea of ethnocultural determinants of traumatic disorders and PTSD. At the same time, there is a reverse trend among proponents of rethinking models of traumatic experiences and PTSD itself. They call for broadening perspectives and taking cultural factors into account when determining the causes and treatment of such conditions. Another challenge to the “universal” view of trauma and PTSD has arisen due to the growing interest in the concept of culturally determined disorders. Although this concept was quite old in anthropology and transcultural psychiatry, traditional psychiatry resisted the idea for many years and simply viewed disorders in non-Western cultures as variants of Western disorders or as “exotic” phenomena not worthy of attention. However, under increasing pressure from psychiatrists, “culturally determined disorders” gained increasing credibility in psychiatry and were finally listed in the American Psychiatric Association’s Diagnostic and Statistical Manual (DSM-IV) (1994). This quickly raised questions about whether PTSD could be a culturally specific disorder. The debate over PTSD has now joined the debate over culturally specific disorders, creating a complex discussion of both concepts (Fernandes *et al.*, 2024). According to G. Theisen-Womersley (2021), the rational position is that all mental disorders are culturally conditioned, including Western ones, since their onset, course, and response are determined by the sociocultural context.

No psychological disorder is completely independent of cultural influence. There has also been a significant increase in the number of scientific publications devoted to the ethnocultural aspects of mental trauma, in particular post-traumatic stress disorder (PTSD), as researchers and clinicians continue to explore and incorporate cultural variables (e.g., concepts of personality, ethnic identity, religious status, gender status and roles, cultural history, concepts of health and disorder) into their clinical and research efforts (Patel & Hall, 2021).

Given the current scientific discussions, it is appropriate to conduct a detailed study of the concept of culture, in particular its definition and significance in shaping complex and potentially traumatic social realities. P.P. Grau *et al.* (2022) defined culture as a set of learned behavioural patterns and meanings that arise in a specific life context and are passed down from generation to generation to ensure survival, adaptation, and effective integration into the environment. These patterns are dynamic and constantly changing in response to individual, social, and environmental challenges. Culture manifests itself externally through artefacts, roles, social conditions and institutions, while internally it encompasses values, beliefs, expectations, cognitive approaches, ontological foundations, practical principles, personal characteristics and worldviews. It can be situational in nature, short-lived or much longer in its impact. A key component of the concept of culture is its ability to construct reality. Culture acts as a matrix that determines the way of personal perception (Mahon, 2022). Table 4 shows in detail the process of socialisation through culture, which influences the formation of all behavioural aspects.

Table 4. Stages of cultural construction of reality

First stage	There exists an innate human impulse to describe, understand, and anticipate the world through the ordering of stimuli
Second stage	An undamaged human brain not only reacts to stimuli but organises, associates, and symbolises them, and in the process generates patterns of explicit and implicit meanings that help support survival, adaptation, and adjustment
Third stage	The process and product of this activity are to a significant extent culturally contextualised. They are generated and shaped through sensory, linguistic, behavioural, and interpersonal practices that comprise the process of cultural socialisation
Fourth stage	The preservation of stimuli as accumulated life experience, both in representational and symbolic forms in the brain and in external forms (such as books), gives rise to a shared cognitive and affective process that helps create cultural continuity over time (i.e., past, present, and future) for both individuals and groups. To a significant degree, individual and collective identities are formed through this very process
Fifth stage	Through socialisation, individual and group preferences and priorities are rewarded or punished, thus supporting and/or modifying cultural constructions of reality (i.e., ontogenesis, epistemology, praxeology, cosmology, ethos, values and behavioural models)
Sixth stage	“Reality” is thus culturally constructed. Different cultural contexts create different realities through processes of cultural socialisation

Source: K. Yuval *et al.* (2020)

Culture structures personal attitudes towards reality and forms perceptual and empirical patterns for describing, interpreting, predicting and managing the surrounding world. It is important to note that this applies to both “normal” and “disordered” behaviour patterns (Ogden, 2021). This ethnocultural construct can be viewed as a cognitive filter that determines an individual’s interpretation of the surrounding reality and continuously influences the

process of understanding the social environment. Understanding reactions to traumatic events is complicated by the influence of ethnocentrism. This phenomenon manifests itself when a particular cultural system considers its own worldview and values to be universal or uniquely correct (Habib *et al.*, 2022). This approach causes methodological and practical difficulties in research and clinical practice, particularly within Western approaches to

mental health. The dominance of Western scientific paradigms, shaped by economic, political and military factors, is not evidence of their objectivity or universality, but merely reflects historical and institutional superiority. Ethnocentric orientations in mental health have led to systemic errors, biases, and abuses in the diagnosis, assessment, and treatment of individuals from non-Western cultures and ethnic or racial minorities (Carmassi *et al.*, 2020). Q. Alemi *et al.* (2023) emphasise that ethnocentric assumptions about trauma and traumatic events continue to be an obstacle to an accurate understanding of traumatic disorders and other forms of psychopathology and maladjustment. However, in contemporary research, the inclusion of ethnocultural factors in the understanding of PTSD is common. In the context of the previously provided definition of culture and the recognised limitations imposed by ethnocentrism, many scientists and specialists now recognise that virtually every aspect of trauma-related mental disorders is shaped by cultural determinants (Yuval *et al.*, 2020). This points to the need for professionals and researchers to develop competence in taking into account the influence of ethnocultural factors on the processes of diagnosis, assessment, and psychotherapy. In the contemporary world, the concept of cultural competence is increasingly being applied, especially in the context of trauma work. It encompasses not only ethnocultural socialisation, but also proficiency in computer technology, foreign languages, writing and many other areas (Gopalkrishnan & Babacan, 2022). Ethnocultural competence refers to the ability to accurately understand the significance of cultural aspects in research, teaching and clinical service delivery. A.W. Garrity (2022) has determined that in a globalised society, healthcare professionals and service providers are increasingly faced with difficulties in communicating with, assessing, diagnosing and treating patients from different ethnocultural traditions. Encounters between them are often characterised by contrasting or even conflicting cultural interactions (e.g., a Nigerian doctor and a Korean patient), highlighting the need to develop cultural competence as a critical professional skill (Gould *et al.*, 2021). Although it is impossible to achieve perfect cultural competence, especially when interacting with different cultures, its level can be assessed based on knowledge of the key features of another culture. The presence or absence of relevant knowledge can either increase or decrease the accuracy of clinical decisions, depending on its scope and depth. The use of culturally insensitive approaches poses significant risks to the effectiveness of psychotherapeutic and diagnostic work (Molendijk *et al.*, 2024). Within each culture, there are specific models, rituals, and protocols aimed at restoring the mental health of individuals who have experienced catastrophic events, traumatic experiences, or extreme stress situations. An analysis by S. Campos *et al.* (2023) showed that, depending on the cultural context, these practices may include what the Western medical community classifies as non-traditional or alternative treatments. These include shamans, healers, herbal medicine, somatic

practices, dancing, indigenous incantations, and recitations. Western psychologists mostly rely on verbal methods to access the patient's experience and healing, but for many non-Western patients, these methods prove ineffective or even unacceptable. Therefore, the healing process often requires the use of various modalities that allow working with traumatic experiences beyond verbal communication. J. Kurath *et al.* (2025) identified the variability of cultural mediation through linguistic and sensory aspects as a fundamental issue for all psychopathology. Personal experience of an event cannot be completely separated from the ways in which it is understood through the senses and language. Cultural characteristics determine the nature of these mediation mechanisms, thereby influencing the perception of reality (McDermott *et al.*, 2024). If different cultures define the concepts of Self, reality, and normativity differently, then expecting them to be similar in such complex phenomena as mental disorders or pathological forms of behaviour is inappropriate. According to A.J. Wright (2021), differences in cultural context create a completely unique view of experience as a phenomenon that varies depending on the sensory and linguistic foundations of each culture. Therefore, cultural factors are decisive in shaping the perception of reality, ways of understanding traumatic experiences and models of responding to them, since it is the system of values, traditions and social norms inherent in a particular culture that influences the interpretation of events, the level of emotional experience and the choice of behavioural strategies. This necessitates taking into account the ethnocultural context not only in research, but also in the diagnosis, psychocorrection, and treatment of mental disorders, especially those arising from traumatic events.

◆ Conclusions

The results of the empirical study and their interpretation showed that the respondents, namely students of higher education institutions in the Cherkasy region, did not have critical signs of PTSD, but still had certain symptoms that could lead to its onset, in particular the use of psychological defence mechanisms such as regression, repression and displacement. At the same time, the data showed that there were no respondents who needed specialised help from relevant medical institutions. The results showed the need for a broader contextual analysis, in particular taking into account socio-cultural factors that can influence the experience, manifestation and overcoming of traumatic experiences. It has been proven that the integration of cultural context is a necessary condition for an adequate understanding of individual and collective responses to trauma. An analysis of existing approaches showed that difficulties arise both within traditional psychiatric models of helping people with PTSD and due to insufficient attention to the ethnocultural characteristics of experiencing and processing traumatic events. The results emphasised the advisability of using multicultural and interdisciplinary approaches that take into account the multidimensional influence of cultural determinants

on the formation and overcoming of the consequences of trauma. It was also found that when responding to national or international crisis situations, Western specialists encounter limitations in their models due to differences in cultural perceptions of the nature of trauma, its causes and consequences. It has been established that although traumatic events are a universal phenomenon, behavioural, psychological and social responses to them vary significantly across cultures. In the context of the Ukrainian experience, it is particularly important to take into account culturally determined strategies for stress resistance and collective recovery. Thus, prospects for further research lie in studying culturally determined strategies for stress resistance

and collective recovery, as well as in identifying ways to integrate international experience in trauma therapy with national approaches to improve the effectiveness of psychotherapeutic and rehabilitation programmes during wartime.

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◆ References

- [1] Alemi, Q., *et al.* (2023). Afghan mental health and psychosocial well-being: Thematic review of four decades of research and interventions. *BJPsych Open*, 9(4), article number e125. [doi: 10.1192/bjo.2023.502](https://doi.org/10.1192/bjo.2023.502).
- [2] Al-Kubaisy, N.F., & Al Qaisy, U.K.A.J. (2020). Complex post traumatic stress disorder (CPTSD) for university students. *Indian Journal of Forensic Medicine & Toxicology*, 15(1), 1621-1626. [doi: 10.37506/ijfmt.v15i1.13643](https://doi.org/10.37506/ijfmt.v15i1.13643).
- [3] American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: APA.
- [4] Ashbaugh, A.R., Houle-Johnson, S., Herbert, C., El-Hage, W., & Brunet, A. (2016). Psychometric validation of the English and French versions of the Posttraumatic Stress Disorder Checklist for DSM-5 (PCL-5). *PLOS One*, 11(10), article number e0161645. [doi: 10.1371/journal.pone.0161645](https://doi.org/10.1371/journal.pone.0161645).
- [5] Campos, S., Núñez, D., Bravo, P., Fresno, A., & Olff, M. (2023). Preliminary evidence for internal structure, sensitivity, and specificity of a brief PTSD and complex PTSD measure in adolescents. *Canadian Journal of Behavioural Science*, 55(4), 341-347. [doi: 10.1037/cbs0000322](https://doi.org/10.1037/cbs0000322).
- [6] Carmassi, C., Dell'Oste, V., Barberi, F.M., Pedrinelli, V., Cordone, A., Cappelli, A., Cremone, I.M., Rossi, R., Bertelloni, C.A., & Dell'Osso, L. (2020). Do somatic symptoms relate to PTSD and gender after earthquake exposure? A cross-sectional study on young adult survivors in Italy. *CNS Spectrums*, 26(3), 268-274. [doi: 10.1017/S1092852920000097](https://doi.org/10.1017/S1092852920000097).
- [7] Fernandes, P., Buus, N., & Rhodes, P. (2024). Vicarious impacts of working with refugees and asylum seekers: An integrative review. *Journal of Immigrant & Refugee Studies*, 22(3), 482-502. [doi: 10.1080/15562948.2022.2049949](https://doi.org/10.1080/15562948.2022.2049949).
- [8] Filges, T., Bengtsen, E., Montgomery, E., & Kildemoes, M.W. (2024). The impact of detention on the health of asylum seekers: An updated systematic review: A systematic review. *Campbell Systematic Reviews*, 20(3), article number e1420. [doi: 10.1002/cl2.1420](https://doi.org/10.1002/cl2.1420).
- [9] Garrity, A.W. (2022). The why, what, and how of trauma-informed educational practices. *Perspectives of the ASHA Special Interest Groups*, 7(6), 1853-1869. [doi: 10.1044/2022.PERSP-22-00059](https://doi.org/10.1044/2022.PERSP-22-00059).
- [10] Gopalkrishnan, N., & Babacan, H. (2022). Cultural partnership practice and mental health in higher education. In A.P. Francis & M.A. Carter (Eds.), *Mental health and higher education in Australia* (pp. 51-66). Singapore: Springer. [doi: 10.1007/978-981-16-8040-3_4](https://doi.org/10.1007/978-981-16-8040-3_4).
- [11] Gould, B., MacQuarrie, C., O'Connell, M.E., & Bourassa, C. (2021). Mental wellness needs of two Indigenous communities: Bases for culturally competent clinical services. *Canadian Psychology*, 62(3), 213-226. [doi: 10.1037/cap0000247](https://doi.org/10.1037/cap0000247).
- [12] Grau, P.P., Kusch, M.M., Williams, M.T., Loyo, K.T., Zhang, X., Warner, R.C., & Wetterneck, C.T. (2022). xA review of the inclusion of ethnoracial groups in empirically supported posttraumatic stress disorder treatment research. *Psychological Trauma: Theory, Research, Practice, and Policy*, 14(1), 55-65. [doi: 10.1037/tra0001108](https://doi.org/10.1037/tra0001108).
- [13] Habib, O., Javed, M., Mahmood, K., Qureshi, M.A., Butt, N.I., & Ashfaq, F. (2022). Prevalence of post-traumatic stress disorder in medical students. *Pakistan Journal of Medical & Health Sciences*, 16(11), 188-190. [doi: 10.53350/pjmhs20221611188](https://doi.org/10.53350/pjmhs20221611188).
- [14] Holton, M.J., & Snodgrass, J.L. (2023). A theoretical and theological reframing of trauma. *Pastoral Psychology*, 72(3), 337-351. [doi: 10.1007/s11089-023-01063-1](https://doi.org/10.1007/s11089-023-01063-1).
- [15] Kanak, M., & Rottmann, S.B. (2021). Everyday agency: Rethinking refugee women's agency in specific cultural contexts. *Frontiers in Psychology*, 12, article number 726729. [doi: 10.3389/fpsyg.2021.726729](https://doi.org/10.3389/fpsyg.2021.726729).
- [16] Kessler, R.C., *et al.* (2017). Trauma and PTSD in the WHO World Mental Health Surveys. *European Journal of Psychotraumatology*, 27(8), article number 1353383. [doi: 10.1080/20008198.2017.1353383](https://doi.org/10.1080/20008198.2017.1353383).
- [17] Kurath, J., Keyan, D., Akhtar, A., Martins, W.V., Komenda, B., Maurer, V., Turgut, K., Bryant, R.A., & Morina, N.A. (2025). A systematic review on moderators of treatment outcome among forcibly displaced adults receiving psychological and/or psychosocial interventions. *Clinical Psychology Review*, article number 102619. [doi: 10.1016/j.cpr.2025.102619](https://doi.org/10.1016/j.cpr.2025.102619).

- [18] Mahon, D. (2022). Providing choice and preferences to service users accessing trauma treatment: A multicultural lens. In *Trauma-responsive organisations: The trauma ecology model* (pp. 123-146). Bingley: Emerald Publishing Limited. doi: [10.1108/978-1-80382-429-120221008](https://doi.org/10.1108/978-1-80382-429-120221008).
- [19] McDermott, L., Hameed, I., & Lau-Zhu, A. (2024). Cultural adaptations, efficacy, and acceptability of psychological interventions for mental health in adults with refugees and asylum-seeker status: A systematic review. *Trauma, Violence, & Abuse*, 25(5), 3758-3776. doi: [10.1177/15248380241262262](https://doi.org/10.1177/15248380241262262).
- [20] Molendijk, M., Baart, C., Schaffeld, J., Akçakaya, Z., Rönna, C., Kooistra, M., de Kleine, R., Strater, C., & Mooshammer, L. (2024). Psychological interventions for PTSD, depression, and anxiety in child, adolescent and adult forced migrants: A systematic review and frequentist and Bayesian meta-analyses. *Clinical Psychology & Psychotherapy*, 31(4), article number e3042. doi: [10.1002/cpp.3042](https://doi.org/10.1002/cpp.3042).
- [21] Ogden, P. (2021). *The pocket guide to sensorimotor psychotherapy in context*. New York: W.W. Norton & Company.
- [22] Patel, A.R., & Hall, B.J. (2021). Beyond the DSM-5 diagnoses: A cross-cultural approach to assessing trauma reactions. *Focus*, 19(2), 197-203. doi: [10.1176/appi.focus.20200049](https://doi.org/10.1176/appi.focus.20200049).
- [23] Romash, I., Neyko, V., Romash, I., Dzivak, K., Gerych, P., Panchyshyn, M., Gerych, O., & Pustovoyt, M. (2022). Post-traumatic stress disorder as a nosological unit: Difficulties of the past and challenges of the future. *Scientific Studios on Social and Political Psychology*, 28(2). doi: [10.33120/ssppj.vi50\(53\).596](https://doi.org/10.33120/ssppj.vi50(53).596).
- [24] Taylor, L., & Turner, K.K. (2025). Sociocultural determinants, anti-oppressive and culturally responsive practices. In A.M. Gomez & J. Hosey (Eds.), *The handbook of complex trauma and dissociation in children* (pp. 673-689). London: Routledge. doi: [10.4324/9781003350156](https://doi.org/10.4324/9781003350156).
- [25] Theisen-Womersley, G. (2021). Culturally informed manifestations of trauma. In *Trauma and resilience among displaced populations: A sociocultural exploration* (pp. 113-146). Cham: Springer. doi: [10.1007/978-3-030-67712-1_5](https://doi.org/10.1007/978-3-030-67712-1_5).
- [26] Vredeveltdt, A., Given-Wilson, Z., & Memon, A. (2023). Culture, trauma, and memory in investigative interviews. *Psychology, Crime & Law*, 1-21. doi: [10.1080/1068316X.2023.2209262](https://doi.org/10.1080/1068316X.2023.2209262).
- [27] Wilson-Mendenhall, C.D., & Holmes, K.J. (2023). Lab meets world: The case for use-inspired basic research in affective science. *Affective Science*, 4(3), 591-599. doi: [10.1007/s42761-023-00200-6](https://doi.org/10.1007/s42761-023-00200-6).
- [28] WMA. (2024). *WMA Declaration of Helsinki – ethical principles for medical research involving human participants*. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki/>.
- [29] Wright, A.J. (2021). Deliberate context-driven conceptualization in psychological assessment. *Journal of Personality Assessment*, 104(5), 700-709. doi: [10.1080/00223891.2021.1942024](https://doi.org/10.1080/00223891.2021.1942024).
- [30] Yuval, K., Aizik-Reebs, A., Lurie, I., Demoz, D., & Bernstein, A. (2020). A functional network perspective on posttraumatic stress in refugees: Implications for theory, classification, assessment, and intervention. *Transcultural Psychiatry*, 58(2), 268-282. doi: [10.1177/1363461520965436](https://doi.org/10.1177/1363461520965436).

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✦ **Анотація.** Актуальність дослідження зумовлена необхідністю адаптувати існуючі методики діагностики посттравматичного стресового розладу (ПТСР) і його терапії до українських реалій та контексту російсько-української війни, яка зумовлює множинні травми як у військових, так і у цивільних. Метою було визначення етнокультурних факторів та експериментальних доказів у контексті травм війни. Методами аналізу стали опитувальник PCL-C та опитувальник захисних механізмів Плутчика-Келлермана. Було визначено роль етнопсихологічних факторів, зокрема національної ідентичності, колективної пам'яті та культурних механізмів подолання стресу, у формуванні та проживанні травматичного досвіду. На вибірці українських студентів проаналізовано вираженість посттравматичного стресового розладу та захисні механізми, які допомагають адаптуватися до умов війни. ПТСР розглянуто як відстрочена або затяжна психічна реакція на травматичні/стресові події, що виходять за межі звичайного людського досвіду. Такі події можуть включати катастрофи, бойові дії, дорожньо-транспортні пригоди, сексуальне, фізичне або психологічне насилля. Неприятливі чинники, зокрема втома, виснаження, неврологічні захворювання можуть підвищувати ризик розвитку розладу, але не є провідними. Тому ПТСР може проявлятися у вигляді повторюваного переживання травми через спогади, кошмари, знищення нагадувань про подію, підвищену тривожність, дратівливість, порушення звичного ритму життя та емоційну відстороненість. В ході дослідження було виявлено, що здобувачі вищої освіти різної статі проявляли відмінності у використанні механізмів психологічного захисту. У жінок частіше спостерігалася регресія – повернення до інфантильних моделей поведінки для зменшення тривоги, а також проекція – перенесення власних негативних рис на інших. У чоловіків переважали витіснення травматичних переживань і раціоналізація – спроби логічно виправдати власні невдачі. Вивчення культурних факторів у переживанні травми стало ключовим для розуміння варіативності її проявів і розроблення культурно чутливих підходів до діагностики та терапії. В українському контексті стійкість ґрунтується на колективізмі, родинній підтримці та традиційних цінностях, що визначають ефективність подолання психологічних наслідків травми. Практична значущість дослідження полягає у використанні цих ресурсів для створення програм психологічної допомоги, які поєднують сучасні психотерапевтичні методи з національно-культурними особливостями

✦ **Ключові слова:** психологічна допомога; екстремальні ситуації; посттравматичний стресовий розлад; психологічний захист; психофізіологічна симптоматика; копінг; етнопсихологія



Impact of traumatic experience on the personal (cognitive) resources of combatants

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◆ **Abstract.** The relevance of the study is conditioned by the fact that a full-scale war and the traumatic experience of participants in military operations significantly transform their emotional and personal resources, causing scientific and practical interest in the investigation of this problem. The purpose of the study was to find out how traumatic experiences affect the cognitive resources of the personality of combatants. A set of theoretical methods and empirical methods was used. The study included 189 people who were treated or examined in a military hospital. It has been established that traumatic experiences, caused by various reasons and of varying duration, significantly distort the use of personal resources, particularly cognitive resources. Cognitive impairments relate primarily to the main indicators of perception speed, attention, and short-term memory. It has been established that increased personal anxiety leads to noticeable disturbances in attention span, and increased depression leads to problems with shifting attention. Delayed experience of participation in combat operations leads to depressive experiences, while delayed experience of participation in the elimination of the consequences of combat operations leads to increased personal anxiety. The results of the study confirmed that traumatic experience leads to characteristic changes in the emotional and personal sphere of combatants and significantly affects their personal (cognitive) resources. The results of the study can be applied in rehabilitation programmes for military personnel with traumatic experiences, in particular, to restore their cognitive resources and form effective strategies for adapting to civilian life. The data obtained enrich the international discourse on the impact of traumatic experiences on the cognitive resources of combatants

◆ **Keywords:** military personnel; combat mental trauma; cognitive sphere; cognitive processes; mental states

◆ Introduction

Contemporary military realities, in particular the experience of countering Russia's armed aggression against Ukraine, pose extreme conditions for military personnel, who face physical and psychological challenges on a daily basis. Prolonged exposure to stressors, such as fighting, losing friends, and physical and emotional overload, can lead to negative mental states such as anxiety, depression,

post-traumatic stress disorder, and burnout. The lack of timely diagnostics and effective psychological support programmes can complicate the process of adaptation of the military and reduce the level of their combat capability. Despite growing attention to the issue of mental health among military personnel, Ukraine still lacks a well-developed system for monitoring and diagnosing the psychological and

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emotional state of servicemen. The lack of comprehensive research on the effectiveness of various psychodiagnostic techniques in military conditions creates the need to improve approaches to assessing negative mental states and develop adaptive rehabilitation methods. Changes in the cognitive sphere in individuals with traumatic experiences of various aetiologies are a serious psychological problem that requires the search for effective ways to solve it. The complexity of the problem is caused by: the negative impact on the personality of traumatic events associated with combat operations and, as a result, the appearance of combat mental trauma. Subsequently, this problem is determined by the specifics of personality adaptation after combat operations, clinical-psychopathological and dynamic features of post-combat social maladjustment syndrome (Blinov, 2022; Shchyruk, 2024). The basis for the occurrence of combat mental trauma syndrome is the mechanisms of short-term adaptation with intensive expenditure of human adaptive resources (Chajkovskij *et al.*, 2025). According to analysis by I.I. Chernenko (2024), there is an intensively increasing depletion and inhibition of the inclusion of regulatory systems for the development of long-term adaptation. To describe this disorder, along with sleep disorders, headaches, and autonomic lability, experts include symptoms such as emotional instability, agitation, decreased overall emotional background, loss of initiative and interest, rapid build-up of fatigue, and memory impairment and difficulty concentrating. Therefore, there is a need not only to diagnose the general psychological and medical consequences of mental trauma, but also to study in more detail the mechanisms of occurrence of disorders and determine compensatory mechanisms that will allow overcoming these disorders.

The idea of the functional state as a system of internal means that are activated to perform purposeful activities in given conditions is the basis for the development of ideas about the effectiveness of solving various tasks, including cognitive ones, based on the integration of data on the resources involved. Z.H. Kisarchuk (2020) investigated psychotherapeutic methods and technologies of assistance to victims aimed at reducing the manifestations of post-traumatic stress disorder, restoring emotional balance, cognitive abilities, and the formation of adaptive behaviour. N.Ya. Levytskyi & Y.M. Potapchuk (2025) focused attention on the dynamics of mental states of combat participants, the features of experiencing combat stress and its consequences, and on the use of psychodiagnostic methods to study the post-traumatic growth of military personnel and their families. I. Kovalenko *et al.* (2023) investigated psychological features of the negative consequences of post-traumatic stress disorder and trauma in military personnel and persons affected by combat stress. A.V. Shvets *et al.* (2024) identified the characteristics of rehabilitation measures in different countries (the United States, Israel, Canada, Great Britain), in particular the functioning of rehabilitation systems and specialised institutions, the use of advanced technologies, the implementation of state

programmes for psychological support for military personnel, veterans and their families, and approaches to the social reintegration of veterans. In this context, the question of the impact of traumatic experience on the personal (cognitive) resources of participants in military operations is of particular interest. The concept of “cognitive resources” reflects the development of a mature psyche that provides processes for solving typical problems, forming and developing new mental structures for effective solution of problem situations. The problem of the influence of increased emotionogenic loads on the characteristics of human functional capabilities in solving cognitive problems is increasingly being discussed by psychologists and neurophysiologists. The disorganising influence of emotions and states of increased emotional stress on the main blocks of information processing has been repeatedly revealed. For example, A. Flood & R.J. Keegan (2022) found that in a state of increased anxiety, the ability to distribute and retain attention decreases, the parameters of memorisation and reproduction of information worsen, the processes of memorisation and preservation of material become more complicated, and logical thinking and decision-making operations are disrupted. Negative mental states limit the use of personal resources, in particular attention and working memory, so the purpose of the study was to identify the role of traumatic experience in changes in the cognitive resources of combatants.

◆ Materials and Methods

In this study, a number of theoretical methods (analysis, synthesis, comparison, generalisation) were applied, which helped to find out the theoretical and methodological foundations of the study of the problem of the impact of traumatic experience on the personal resources of participants in military operations, to analyse key concepts and substantiate the content of the research stages. An empirical study was conducted to investigate the impact of traumatic experience on the personal (cognitive) resources of combat participants, which involved 189 people who were treated or examined in a military hospital in the Khmelnytskyi Oblast in the period from May 2023 to April 2025. The age range was 28 to 54 years; the median age was 39.8 ± 14.2 years. All study participants were men. The subjects were divided into five groups. The main groups of the study were characterised by the presence of a history of mental trauma. Group 1 (N1) included military personnel who experienced an acute condition caused by recent combat experience (40 people); Group 2 (N2) was characterised by the presence of delayed mental trauma complicated by injuries (44 people); Group 3 (N3) also had delayed mental trauma, but without complications from injuries (36 people); Group 4 (N4) was characterised by the experience of traumatic non-combat experience (related to work on the elimination of the consequences of military operations) (33 people); Group 5 (N5) was a control and consisted of students of a military higher education institution who did not have a traumatic experience (36 people).

Initially, each participant was interviewed, which was an anonymous structured interview and contained questions related to situations of trauma (injury), features of combat or other traumatic experience, and the nature of the subject's experience and attitude to these events and the fact of psychological trauma. In the next stage, all study participants were diagnosed using the same psychological test methods, which allowed them to assess personal characteristics, subjective experience of states, and cognitive resources. The following tests were used: Schulte Table, Gorbov's Red-Black Tables, Bourdon Test (to study attention resources); tests: reproduction of 12 numbers, reproduction of text (32 words), reproduction of 10 words (to study short-term memory resources); Amthauer Intelligence Structure Test (to study intellectual resources); Spielberger-Hanin Anxiety Scale, Zung-Balashova Self-Rating Depression Scale, Mississippi Scale, and the military version ("MS" Mississippi Scale) (to analyse the mental state of the study participants). Factor analysis of the obtained data, covering the level of situational and personal anxiety and indicators of depression, revealed differences between the study groups. The psychological survey lasted 45-90 minutes within 2-3 days in the morning hours before undergoing medical

procedures or receiving medications. The study was conducted in compliance with the international ethical guidelines for human-related health research developed by the Council of international Organisations of Medical Sciences in collaboration with the World Health Organisation (CIOMS, 2016). Standardised procedures were followed to ensure the reliability and reproducibility of the data obtained. In particular, unified protocols and methods for studying the impact of negative mental states on the participants' cognitive processes were used. The correct execution of tasks and compliance of the results obtained with the set goals (verification and validation procedures) were checked. Repeated measurements (control measurement procedure) were performed to confirm the stability of the data.

◆ Results and Discussion

A comparison of the severity of negative mental states in different groups of subjects showed that participants with traumatic experiences were characterised by significantly higher levels of personal anxiety and depressive symptoms compared to those who did not have such experiences. The differences shown in Table 1 have a high level of statistical significance, which confirms the reliability of the results.

Table 1. Results of comparison of the level of severity of negative stable mental states in different groups of study participants

Group	Level of situational anxiety	Level of personal anxiety	Level of depression
N1 – with acute mental trauma	40	30	48
N2 – with delayed mental trauma complicated by injury	47	39	41
N3 – with delayed mental trauma without injury	36	29	42
N4 – with mental trauma unrelated to combat experience	34	38	30
N5 – control group	31	23	32

Source: compiled by the authors

Analysing the obtained values of indicators, it is necessary to consider the psychological characteristics of the study participants: male military personnel tend to assess their own state as emotionally stable. Those who do not have combat and other traumatic experiences are characterised by very low indicators of personal anxiety and depression. Although the indicators of other groups are significantly higher, all of them fit within the limits of the normal range. Features of subjective experience of negative states in different groups of study participants revealed various factors of influence. Individuals who have recent or past combat experience have significantly expressed depressive experiences, which was not observed in the

group of individuals who have traumatic but non-combat experience in eliminating the consequences of combat operations. The latter group is characterised by higher personal anxiety compared to military personnel who did not experience traumatic events, and even compared to those who recently participated in military operations. The results of all cognitive tests were also analysed, which helped to identify the features of using the resources of memory, thinking and intellectual activity of participants. The block of techniques aimed at studying the characteristics of attention turned out to be the most significant in the context of understanding the specifics of cognitive resources. The summary results of this stage are presented in Table 2.

Table 2. Number of errors in attention tests in different groups of study participants

Group	Gorbov's Red-Black Tables	Bourdon Test	Schulte Tables
N1 – with acute mental trauma	1.8	3.7	2.9
N2 – with delayed mental trauma complicated by injury	3.5	2.7	3.3
N3 – with delayed mental trauma without injury	1.9	3.6	1.0
N4 – with mental trauma unrelated to combat experience	1.7	1.4	2.7
N5 – control group	0.5	1.1	0.1

Source: compiled by the authors

All groups of study participants with a history of mental trauma significantly differ in these indicators from the control group. The stability of attention (measured by the Bourdon Test) suffers more in the group with acute and non-combat mental trauma. Attention switching, as measured using the Gorbov Red-Black Tables, was reduced in the group with delayed mental

trauma complicated by injury. The ratio of switching and attention stability, measured using Schulte Tables, is impaired in all three listed groups. Further, a detailed analysis of the indicator shown in Table 3, namely the number of rows filled in in one minute in the Bourdon Test sample, was carried out and compared with the number of errors made.

Table 3. Performance indicators in the Bourdon Test sample

Group	Average number of test rows completed in one minute	Standard deviation	Average number of errors made during execution	Standard deviation
N1	7.18	1.75	3.68	2.02
N2	6.05	1.41	2.71	1.7
N3	8.04	1.19	1.3888	1.37
N4	5.38	1.53	3.5757	2.17
N5	8.26	0.60	1.1388	1.18

Source: compiled by the authors

The differences in these indicators between all groups, calculated using univariate analysis of variance, are highly significant: for the number of rows – $F(4; 184) = 29.379$; $p < 0.001$; for the number of errors – $F(4; 184) = 16.929$; $p < 0.001$ (where F – indicator of the F-Fischer criterion; p – level of statistical significance). The table shows that people with delayed, but not complicated combat trauma practically do not differ in results from the control group; people with acute combat trauma do the test quickly enough, but make many mistakes. The most unfavourable results were observed in the group with delayed and complicated combat trauma and non-combat trauma. A small amount of execution is combined with a large number of errors, which is obviously a consequence of general as-thenisation. In the group of military personnel who have experienced traumatic experiences and were injured in combat operations, the results obtained were predictable. But for a group of people without combat experience, the data obtained was less evident. This group is characterised by a relatively high level of personal anxiety, which leads to a redistribution of attention to tracking a potential threat and makes it difficult to focus on completing the task. The group with uncomplicated delayed combat trauma showed more favourable indicators. On average, at the time of testing, two years had passed after participating in

combat operations. It is possible that the events that caused the mental trauma were experienced and the mental status was restored. A detailed analysis of the performance of five Schulte samples in the delayed mental trauma group showed a particular trend. In the first sample, the subjects showed a significant number of errors (1.7). In the second sample, the number of errors and the execution time significantly decreased (1.03). In the third and fourth samples, the number of errors continued to decrease (to 0.4 and 0.56), but the execution time increased significantly. By the fifth test, the number of errors almost reached the initial level (1.5), despite the fact that the execution time increased further. The normal situation was quite different. The time to complete the tests was on average the same (significantly less than in the group of people with delayed injury), and the number of errors during all tests was reduced from 0.39 in the first sample to 0.01 in Group 5. These results confirm that with delayed mental trauma, subjects tend to intensify cognitive processes by consciously connecting additional resources. However, the efforts made to achieve this are not enough in the long run, and then a sharp disorganisation of cognitive performance occurs. Similar trends were found when analysing the results of short-term memorisation tests. Table 4 shows the results of stimulus reproduction.

Table 4. Results of short-term memorisation tests in different groups of subjects

Group	12 numbers	Test (32 words)	10 words
N1 – with acute mental trauma	53	68	49
N2 – with delayed mental trauma complicated by injury	48	58	31
N3 – with delayed mental trauma without injury	55	60	45
N4 – with mental trauma unrelated to combat experience	45	57	21
N5 – control group	62	81	68

Source: compiled by the authors

All groups of subjects who experienced mental trauma performed significantly worse on tests compared to the control group. The greatest decrease in results was observed for groups of people with complicated delayed combat trauma and delayed mental trauma not related to combat experience. The overall intelligence quotient during psychological trauma decreases slightly and remains within the normal range. To assess intelligence, the study used a computerised version of the Amthauer Test, which consists of a significant number of intellectual tasks. A more detailed analysis of the data obtained showed that subjects experiencing acute mental trauma were successful in slightly different intellectual tasks than subjects experiencing delayed mental trauma. In particular, with acute mental trauma, subjects were significantly more successful in performing intellectual tasks related to analysing information from long-term memory. With delayed mental trauma, subjects counted better about themselves, but lost significantly in tasks that require manipulation of long-term information. These data could be interpreted as an indication that in the case of acute mental trauma, subjects overcome the difficulties that have arisen due to the appeal to long-term memory, which does not fail them. In the case of delayed mental trauma, accessing long-term memory is not so effective, and subjects can maintain the level of problem solving only by intensifying actual mental operations.

Interpretation of the research results allowed for a detailed analysis of the problem and assessment of integrative indicators and their interaction. It is worth noting that most contemporary approaches to the diagnosis of negative conditions prefer a comprehensive approach that helps to identify them in time and sets the task of finding integrative indicators (Shalev, 2007). The study of individual psychophysiological indicators cannot provide a reasonable assessment and prediction of the professional effectiveness of a serviceman. Therefore, an in-depth analysis of the individual psychological, socio-psychological characteristics of the serviceman's personality becomes even more important and causes crisis states based on the totality of his individual characteristics, the results of psychological diagnostics, monitoring of current psychological states (Kokun *et al.*, 2019). Further, an attempt was made to identify such integrative characteristics in the available data set and perform a factor analysis of all indicators of the state and cognitive performance. Factor analysis of indicators of subjective assessment of the condition helped to combine them into one factor, which explains 46.08% of the variance of the subjects' responses. The factor can be called an "anxiety-depressive complex". Some indicators were included in the factor with such loads (Table 5).

Table 5. Factor analysis of subjective assessment indicators

Situational anxiety	0.795
Personal anxiety	0.722
Manifestation of depression	0.558

Source: compiled by the authors

The integral index of anxiety and depressive states was calculated based on these data. Significant differences were found between the groups in this indicator ($F(4; 184) = 87.89; p < 0.001$). The index was most pronounced in the group of people with complicated delayed mental

trauma. A factor analysis of all cognitive parameters was also performed and a factor structure of two factors was obtained, which together explains 55.66% of the variance in responses. The first factor includes all measurements of attention and memory, and the second – intelligence quotient (Table 6).

Table 6. Factor structure that collectively explains 55.66% of the response variance

Execution time in the Gorbov's Test	-0.836	-0.021
Execution errors in the Gorbov's Test	-0.517	0.468
Number of rows in the Bourdon Test sample filled in one min.	0.741	0.204
Execution errors in the Bourdon sample	-0.478	-0.402
Total lead time of five samples in the Schulte Test	-0.698	0.166
Total number of errors in the Schulte Test	-0.591	-0.176
Reproduction of 12 numbers	0.712	0.027
Reproduction of text	0.747	-0.128
Reproduction of words	0.817	0.091
Intelligence quotient	-0.167	0.758

Source: compiled by the authors

The results of subjects who experienced psychological trauma in the intelligence test do not differ significantly from the norm. This can be explained by the greater significance of these results for the subjects and, consequently, their higher motivation. It is characteristic that the number of errors in the Gorbov's Red-Black Table and the Bourdon

Test negatively correlate with the intelligence quotient. All indicators included in the first factor were combined with the established coefficients into an integrative measure of cognitive performance. It was found that the groups of subjects differ critically in this indicator ($F(4; 184) = 72.32; p < 0.001$). The cognitive performance ratio is negative-

ly correlated with age, distance from a traumatic event, and the anxiety-depressive states index, which, in turn, is positively associated with time spent in combat conditions. The relationships between the calculated integrative indi-

ces, and between the age of subjects, the distance of the traumatic event, and the duration of the traumatic experience were analysed. Based on the results of the analysis, correlation clusters were constructed, presented in Table 7.

Table 7. Correlation clusters for five indicators

	Cognitive performance quotient	Index of anxiety and depressive states	Duration of the traumatic experience	Distance from a traumatic event	Age
Cognitive performance quotient	–	-0.348	–	–	–
Index of anxiety and depressive states	-0.348	–	0.228	-0.269	-0.236
Duration of the traumatic experience	–	0.228	–	–	–
Distance from a traumatic event	–	-0.269	–	–	–
Age	–	-0.236	–	–	–

Source: compiled by the authors

The data showed that the cognitive performance index was negatively associated with the anxiety-depressive states index and distance from the traumatic event. The higher the subjective experience of anxiety and depression, the worse a person solves cognitive problems. This pattern increases with age. It is characteristic that cognitive performance worsens with the distance in time of the traumatic event, which indicates that the traumatic experience has not been processed. The anxiety-depressive index is positively associated with the duration of traumatic experiences. The longer people were exposed to combat conditions or the aftermath of combat, the higher their anxiety and depression scores and the worse their cognitive performance. The data confirmed the conclusions of V. Antonova & N. Plidlutska (2024), who identified the relationship between the level of post-traumatic stress disorder and various aspects of combat stress and traumatic events in military personnel, and also found that the level of PTSD (post-traumatic stress disorder) does not always correlate with the level of combat stress, and the level of traumatic event is not always associated with the level of manifestation of combat stress. The results are also consistent with the statements of N.V. Danilevska (2018), who investigated the structure of post-combat social maladjustment syndrome and its specific onset: after military personnel return from combat zones, they encounter civilian life and expand their social contacts with civilians. In turn, I.I. Chernenko (2024), who studied the cognitive functions of 350 patients who had suffered combat traumatic brain injury, concluded that combat traumatic brain injury has a negative impact on patients' cognitive abilities, depending on the severity and catamnesis. In addition, G. Keinan (1987) pointed to an increase in personality neuroticism and a decrease in adaptive abilities in his study of the psychological characteristics of the negative consequences of post-traumatic stress disorder and trauma in military personnel and individuals affected by combat stress. C. MacLeod & A.M. Donnellan (1993) confirmed that reduced performance in highly anxious individuals is conditioned by a limited functional capacity of working memory, which is manifested in a slowdown in the performance of cognitive tasks under conditions of increased stress. In turn, emotional state affects cognition not direct-

ly, but through information about the value it conveys: a positive affect usually promotes flexible, relational information processing and generates favourable assessments, while a negative affect restricts such processing, causing more detailed, stimulus-dependent thinking (Clare & Palmer, 2009). O.V. Savchenko (2014) argued that cognitive resources are a key component of individual experience, as they provide information processing, problem solving, and personal competence development through the interaction of mental structures, thought operations, cognitive emotions, and behavioural procedures. The study by N. Derakshan & M.W. Eysenck (1998) confirmed that in individuals with high levels of anxiety and defensively high anxiety, the speed of thinking significantly decreased with a high load on memory, while in individuals with low levels of anxiety and repressors, the indicators remained stable, which indicates a smaller number of anxious thoughts unrelated to the task being performed. Analysis by C.L. Germain *et al.* (2016) showed that negative beliefs about oneself and the world partially mediate the relationship between PTSD symptoms and various forms of anger expression, with the severity of combat PTSD directly affecting external anger expression, highlighting the need for targeted diagnosis and correction of traumatic beliefs to improve emotional regulation in veterans. Yu.O. Aseeva *et al.* (2024) proved the propensity of people with combat experience to depression, anxiety, hysteria, and hypomania. The above-mentioned problems further highlight the need for closer integration of medical, social, and psychological services with the involvement of state, non-state, and volunteer structures, which will provide more effective support for military personnel, veterans, and their families (Hryniovskyi *et al.*, 2022). Thus, the results obtained are consistent with the conclusions of previous studies and confirm the complex and multidimensional nature of the relationship between combat stress, traumatic experience, and cognitive functions, which determines the need for a comprehensive approach to the diagnosis and rehabilitation of military personnel.

◆ Conclusions

The study showed that traumatic experiences lead to increased anxiety and depression: delayed participation in

combat operations mainly causes depressive states, and the experience of eliminating their consequences – increased personal anxiety. Thus, traumatic experiences caused by different causes and different durations introduce significant distortions in the use of cognitive resources. Cognitive impairments are primarily related to the main indicators of attention and short-term memory. It was found that increased personal anxiety leads to noticeable violations of attention stability, and increased depression – to problems with switching attention. In general, the most problematic, both in terms of performing attention tests and in terms of performing memorisation tests, are groups of people with complicated delayed combat mental trauma, delayed mental trauma, and a group of military personnel who have traumatic experience that is not related to combat operations. In the case of acute mental trauma, the study participants demonstrated different strategies for solving cognitive problems than in the case of delayed mental trauma. In particular, military personnel with acute mental trauma sought to maintain a high level of performance by connecting additional resources and intensifying activities. However, this strategy is generally not effective, but leads to rapid fatigue. In case of serious difficulties, metacognitive strategies for conscious resource allocation are optimal, as some researchers have previously pointed out. It is on the way to learning these strategies that it is possible to overcome difficulties for people who are experiencing delayed mental trauma. In addition, in acute mental trauma, subjects relied on long-term

memory resources and basic knowledge to solve intellectual problems; in delayed mental trauma, when long-term memory begins to deteriorate, strategies for intensifying actual mental operations were involved. Attempts by subjects to intensify the solution of cognitive tasks by increasing conscious regulation are subject to limited opportunities for their additional attention resources and are not optimal strategies. The study confirmed that the traumatic experience of combatants significantly affects their cognitive resources, so it is important to pay attention to their recovery and development in rehabilitation. The prospect of further research is to investigate the behaviour of military personnel with PTSD and the role of society as a support resource.

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◆ References

- [1] Antonova, V., & Plidlutska, N. (2024). Mental consequences of combat trauma in participants of military conflicts. *Theory and Practice of Social Systems Management*, 1, 3-13. doi: [10.20998/2078-7782.2024.1.01](https://doi.org/10.20998/2078-7782.2024.1.01).
- [2] Aseeva, Yu.O., Aimerdov, K.V., Chemer, Yu.P., & Kasykova, M.V. (2024). Psychological characteristics of individuals with different military experience. *Mental Health*, 1, 3-9. doi: [10.32782/3041-2005/2024-1-1](https://doi.org/10.32782/3041-2005/2024-1-1).
- [3] Blinov, O.A. (2022). Experiences of combat stress by military personnel and those being treated in hospitals. *Psychology and Personality*, 1, 85-99. doi: [10.33989/2226-4078.2022.1.252055](https://doi.org/10.33989/2226-4078.2022.1.252055).
- [4] Chajkovskiy, M., Potapchuk, Y., & Petrechenko, S. (2025). *Psychodiagnosis and psychocorrection of post-traumatic stress disorder: A teaching and methodological manual*. Kyiv: University “Ukraine”.
- [5] Chernenko, I.I. (2024). Peculiarities of the impact of the consequences of combat traumatic brain injury on the cognitive sphere of patients depending on the severity and catamnesis. *Psychiatry, Neurology and Medical Psychology*, 11 (1), 35-42. doi: [10.26565/2312-5675-2024-23-04](https://doi.org/10.26565/2312-5675-2024-23-04).
- [6] CIOMS. (2016). *International ethical guidelines for health-related research involving humans* (4th ed.). Geneva: WHO Press Center.
- [7] Clore, G.L., & Palmer, J.E. (2009). Affective guidance of intelligent agents: How emotion controls cognition. *Cognitive Systems Research*, 10(1), 22-30. doi: [10.1016/j.cogsys.2008.03.002](https://doi.org/10.1016/j.cogsys.2008.03.002).
- [8] Danilevska, N.V. (2018). *Clinical-psychopathological and dynamic features of social-disadaptation post-combat syndrome in Ukrainian military personnel in modern realities*. *Psychiatry, Neurology and Medical Psychology*, 10, 7-12.
- [9] Derakshan, N., & Eysenck, M.W. (1998). Working memory capacity in high trait-anxious and repressor groups. *Cognition and Emotion*, 12(5), 697-713. doi: [10.1080/026999398379501](https://doi.org/10.1080/026999398379501).
- [10] Flood, A., & Keegan, R.J. (2022). Cognitive resilience to psychological stress in military personnel. *Frontiers in Psychology*, 13, article number 897040. doi: [10.3389/fpsyg.2022.809003](https://doi.org/10.3389/fpsyg.2022.809003).
- [11] Germain, C.L., Kangas, M., Taylor, A., & Forbes, D. (2016). The role of trauma-related cognitive processes in the relationship between combat-PTSD symptom severity and anger expression and control. *Australian Journal of Psychology*, 68(2), 73-81. doi: [10.1111/ajpy.12097](https://doi.org/10.1111/ajpy.12097).
- [12] Hryniovskiy, A., Bielai, S.V., Kernickiy, A.M., & Pasichnik, V.I. (2022). Medical, social and psychological aspects of assisting the families of the military personnel of Ukraine who performed combat tasks in extreme conditions. *Medical News*, 75(1), 310-317. doi: [10.36740/WLek202201228](https://doi.org/10.36740/WLek202201228).

- [13] Keinan, G. (1987). Decision-making under stress: Scanning of alternatives under controllable and uncontrollable threats. *Journal of Personality and Social Psychology*, 52, 639-644. doi: 10.1037/0022-3514.52.3.639.
- [14] Kisarchuk, Z.H. (2020). *Technologies of psychotherapeutic assistance for victims in overcoming symptoms of post-traumatic stress disorder*. Kyiv: Publishing House "Slovo".
- [15] Kokun, O.M., Agayev, N.A., Pishko, I.O., Lozinska, N.S., & Kornya, L.V. (2019). *Psychological study of the personnel of the Armed Forces of Ukraine. Methodological manual*. Kyiv: FOP Maslakov.
- [16] Kovalenko, I., Berezan, O., & Pomohaibo, V. (2023). Post-traumatic stress disorder for military servants: Theory, research and treatment. *Psychology and Personality*, 13(2), 263-278. doi: 10.33989/2226-4078.2023.2.288310.
- [17] Levytskyi, N.Ya., & Potapchuk, Y.M. (2025). Using psychodiagnostic tools to study post-traumatic growth of family members of military personnel in war conditions. *Habitus*, 73, 291-294. doi: 10.32782/2663-5208.
- [18] MacLeod, C., & Donnellan, A.M. (1993). Individual differences in anxiety and the restriction of working memory capacity. *Personality and Individual Differences*, 15(2), 163-173. doi: 10.1016/0191-8869(93)90023-V.
- [19] Savchenko, O.V. (2014). *Cognitive resources as an important component of individual experience at the cognitive level*. *Psychological Prospects Journal*, 24, 283-296.
- [20] Shalev, A.Y. (2007). PTSD: A disorder of recovery? In L.J. Kirmayer, R. Lemelson & M. Barad (Eds.), *Understanding trauma: Integrating biological, clinical, and cultural perspectives* (pp. 207-223). Cambridge: Cambridge University Press. doi: 10.1017/CBO9780511500008.015.
- [21] Shchyruk, I.A. (2024). Psychological features of negative consequences of post-traumatic stress disorder and trauma in military personnel and persons affected by combat stress. *Scientific notes. Series: Psychology*, 3, 87-93 doi: 10.32782/cusu-psy-2024-3-12.
- [22] Shvets, A.V., Maltsev, O.V., Kyselov, S.M., & Kaplyuk, O.B. (2024). Peculiarities of the rehabilitation management process among combatants: World experience. *Ukrainian Journal of Military Medicine*, 5(3), 39-49. doi: 10.46847/ujmm.2024.3(5)-039.

Вплив травматичного досвіду на особистісні (когнітивні) ресурси учасників бойових дій

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✦ **Анотація.** Актуальність дослідження зумовлена тим, що повномасштабна війна та травматичний досвід учасників бойових дій істотно трансформують їхні емоційно-особистісні ресурси, зумовлюючи науково-практичний інтерес до вивчення цієї проблеми. Мета дослідження полягала у з'ясуванні того, як травматичний досвід впливає на когнітивні ресурси особистості учасників бойових дій. Використано комплекс теоретичних методів і емпіричних методів. Дослідження охопило 189 осіб, що перебували на лікуванні або обстеженні у військовому шпиталі. З'ясовано, що травматичний досвід, спричинений різними причинами і різної тривалості, вносить суттєві спотворення у використання особистісних, зокрема когнітивних ресурсів. Порушення у когнітивній сфері стосуються насамперед основних показників швидкості сприйняття, уваги та короточасної пам'яті. Встановлено, що підвищена особистісна тривожність призводить до помітних порушень стійкості уваги, а підвищена депресивність – до проблем із перемиканням уваги. Відтермінований досвід участі у бойових діях формує депресивні переживання, а відтермінований досвід участі у ліквідації наслідків бойових дій призводить до виникнення підвищеної особистісної тривожності. Результати дослідження підтвердили, що травматичний досвід призводить до характерних змін в емоційно-особистісній сфері учасників бойових дій та суттєво впливає на їхні особисті (когнітивні) ресурси. Результати дослідження можуть бути застосовані у реабілітаційних програмах для військовослужбовців із травматичним досвідом, зокрема для відновлення їхніх когнітивних ресурсів та формування ефективних стратегій адаптації до цивільного життя. Отримані дані збагачують міжнародний дискурс про вплив травматичного досвіду на когнітивні ресурси учасників бойових дій

✦ **Ключові слова:** військовослужбовці; бойова психічна травма; когнітивна сфера; пізнавальні процеси; психічні стани



Transformation of military organisational culture under the influence of war: An empirical study using the OCAI methodology

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◆ **Abstract.** The relevance of the study is conditioned by the fact that a full-scale war radically changes the conditions of functioning of the Armed Forces of Ukraine, putting forward new requirements for leadership, communication, and preservation of institutional values. In such circumstances, the transformation of organisational culture becomes a key factor in the cohesion, sustainability, and effectiveness of command, and its empirical measurement allows understanding the mechanisms of internal adaptation of military units to external pressure. The purpose of the study was to empirically assess the dominant types of organisational culture among Ukrainian servicemen during the war (2022-2025) using the OCAI method. The OCAI (Organisational Culture Assessment Instrument) methodology adapted to the military context, questionnaires of military personnel, open interviews, and document analysis were applied, and descriptive statistics, paired t-test and one-factor variance analysis (ANOVA) were used for data processing. A survey of 83 military personnel showed that the dominant type of culture remains hierarchical (34.25 points), but in the desired state its value is significantly reduced (20.26 points) in favour of adhocratic (an increase from 12.1 to 26.97 points) and clan (from 27.22 to 27.77). The most pronounced changes were recorded in the success criteria, where the adhocratic culture rose from 20.34 to 35.64 points, and the hierarchical culture decreased from 32.98 to 14.08 points. There was also an increase in innovation (from 6.36 to 7.64), initiative (from 6.96 to 7.68 points), and result orientation (from 7.16 to 8.24 points), which showed the active adaptation of troops to the conditions of modern warfare based on trust, mutual support networks, and value-oriented leadership practices. This study was one of the first empirical applications of the OCAI model in the military context of Ukraine during the war, its originality lies in the adaptation of the tool for highly structured and stressful

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institutions, which allowed diagnosing changes from a rigid hierarchy to more flexible models. The results obtained enrich the international discourse on military leadership and organisational development, and are also of practical value for reforming the system of training military leaders, forming a sustainable organisational culture in the defence sector

◆ **Keywords:** organisational changes; Armed Forces of Ukraine; leadership; cultural adaptation; transformation; combat effectiveness

◆ Introduction

In modern warfare, organisational culture is becoming crucial to ensuring combat effectiveness. Even under equal conditions of the combat situation, resource support and level of training of personnel, the results of actions can vary significantly depending on the internal climate, values, and leadership style in a particular unit. The effectiveness of military organisations largely depends on the quality of leadership, and the development of the leadership potential of cadets should combine thorough theoretical training with practical experience in exercises, tactical, and simulation games. The existing Ukrainian system is characterised by insufficient individualisation of approaches, so improvement is possible through the introduction of interactive teaching methods, mentoring, cases, project work, etc., which will contribute to the development of strategic thinking, communication skills, and the ability to make decisions in extreme conditions (Melnychenko *et al.*, 2024). In this regard, organisational culture is a decisive factor in combat readiness, rather than a background factor. War creates an extreme environment that accelerates the transformation of cultural mechanisms, activates adaptation, innovation, and cohesion, revealing not only positive potentials, but also critical points of vulnerability of organisations. The study of the dynamics of cultural changes in Ukrainian military units is of great scientific and practical significance for the development of strategic approaches in the Armed Forces of Ukraine. E.D. Lonergan & J. Snyder (2025) emphasised that the military organisational culture shapes the professional identity, values, and standards of conduct of the army, defining its internal norms and approaches to conducting combat operations, while the strategic culture reflects a broader understanding of the goals and methods of using force at the state security level, and both of these components are undergoing profound transformations in modern warfare conditions, in particular in cyberspace, which introduces new technological opportunities and challenges.

Analysis of organisational culture in the South Carolina National Guard (USA) showed that leadership styles are crucial for shaping organisational culture, while transformational and transactional leadership were significantly more effective than liberal style in achieving the desired cultural results (Elliott *et al.*, 2025). Other studies have highlighted the importance of cultural factors in military adaptation. Thus, in the SCEEUS report M. Mannerfeld (2023) noted that the organisational culture of the Armed Forces of Ukraine stimulated innovation – for example, the mass use of civilian drones was made possible by a decentralised, proactive approach to command. The study

by J. Soeters (2021) showed that military organisational culture was established under the influence of national traditions, historical experience, and features of military service, depends on the specifics of a particular country and integrates elements of global culture within the framework of international unions and joint operations. A.T. Bogale & K.L. Debela (2024) identified organisational culture as a key factor in overcoming crises and improving efficiency, which affects interpersonal interaction, management and dynamics of the work environment, which creates the basis for its effective integration into military affairs. The paper devoted to the study of the lessons of the war in Ukraine, B.A.M. Langum (2024) also emphasised the importance of mental flexibility and adaptive leadership in the military during war. M.T. Hackett & J.A. Nagl (2024) in its analysis of military experience emphasised the need for a culture of command to achieve the ultimate goal (mission command), which implies trust and decentralisation of responsibility. Similar findings were obtained in the analytical research by CSIS (2025), which pointed to the critical role of the human domain (psychological state, continuity of command, and moral stability) in conflict situations. M. Hvizda *et al.* (2025) further reviewed Ukraine's lessons for future wars, with a focus on innovation, efficiency, and structural adaptation. Summarising, the scientific community agrees that it is culture, trust, initiative, and the rejection of excessive hierarchy that determine the current effectiveness of the Armed Forces. Despite this, direct, systematic empirical research into cultural changes in the Ukrainian military environment in conditions of active warfare remains underrepresented in the literature. The purpose of the study was to identify the impact of war on the transformation of military organisational culture and factors that determine the success or inefficiency of units in combat conditions.

◆ Materials and Methods

The methodological basis of the research was contemporary scientific approaches to the investigation of organisational culture and its role in management and leadership. The central concept was the model by E.H. Schein (2004), which explained the development and consolidation of culture through three levels: artefacts, proclaimed values, and basic ideas. In the military environment, these elements are reflected in leadership styles, decision-making mechanisms, communications, and interpersonal interaction. In order to determine the influence of cultural context on organisational behaviour, the cultural dimension model by G. Hofstede (2001) was considered, which allowed assessing the specifics of management strategies in a

cross-cultural context. Additionally, the “cultural web” model by G. Johnson & K. Scholes (2002) was also used, which covered informal elements of culture – symbols, rituals, dominant paradigms. Of particular importance was the Organisational Culture Assessment Instrument (OCAI), which allowed identifying the current and desired organisational culture within the model of competing values: clan, adhocratic, market, and hierarchical (Cameron & Quinn, 2005; Wang *et al.*, 2021). It was this tool that was adapted to the military context in this study. In addition to generally accepted theories, the development of the research approach considered the results of a previous empirical study by V. Osodlo *et al.* (2021), who focused on the role of organisational culture in ensuring the sustainable development of organisations. It proved that it is cultural architectonics that largely determines the effectiveness of communication, motivational mechanisms, and leadership influence, which has become the basis for the current analysis.

In this study, organisational culture is interpreted as “a pattern of collective basic ideas adopted by a group when solving problems of adaptation to the external environment and internal integration” (Schein, 2004). To determine the specific characteristics of the organisational culture of military units, the OCAI methodology adapted for the military environment was used. The organisational culture diagnostic questionnaire consisted of 24 diagnostic statements, which were divided into 6 blocks of 4 statements each. In each of the 6 blocks, respondents had to distribute 100 points between four statements according to how much each of them reflects the real state (present) and the desired state (what they would like to see the division in the future). For the purposes of this study, the author adapted the OCAI methodology to the military context. In particular, the wording of the statements was clarified considering the military terminology, the organisational structure of the Armed Forces of Ukraine, and the specifics of the units. The concept of “manager” was

replaced by “commander”, “organisation” – by “division”. Aerobic testing of the adapted version of the questionnaire was conducted on 10 military personnel of different levels, as a result of which minor editorial changes were made. The reliability of the instrument was checked by internal consistency: the Cronbach’s α for the scales ranged from 0.72 to 0.81, which indicates sufficient reliability. In order to assess changes in organisational culture under the influence of war, respondents were asked to evaluate 8 components of organisational culture and their transformation during a large-scale war. The Likert scale from 1 to 10 points was used to evaluate responses, where 1 – the lowest score (no manifestation) and 10 – the highest score (maximum level of manifestation).

The following methods were also used to collect empirical data: open interviews, questionnaires of military personnel – primarily officers of operational and strategic levels of military education, analysis of documents and internal communications, indirect observation of behaviour. The presented empirical study was conducted in 2025. In total, the study covered 83 respondents and was conducted considering the ethical foundations of psychological research in accordance with the requirements of the Helsinki Declaration of the World Medical Association (WMA, 2024). Statistical analysis involved calculating mean values and standard deviations to identify trends in change and the level of consensus in estimates. The received data was processed using the SPSS software suite (version XX). Descriptive statistics (mean, standard deviation) were used to evaluate the basic characteristics of the sample and the parameters of the organisational culture. A paired t-test for dependent samples was used to test the statistical significance of differences between the existing and desired culture state. Individual intergroup comparisons were performed using univariate analysis of variance (ANOVA). Statistical significance was considered acceptable at $p < 0.05$. Table 1 provides information describing the sample of subjects.

Table 1. Characteristics of the study sample

Category	Number of people	Percentage
Total number of respondents	83	100
Duration of military service		
under 10 years	42	50.6
11-20 years	19	22.9
more than 20 years	22	26.5
Affiliation with the type (branch, forces) of the Armed Forces of Ukraine		
Ground Forces	50	60.2
Air Forces	2	2.4
Naval Forces	2	2.4
Special Operations Forces	3	3.6
Forces of Unmanned Systems	1	1.2
Territorial Defence Forces	5	6.0
Logistics Forces	5	6.0
General Staff	3	3.6
Ministry of Defence of Ukraine, HMEI	12	14.5
Category of military personnel		
soldiers	20	24.1
sergeants	15	18.1

Table 1. Continued

Category	Number of people	Percentage
junior officers	10	12.0
senior officers	36	43.4
generals	2	2.4

Source: developed by the authors

These data allowed considering the findings representative, since the study covered all categories of military personnel representing the majority of the components of the Armed Forces of Ukraine. Despite the representativeness of the study for key categories of military personnel, there was an uneven distribution in some indicators. In particular, the sample mainly included representatives of the Ground Forces (60.2%) and senior officers (43.4%), which may partially affect the generalisation of results for other categories and types of forces of the Armed Forces of Ukraine. This should be considered as a methodological limitation that requires further study with an extended or stratified sample.

◆ Results and Discussion

Interpretation of the results of the assessment of the organisational culture of military units. The study allowed identifying key changes in the military organisational culture that occurred as a result of the war for the period from February 2022 to May 2025. The result of

using the OCAI methodology is a rating assessment of four alternatives, which helped to identify the type and state of the division's culture by constructing a framework structure of competing values. The types of culture in this case include clan (alternative A), adhocratic (alternative B), market (alternative C), and hierarchical (alternative D). Clan culture implies the establishment of a "family" within the organisation, where all military personnel share common values, all are united and empathetic. Adhocratic is a corporate culture characterised by flexibility and adaptability to circumstances. Hierarchical – mainly aimed at a clear distribution of responsibilities in the division, standardisation of rules and procedures for functioning. Market culture means that the division primarily focuses on external circumstances, and not on the internal situation. The data presented in Table 2 provide an in-depth comparative analysis of the current and desired state of organisational culture of military units in six key dimensions that reflect the structural, managerial, value, and strategic aspects of the team's functioning.

Table 2. Assessment of organisational culture parameters

		Current status		Desired state	
Dimensions of organisational culture		Mean value	Standard deviation	Mean value	Standard deviation
The most important characteristics of the division	A	27.22	0.449	27.77	0.429
	B	12.1	0.380	26.97	0.352
	C	26.42	0.599	25	0.456
	D	34.25	0.484	20.26	0.387
General leadership and command style	A	26.96	0.681	32.02	0.568
	B	19.85	0.630	29.88	0.386
	C	24.42	0.662	22.97	0.688
	D	28.77	0.730	15.13	0.542
Personnel management	A	27.42	0.691	32.21	0.424
	B	20.89	0.704	26.01	0.389
	C	21.51	0.626	24.18	0.546
	D	30.18	0.692	17.6	0.564
Unifying features of the division	A	29.44	0.686	32.91	0.432
	B	17.26	0.576	27.12	0.324
	C	27.43	0.352	23.17	0.576
	D	25.86	0.386	16.81	0.346
Strategic guidelines of the division	A	25.34	0.380	28.32	0.566
	B	23.19	0.448	31.55	0.624
	C	25.8	0.449	27.71	0.431
	D	25.66	0.420	12.42	0.386
Criteria of division success	A	24.01	0.599	27.64	0.348
	B	20.34	0.662	35.64	0.367
	C	22.68	0.393	22.64	0.431
	D	32.98	0.484	14.08	0.564

Source: developed by the authors

According to Table 2, the current state is dominated by a hierarchical culture (34.25), which indicates the presence of structure, regulation, and orientation to control and subordination. However, the desired state demonstrates a clear desire to reduce this dominant (to 20.26) and a significant increase in the importance of adhocratic culture (from 12.1 to 26.97), and a moderate increase in the clan component. This dynamic is interpreted as a request to increase flexibility, innovation, strengthening internal cohesion, emotional mutual support, and identity of the division. The current leadership model tends towards a hierarchical style (28.77), which is typical for traditional military structures with a high level of formalisation and vertical management. However, the expected changes indicate a clear desire for a more humane, open and transformational style: the importance of clan leadership style increases (up to 32.02) and adhocratic (up to 29.88). This may indicate the need for more trusting interpersonal relationships, developing initiative among subordinates, and maintaining a mentoring culture. In the field of personnel management, there is also a desire to abandon strictly formalised procedures (the hierarchical model decreases from 30.18 to 17.6) in favour of the clan (growth to 32.21) and adhocratic model (to 26.01). This trend reflects the growing importance of an individualised approach to military personnel, orientation to the development of human capital, considering psychological comfort and social support in difficult and dynamic circumstances. The current situation is characterised by a somewhat unbalanced cultural profile, with approximately equal positions of clan, market, and hierarchical cultures. In the desired state, preference is clearly given to clan (up to 32.91) and adhocratic (up to 27.12) traits. This indicates a demand for the development of a culture of unity, shared values, interpersonal trust, and openness to change and flexibility in responding to challenges. A decrease in the importance of market culture may indicate the priority of internal cohesion over external competition. The transition of strategic guidelines was most striking: hierarchical culture decreased to a minimum level (12.42), and adhocratic

culture increased to 31.55, which indicates a transformation of the strategic vision of the organisation. The focus is gradually shifting from stability and predictability to innovative development, adaptive planning, and finding new approaches to task completion. In conclusion, the analysis of success criteria showed the most pronounced change in cultural emphasis: if the hierarchical model currently dominates (32.98), then in the desired version preference is given to the adhocratic type (35.64). This means that the idea of efficiency and effectiveness shifts from monitoring and following formal procedures to achieving innovative results, a high degree of autonomy, initiative, and creativity in work. In general, the results of the study revealed a significant transformation of value orientations within military units. From a clearly dominant hierarchical culture, there is a transition to a more flexible, innovative, and human-centred model of organisational culture that combines the features of clan and adhocratic cultures. This indicates changes in the expectations of personnel regarding management styles, ways of interaction, and determining the effectiveness of the unit in the modern security environment. In addition, a high standard deviation in current state assessments (especially in measuring leadership style) indicates cultural heterogeneity or even hidden tensions between different behaviours, which can complicate the process of change. But the low level of deviation in the desired state of culture demonstrates the consensus of the study participants on the priority areas of development of the organisational environment.

Interpretation of changes in the components of the organisational culture of military units under the influence of war. Table 3 provides a comparative analysis of key components of organisational culture before and after the deployment of full-scale military operations. The analysis is based on scores on a scale from 0 to 10, where higher values indicate a greater degree of the corresponding characteristic. Changes in the mean values and dynamics of the standard deviation presented in Table 3 allow assessing both qualitative transformations and the level of uniformity of perception of changes among respondents.

Table 3. Assessment of changes in organisational culture components under the influence of war

Culture component	Before		After	
	Mean value (score 0-10)	Standard deviation	Mean value (score 0-10)	Standard deviation
Cohesion level	7.60	0.346	7.50	0.437
Initiative of personnel	6.96	0.422	7.68	0.348
Compliance with procedures	6.80	0.368	7.56	0.495
Result orientation	7.16	0.354	8.24	0.367
Support from commanders	7.00	0.420	7.31	0.438
Innovation in approaches	6.36	0.566	7.64	0.433
Readiness for change	6.43	0.622	7.54	0.452
Atmosphere of trust	6.95	0.426	7.01	0.387

Source: developed by the author

The cohesion index remained almost unchanged (from 7.60 to 7.50), showing a slight decrease that does not go beyond the statistical error. This demonstrates the

stability of horizontal ties and collective solidarity in the military environment, even in conditions of extreme stress and high dynamics. A slight increase in the standard

deviation may reflect the variability of the cohesion experience in different units or at different stages of combat operations. Initiative increased from 6.96 to 7.68, which indicates an increase in the subjectivity of military personnel, an increase in autonomy in decision-making and a willingness to act proactively. A decrease in the standard deviation indicates greater consistency in the perception of this shift, which can be interpreted as a sign of an adaptive increase in individual responsibility in the face of combat challenges. The formal compliance rate increased from 6.80 to 7.56. This indicates the strengthening of the role of regulatory guidelines and disciplinary structure, which remain the basis for the functioning of divisions even in conditions of uncertainty. This is probably conditioned by the need to maintain order and predictability in extreme situations. The growing deviation indicates differences in the experience of implementing procedures in different contexts. The largest increase among all components was recorded for this parameter – from 7.16 to 8.24. This demonstrates that war has activated instrumental orientations when evaluating the effectiveness of actions has become a priority. A stable low deviation confirms a high level of consensus on improving performance as a defining criterion for behaviour and management. The support rate increased from 7.00 to 7.31, which indicates a positive trend in interpersonal vertical relationships, in particular, an increase in attention from commanders to the needs of subordinates. While growth is moderate, it shows a desire for a more ethical, humane, and supportive leadership style that is consistent with modern ideas about effective command in the face of uncertainty. A sharp increase in innovation (from 6.36 to 7.64) indicates that the war has become a catalyst for the search for new solutions, tactics, and ways to organise processes. Increasing innovation activity can be associated both with the need to adapt to changes, and with expanding the space for initiatives at the tactical level. A decrease in the standard deviation indicates a unified perception of this trend. Readiness for changes also shows positive dynamics – from 6.43 to 7.54. This trend reflects psychological mobilisation and increased tolerance for uncertainty among personnel. Increasing flexibility of thinking and adaptability is a key factor in survival and success in war. A slight increase in the atmosphere of trust indicator (from 6.95 to 7.01) with a consistently low deviation indicates a relative constancy in the level of interpersonal trust, despite the challenges associated with extreme conditions. This may indicate already established trusting relationships, which remain an important resource in crisis situations, although they do not show significant strengthening. Analysis of changes in the components of the organisational culture of military units under the influence of war demonstrates a general tendency to strengthen adaptive, innovative and performance-oriented characteristics, while maintaining (or slightly reducing) the level of cohesion and trust. War, as an extreme external factor, on the one hand, mobilised initiative, innovation and readiness for change, and on the other,

contributed to increasing the role of clear procedures and monitoring of results. This paradox of combining formalisation and flexibility is typical for complex organisations in conditions of high uncertainty and risk. The changes were accompanied by a general decrease in the variability of perception in most parameters, which indicates an increase in the consistency of collective experience. This can be seen as a sign of consolidation of the organisational culture around new challenges, when a common goal forms new rules for interaction and collective survival.

A variety of approaches to interpreting organisational culture models. Organisational culture, formed under the influence of historical heritage, values and behaviour of leaders, is a key factor in the effectiveness of organisations, determines the opportunities and limitations of their development, and its purposeful management contributes to the achievement of strategic goals, improving work ethics, communications, and the implementation of innovative strategies (Osodlo *et al.*, 2021). The results of the study confirmed that the organisational culture of the Armed Forces of Ukraine is in the process of active transformation. M.R. Bowers *et al.* (2017) argued that successful crisis management requires a combination of organisational culture and individual leadership styles, implemented through crisis leadership principles that allow the choice of the most effective leader for a particular situation. Accordingly, the conditions of war are just such crisis situations, so OCAI in a reformed form has the potential to identify the dominant types and trends of transformation of military organisational culture, and to outline the tension between hierarchical models and orientation towards clan and adhocratic values (Cameron & Quinn, 2005; Wang *et al.*, 2021). Despite the preservation of a significant share of hierarchical characteristics, the personnel declare a desire to shift the emphasis towards clan and adhocratic culture. The study by A. Pollman (2015) demonstrated that the organisational culture of the U.S. Marine Corps is characterised by a preference for market and hierarchical attributes with a tendency towards greater flexibility and adhocracy, while reflecting a desire to strengthen clan elements in leadership. But the results of this study showed a focus on trust, team interaction, initiative and flexibility in decision-making among the Ukrainian military. Such results show that war is becoming a catalyst for cultural change, stimulating a reorientation from rigid and formalised practices to more adaptive and humanitarian-coloured models of interaction. Similar trends can be traced in other Ukrainian studies. Analysis of the positive organisational culture in the Armed Forces of Ukraine showed that the key factor of sustainability is the development of informal practices of mutual support, horizontal communication and trust between military personnel, which strengthen readiness to perform tasks under stressful conditions (Shynkaruk *et al.*, 2024). Similar processes were recorded in the civilian sector, in particular in the university environment, where during the war there was a shift from a rigid hierarchical culture to a more

flexible, innovative and creative organisational model (Falko & Zhukov, 2023). This indicates that the transformation of culture under the pressure of war is a common characteristic for different types of organisations in Ukraine.

The relationship between organisational culture and leadership styles deserves special attention. The results of this study show that military personnel's focus on clan and adhocratic culture is accompanied by an expectation of leadership based on support, trust, and shared responsibility. A similar connection has been confirmed in different contexts from the Ukrainian military. Thus, a study of the US National Guard showed a close correlation between the dominance of clan culture and the predominance of a democratic, supportive leadership style (Langum, 2024). In the Ukrainian context, this is reflected in the expectation of the military to see commanders who combine professional competence with a willingness to serve as an example, provide team cohesion and moral support. Similar characteristics were described in the study by N. Batryn (2023) on military leadership, which highlighted the role of empathy, quick decision-making, and maintaining trust in crisis situations. The results of this study also revealed a systemic conflict between new cultural landmarks and the inertia of old hierarchical models. Contemporary publications repeatedly emphasised that the new generation of Ukrainian commanders strives to implement more decentralised and proactive approaches to management, but faces resistance from the traditional bureaucratic system (Kirichenko, 2025). Analytical reviews confirm that excessive regulation and rigid hierarchical practices often limit the initiative and flexibility of military units, reducing their effectiveness in combat conditions (Zaluzhny, 2025; Walker et al., 2025). In this context, the data obtained can be interpreted as an empirical confirmation of cultural tension: on the one hand, the dominant hierarchy; on the other, the clear desire of personnel for new models based on mutual trust and partnership. Ultimately, the results obtained are consistent with the strategic conclusions of military science regarding the lessons of war. The ability of the Ukrainian military to act effectively is determined not only by the level of technical support, but also by the development of flexible, creative, and collegial forms of command that allow them to quickly adapt to changes in the environment (Sukman, 2024). This further emphasised that the transformation of organisational culture is not only an internal management process, but also a determining factor in operational and strategic effectiveness. Thus, the conducted research fits into the broader scientific discourse and demonstrates that culture in military organisations is not a secondary, but a key factor of combat capability. It simultaneously reflects the legacy of the past and the landmarks

of the future, determining the readiness of personnel for adaptation, innovation, and sustainability.

◆ Conclusions

The war has become a powerful transformative factor for the organisational culture of military units of the Armed Forces of Ukraine. The results of a survey of 83 military personnel showed that the dominant type of culture remains hierarchical (34.25 points), but in the desired state its value decreases to 20.26 points in favour of adhocratic (an increase from 12.1 to 26.97 points) and clan (from 27.22 to 27.77 points). The greatest changes were recorded in the success criteria, where the adhocratic culture increased from 20.34 to 35.64 points, and the hierarchical culture decreased from 32.98 to 14.08 points. There is also an increase in innovation (from 6.36 to 7.64 points), initiative (from 6.96 to 7.68 points), and result orientation (from 7.16 to 8.24 points), which indicates an active adaptation of the army to modern warfare. These results confirmed the gradual transition from a strictly hierarchical to a more flexible and human-centred culture, where trust, cooperation, flexibility, innovation, efficiency, and initiative become the leading characteristics. As a result, the distance of power decreases, the formal boundaries between levels and roles lose rigidity, horizontal communications and combat brotherhood are strengthened, which forms an open and goal-oriented military culture. High scores of cohesion and trust showed that there is a stable moral core that supports combat capability despite extreme conditions. The results obtained are of applied importance for the reform of military administration, the development of leadership training programmes, and new personnel policies. Moreover, they highlight the need for further institutional consolidation of these positive changes, so that the latest military organisational culture moves from a natural phenomenon to a conscious system practice and becomes the basis for the next stage of development of the Defence Forces of Ukraine. Further research should focus on a more in-depth study of the dynamics of change in units of different types and levels of combat interaction, considering the specifics of their organisational structure, professional composition, intensity of combat missions, and external conditions.

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◆ References

- [1] Batryn, N. (2023). Wartime leadership in the context of organizational change theories. *International Science Journal of Management, Economics & Finance*, 2(1), 96-103. [doi: 10.46299/j.isjmef.20230201.10](https://doi.org/10.46299/j.isjmef.20230201.10).
- [2] Bogale, A.T., & Debela, K.L. (2024). Organizational culture: A systematic review. *Cogent Business & Management*, 11(1), article number 2340129. [doi: 10.1080/23311975.2024.2340129](https://doi.org/10.1080/23311975.2024.2340129).

- [3] Bowers, M.R., Hall, J.R., & Srinivasan, M.M. (2017). Organizational culture and leadership style: The missing combination for selecting the right leader for effective crisis management. *Business Horizons*, 60(4), 551-563. doi: [10.1016/j.bushor.2017.04.001](https://doi.org/10.1016/j.bushor.2017.04.001).
- [4] Cameron, K.S., & Quinn, R.E. (2005). *Diagnosing and changing organizational culture: Based on the competing values framework*. Hoboken: John Wiley & Sons.
- [5] Center for Strategic & International Studies (CSIS). (2025). *Human domain lessons from the Russia-Ukraine conflict*. Retrieved from <https://www.csis.org/analysis/human-domain-lessons-russia-ukraine-conflict-focus>.
- [6] Elliott, Z.U., Bourne, P.A., Chambers, T.M., McNeil, T.H., Moses, D.N.C., & Nelson, R. (2025). A quantitative analysis of leadership styles and organisational culture: A data-driven study of the South Carolina Army National Guard. *Journal of Leadership, Accountability & Ethics*, 22(1), 78-117. doi: [10.33423/jlae.v22i1.7537](https://doi.org/10.33423/jlae.v22i1.7537).
- [7] Falko, N., & Zhukov, O. (2023). Transition from hierarchy to adhocratic organizational culture in a Ukrainian university: From survival to successful development in the conditions of war. *Problems and Perspectives in Management*, 21(2), 15-22. doi: [10.21511/ppm.21\(2-si\).2023.03](https://doi.org/10.21511/ppm.21(2-si).2023.03).
- [8] Hackett, M.T., & Nagl, J.A. (2024). A long, hard year: Russia-Ukraine war lessons learned 2023. *The US Army War College Quarterly Parameters*, 54(3), article number 6. doi: [10.55540/0031-1723.3302](https://doi.org/10.55540/0031-1723.3302).
- [9] Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Thousand Oaks: Sage Publications.
- [10] Hvizda, M., Frederick, B., Laufer, A., Evans, A.T., Gunness, K., & Ochmanek, D.A. (2025). *Dispersed, disguised, and degradable: The implications of the fighting in Ukraine for future U.S.-involved conflicts*. Retrieved from https://www.rand.org/pubs/research_reports/RRA3141-2.html.
- [11] Johnson, G., & Scholes, K. (2002). *Exploring corporate strategy: Text and cases* (6th ed.). Harlow: Financial Times Prentice Hall.
- [12] Kirichenko, D. (2025). *Ukraine's new generals battle the old system*. Retrieved from <https://cepa.org/article/ukraines-new-generals-battle-the-old-system/>.
- [13] Langum, B.A.M. (2024). *Adapt, lead, win: NCO lessons from Ukraine*. Retrieved from <https://www.armyupress.army.mil/portals/7/nco-journal/images/2024/October/NCO-Lessons-from-Ukraine/NCO-Lessons-from-Ukraine.pdf>.
- [14] Loneragan, E.D., & Snyder, J. (2025). Cultural change in military organizations: Hackers and warriors in the US Army. *Texas National Security Review*, 8(3), 74-95. doi: [10.1353/tns.00006](https://doi.org/10.1353/tns.00006).
- [15] Mannerfelt, M. (2023). *The positive organizational culture of the Ukrainian Armed Forces and the use of civilian drones in the war against Russia*. Retrieved from <https://sceus.se/en/publications/the-positive-organizational-culture-of-the-ukrainian-armed-forces-and-the-use-of-civilian-drones-in-the-war-against-russia/>.
- [16] Melnychenko, S., Ovchynnyk, V., Hudal, S., & Kulyk, M. (2024). Pedagogical aspects of the development of leadership qualities in cadets of higher military educational institutions. *Scientific Bulletin of Mukachevo State University. Series "Pedagogy and Psychology"*, 10(1), 87-97. doi: [10.52534/msu-pp1.2024.87](https://doi.org/10.52534/msu-pp1.2024.87).
- [17] Osodlo, V., Rybchuk, O., & Krykun, V. (2021). Organizational culture as a basis for efficient development of organization. *European Journal of Studies in Management and Business*, 17, 18-30. doi: [10.32038/mbrq.2021.17.02](https://doi.org/10.32038/mbrq.2021.17.02).
- [18] Pollman, A. (2015). *Diagnosis and analysis of marine corps organizational culture*. (Master's thesis, Naval Postgraduate School, Monterey, USA).
- [19] Schein, E.H. (2004). *Organizational culture and leadership* (3rd ed.). San Francisco: Jossey-Bass.
- [20] Shynkaruk, O., Byshyvets, N., Dutchak, M., Andrieieva, O., & Iakovenko, O. (2024). Mental health and post-traumatic stress disorder in military personnel depending on participation in active combat operations. *Physical Education, Sport and Health Culture in Modern Society*, 2(66), 39-51. doi: [10.29038/2220-7481-2024-02-39-51](https://doi.org/10.29038/2220-7481-2024-02-39-51).
- [21] Soeters, J. (2021). *Militaries' organizational cultures in a globalizing world*. Retrieved from <https://oxfordre.com/politics/display/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-1937/version/0>.
- [22] Sukman, D. (2024). *Something old and something new: Lessons from the Ukraine-Russia war*. Retrieved from <https://www.armyupress.army.mil/Journals/Military-Review/Online-Exclusive/2024-OLE/Lessons-Ukraine-Russia-War/>.
- [23] Walker, M., Lovett, I., & Sivorka, I. (2025). *Ukraine's once nimble army is mired in Soviet decision-making*. Retrieved from <https://www.wsj.com/world/ukraine-russia-army-soviet-5fa8e1c9>.
- [24] Wang, Y., Zhu, G., Shi, J., Huang, Y., & Guo, X. (2021). OSAI: A component-based open software architecture for modern industrial control systems. *Arabian Journal for Science and Engineering*, 47(4), 3805-3819. doi: [10.1007/s13369-021-06123-3](https://doi.org/10.1007/s13369-021-06123-3).
- [25] WMA. (2024). *WMA Declaration of Helsinki – ethical principles for medical research involving human participants*. Retrieved from <https://www.wma.net/policies-post/wma-declaration-of-helsinki/>.
- [26] Zaluzhny, V. (2025). *The art of command and control on the battlefields of Ukraine*. Retrieved from <https://www.thetimes.com/world/russia-ukraine-war/article/the-art-of-command-and-control-on-the-battlefields-of-ukraine-lml8m5qgx>.

Трансформація військової організаційної культури під впливом війни: емпіричне дослідження за методикою OCAI

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◆ **Анотація.** Актуальність дослідження зумовлена тим, що повномасштабна війна радикально змінює умови функціонування Збройних Сил України, висувуючи нові вимоги до лідерства, комунікації та збереження інституційних цінностей. У таких умовах трансформація організаційної культури стає ключовим чинником згуртованості, стійкості та ефективності командування, а її емпіричне вимірювання дозволяє зрозуміти механізми внутрішньої адаптації військових підрозділів до зовнішнього тиску. Метою дослідження була емпірична оцінка домінуючих типів організаційної культури серед українських військовослужбовців у період війни (2022-2025 рр.) за методикою OCAI. Застосовано адаптовану до військового контексту методику OCAI (Organizational Culture Assessment Instrument), анкетування військовослужбовців, відкриті інтерв'ю та аналіз документів, а для обробки даних використано описову статистику, парний t-тест і однофакторний дисперсійний аналіз (ANOVA). Опитування 83 військовослужбовців показало, що домінуючим типом культури залишається ієрархічна (34,25 бала), однак у бажаному стані її значення суттєво знижується (20,26 бала) на користь адхократичної (зростання з 12,1 до 26,97 бала) та кланової (з 27,22 до 27,77). Найбільш виражені зміни зафіксовано у критеріях успіху, де адхократична культура піднялася з 20,34 до 35,64 бала, а ієрархічна знизилася з 32,98 до 14,08 бала. Також спостерігалось зростання інноваційності (з 6,36 до 7,64), ініціативності (з 6,96 до 7,68 бала) та орієнтації на результат (з 7,16 до 8,24 бала), що засвідчило про активне пристосування військ до умов сучасного бою завдяки довірі, мережам взаємопідтримки та ціннісно орієнтованим практикам лідерства. Це дослідження стало одним із перших емпіричних застосувань моделі OCAI у військовому контексті України під час війни, його новизна полягає в адаптації інструменту для високоструктурованих і стресових інституцій, що дало змогу діагностувати зміни від жорсткої ієрархії до більш гнучких моделей. Отримані результати збагачують міжнародний дискурс про військове лідерство й організаційний розвиток, а також мають практичну цінність для реформування системи підготовки військових керівників, формування стійкої організаційної культури в оборонному секторі

◆ **Ключові слова:** організаційні зміни; Збройні Сили України; лідерство; культурна адаптація; трансформація; бойова ефективність



Methodology for developing combat skills in military personnel during combat training

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◆ **Abstract.** The mismatch between available resources and tasks, limited training time, and the need for high-quality training make it critically important to optimise methods for developing combat skills, taking into account individual learning rates and safety restrictions. The aim of the article was to prove the need to improve combat training methods for personnel and to identify the best methods for their implementation. Based on a review of regulatory documents and military standards of the Ministry of Defence of Ukraine, the shortcomings of the current system of psychological training of military personnel were identified and the principles for its further improvement were formulated. Through the analysis of scientific and pedagogical sources, the basic laws of skill formation were identified. The differences between a skill and a habit as different levels of mastery of behavioural actions were studied, and the psychological factors that determine their formation were analysed, primarily the role of motivation and perseverance in achieving results. The stages, forms, methods and techniques of training aimed at improving the effectiveness of the acquisition of combat skills and abilities were summarised. The importance of a systematic approach to the organisation of the learning process was emphasised, and the stages, forms and methods of training aimed at improving the effectiveness of learning combat skills and abilities were summarised. The feasibility of combining a modular approach, targeted training scenarios and systematic control of results was justified. The potential of microlearning as a modern approach was described separately, noting its conciseness, practical orientation, adaptability to individual learning pace, use of digital learning tools, and regular feedback, which ensures high operational efficiency of training in conditions of limited time. The influence of personal experience and motivation on the stages and duration of skill formation has been identified. The results of the study can be integrated into the design and modification of training programmes, the development of methodological recommendations and training scenarios for combat training of units, which will contribute to improving the effectiveness of professional skills formation, rationalising training time and reducing operational risks associated with insufficient training of personnel

◆ **Keywords:** psychological training; learning activity; microlearning; motivation; habit

◆ Introduction

Any training, including combat (psychological) training, is an educational process of acquiring knowledge and skills, the effectiveness of which is determined by the conditions of the training, the teaching methods and the individual

psychological characteristics of the military personnel. According to the updated Basic General Military Training (BGMT) programme, 372 hours are allocated for the training of mobilised service personnel, which does not

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ensure a sufficient level of psychological resilience for effective actions in combat conditions (Cabinet of Ministers of Ukraine, 2025). The actual amount of time available for practical training is significantly lower than what is required for the reliable formation of service-combat abilities and skills. Standard approaches often fail to take into account individual learning rates and motivational factors, which reduces training effectiveness. As a result, the level of combat capability directly depends on the quality of training and the degree to which skills are formed. As emphasised by N.V. Moskalenko *et al.* (2022), the experience of armed conflicts, including the combat operations on the territory of Ukraine, demonstrates that the quality and speed of forming combat skills determine not only the successful completion of tasks, but also the preservation of the lives and health of personnel. Thus, the development of a comprehensive methodology aimed at accelerating and improving the formation of skills in service members is one of the priority tasks of modern military pedagogy and psychology. Modern combat conditions require military personnel to be highly mobile, quick to react and able to work with modern technologies. Given the rapid development of technology, training with the use of technical means such as drones, unmanned aerial vehicles and other innovative systems plays a significant role. As of 2025, the combat training programmes of the Armed Forces of Ukraine do not specify training methods, but rather the order in which classes are conducted, which are, of course, not identical concepts (Law of Ukraine No. 4538-IX, 2025). Combat training is the foundation of the armed forces' combat readiness and a key factor in achieving victory in modern armed conflict. The effectiveness of any unit's actions directly depends on the level of individual preparedness of each servicemember, their ability to perform their duties quickly, accurately and coherently under conditions of maximum physical and psychological stress.

D. Grossman & L. Christensen (2023) noted that due to the growth of technological complexity and information overload, modern combat operations require military personnel to have high digital and technical literacy, operational cognitive adaptability, and endurance under stress. In these conditions, simply acquiring theoretical knowledge is insufficient. The formation of stable, automatic practical skills is of decisive importance – from the use of personal weapons and the provision of first psychological aid and pre-medical care to complex tactical actions as part of a unit. According to the conclusions of I. Neminsky *et al.* (2023), it is these skills that allow military personnel to act reflexively and effectively under enemy fire, in conditions of stress, fatigue, and limited time for decision-making. A. Romanyshyn & A. Neurova (2025) emphasised that the main task is to develop not only the physical but also the mental qualities of military personnel, which are crucial for the successful completion of combat missions. Issues related to adaptation to service conditions, stressful situations, psychological stability, and making the right decisions in critical conditions are often the main topics in research. The

study by Z.A. Khan *et al.* (2023) focuses on the importance of using innovative teaching methods based on psychological and cognitive theories. One such approach is the use of cognitive learning principles, which involve the integration of new knowledge through understanding and reflection on experience. O.V. Sagan (2022) also noted achievements in the application of gamification in military training, where game elements are used to increase motivation and engage military personnel in the active acquisition of knowledge and skills. A review of the above studies revealed the need to improve approaches to the training of military personnel. The aim of the article was to substantiate the conceptual foundations for modernising personnel training methods and to develop recommendations for improving the effectiveness of combat skills and abilities training.

◆ Materials and Methods

To ensure comprehensiveness, objectivity and reliability of the results obtained, a set of complementary research methods was applied. The leading role was played by methods of analysis of scientific and pedagogical sources, which included comparison, generalisation, classification and systematisation of scientific approaches, concepts and practical solutions in the field of combat and psychological training of military personnel. They made it possible to determine the current state of the problem of professional skills development and to identify key pedagogical, psychological and military-applied approaches to adult education (in particular, in conditions of high stress and limited time). A comparative analysis of pedagogical systems revealed their functional advantages and structural limitations, which served as the basis for a critical assessment of existing approaches. The generalisation and systematisation of empirical and theoretical data ensured the formation of a conceptual framework for the study and a clear definition of its terminology. At the theoretical and methodological stage, methods of analysis of normative documents in combination with content analysis were used to study the official regulatory framework for combat training, which ensured the systematic reproduction of regulatory provisions and their methodological interpretation.

The regulatory and legal basis for this study was provided by documents and standards, including Military Publication 1-(18-21)160(13).01 (2021), Military Publication 1-00(160)03.01 (2021), Military standard STI 000G(V).58A (2019), Military standard STI 101A.26V (2019), a review of which made it possible to assess the compliance of existing practices with modern requirements of the defence sector, identify gaps and inconsistencies in the current regulatory and methodological framework that affect the level of training of military personnel. Based on official materials from the Ministry of Defence of Ukraine (2025), the features of conducting BGMT in higher education institutions were systematised. To define concepts such as “skill”, “habit”, “ability”, and “mastery”, data from the psychological dictionary by V.V. Syniavsky & O.P. Sergeenkova (2007) were used. A review of the latest teaching

practices, including gaming and microlearning, made it possible to develop a number of recommendations for improving the effectiveness of information assimilation by military personnel in military training. The recommendations of these manuals and collections of standards served as a source for determining the approaches and practices implemented in the training of the personnel of the Armed Forces of Ukraine.

◆ Results and Discussion

The main indicator of a person's competence in any field is the number and quality of skills they possess. The result of BGMT should not be new theoretical knowledge, but rather developed skills that can be applied in real combat conditions. W. Pruchnicki *et al.* (2022) determined that a skill is formed as a result of special exercises – purposeful and systematic repetition of actions. A prerequisite for skill formation is a person's interest and motivation to learn. If, at the previous stage, a servicemember understands the purpose of a skill and the algorithm for its application, the pace of subsequent stages of training increases significantly. Thus, familiarisation with techniques and algorithms for performing actions plays an important role. For example, when mastering movements on the battlefield, the algorithms of movement are first demonstrated and learned through visual observation of the actions of experienced military personnel; then rehearsal (orientational) movements are performed, during which gross errors are possible, which are considered as a stage of the learning trajectory and are subject to systematic correction. The analytical stage provides that, based on the information received, the military personnel must master individual elements of the actions. For example, when teaching a child to read, letters are first demonstrated sequentially, then syllables, and later words; Similarly, when mastering a new action in combat training, it is necessary to consciously work through all the intermediate stages: the mechanism for performing actions must be understood, although in the initial stages their implementation may be characterised by inaccuracy and increased execution time. At the synthetic stage (the stage of conscious competence), individual actions are combined into a single whole, and the time required for execution is reduced. A combination of theoretical knowledge and practice is formed. The warrior forms a clear idea of the action and can consciously use it. Some steps begin to be performed automatically without conscious control. At the automatic stage (the stage of unconscious competence), the established skill does not require control and is performed completely unconsciously. The signal that the skill has been formed is considered to be the automatic performance of an action without prior analysis (Pruchnicki *et al.*, 2022). The signs of a formed skill are the combination of individual elementary movements into a coherent, coordinated action and the gradual elimination of unnecessary, irrational movements, which reduces overall tension. In the process of execution, attention shifts from controlling the technique of movement to achieving the final result.

Actions become rhythmic, which saves effort and reduces fatigue. In addition, the serviceman acquires the ability to arbitrarily regulate the pace of work – to slow down or speed up the execution depending on the situational conditions (Romanyshyn & Neurova, 2025).

The developed skill becomes part of a broader concept – competence, which implies the ability to perform an action with a certain level of quality in different, changing conditions. The development of competence requires a gradual increase in the complexity of tasks and variation in the conditions of activity, which ensures flexibility and consistency of action. The highest level of skill development is mastery, in which a servicemember is able to perform complex actions quickly, accurately, and effectively, even in stressful or non-standard situations (Syniavsky & Sergeenkova, 2007). An important aspect of organising personnel training is ensuring conditions under which theoretical material is presented in the most understandable form, and the training process provides for the possibility of prompt receipt and provision of feedback between the instructor and the serviceman. V.L. Zlyvkov & S.O. Lukomska (2019) identified the main recommendations for skill formation. First of all, skill formation has a stressful effect on the psyche of a military personnel. The more new skills are acquired at the same time, the higher the mental load on the military personnel, which reduces the effectiveness of the training process. Simultaneous mastery of several professional actions can lead to the formation of artificial associative links between them, even in the absence of a logical connection. As a result, such skills acquire a complex nature of manifestation and can be lost not selectively, but collectively. The widespread assertion about the superiority of lectures as the basis of training is erroneous, since the theoretical part plays a supporting role and corresponds only to the first stage of skill formation. It helps to set the direction of movement and avoid mistakes in the key part of training – practice. According to Y.L. Bryndikov (2018), the form of training plays an important role in the process of information transfer. The most effective form of training is individual training, when the instructor works directly with the serviceman and adapts the material to his level of preparedness. However, due to the significant resources required, this approach is rarely used, while group and distance formats are more common. To increase the effectiveness of such classes, it is advisable to use elements of microlearning, which contribute to better assimilation of the material and individualisation of the learning process (Pruchnicki *et al.*, 2022; Romanyshyn & Neurova, 2025). Microlearning is an approach to learning that involves acquiring knowledge in small doses, with constant repetition and complication. Its effectiveness lies in short and quick sessions, each of which has a specific goal and teaches a separate action. All these microelements form a complete picture of the topic being studied. For example, if a long video is divided into short videos, the course does not become microlearning. Micro-units must be purposeful; each stage of learning aims to teach a specific action. By combining

these sessions, a complete picture of the topic or skill being studied is formed (Romanyshyn & Neurova, 2025). This approach is important for all aspects of basic military training during mobilisation. Given the limited training time, the main goal of the training process is to prepare military

personnel to perform specific combat tasks typical of real frontline conditions, rather than to learn the basic principles of military activity designed for peacetime. Table 1 presents the key features and principles of microlearning that ensure effective learning in conditions of intensive combat training.

Table 1. Basic principles of microlearning

Name	Content
Purposefulness	Microlearning should focus on addressing one specific problem rather than a wide range of issues, ensuring its practical relevance
Conciseness	Explanations typically last 2-7 minutes. Preparing such a lesson involves removing non-functional information that distracts attention. Focusing on relevant content that has been proven in combat increases engagement and training effectiveness
Self-sufficiency and integrity	Each unit of training content should be self-sufficient, while also being integrated into the overall training system and aimed at achieving the planned results
Accessibility	The content of the lessons should be accessible, both in terms of understanding by the average person and in terms of the ability to obtain electronic and printed versions from any device
Practical applicability	Training content should be visually demonstrative and practically oriented to ensure the immediate applicability of the knowledge gained in combat conditions
Continuity	Training should be conducted in a comprehensive and phased manner
Multi-format	To maintain a person's attention, it is necessary to constantly change the form of teaching the training materials
Repetition	It is important to implement multiple interval repetitions of a new topic to reinforce it in the memory. The easiest way to do this is through comprehensive modelling of questions from different subjects
Skill acquisition	It is important to break down a skill into several simple actions and organise separate training for each one.
Speed of execution	At first, the serviceman performs the actions at a slow pace, focusing on individual elements to identify and eliminate mistakes. Prolonged work at a slow pace can hinder the integration of motor elements into a single system; thus, training should gradually transition to a normal pace, allowing for occasional mistakes as part of the automation process
Quality of execution	After identifying the key skills to be mastered, the next necessary step is to systematically monitor their performance. The effectiveness of skill formation is ensured by gradually increasing the complexity of tasks and consistently raising the requirements for the quality of performance
Use of simulators	A trainer is a simulator of certain actions and conditions. It is used to simulate situations and develop adequate responses to them
Corrective feedback	During training activities, it is necessary to provide timely and constructive feedback, which allows to identify mistakes, evaluate the correctness of the actions performed and the degree of achievement of the set goal. Untimely correction of actions can lead to the consolidation of bad habits, while awareness of one's own results and inaccuracies is a key condition for the effective formation of professional skills. The source of such feedback can be a teacher, instructor, colleagues, or the serviceman's self-control

Source: developed by the authors based on A. Romanyshyn & A. Neurova (2025)

Analysis of the table shows that microlearning in military training was based on the principles of purposefulness, practical orientation and continuity of the educational process. This system of training ensures the gradual, conscious and controlled development of skills, facilitates the rapid transfer of knowledge into practical activity and improves the quality of learning through individualisation and feedback. The study of theory can be supplemented by observing an experienced soldier performing an action in practice. As emphasised by K. Derera (n.d.), observation cannot replace training, but it will be more effective than simply reading or listening. Acquiring a skill is the result of long training, so it is important to break the skill down into several simple actions and organise separate training sessions for each one. The first training sessions should focus on quantity rather than quality. It is better to do 40 repetitions with mistakes in a day than 15 repetitions without mistakes. Gradually increase the interval between exercises. During breaks, the warrior analyses their actions. It is important that the breaks are not too long; it is important to maintain a balance. For example, in a week, a warrior without training will forget a new skill. Speed of execution is one of the key factors in skill formation. At the initial stage, it is advisable to practise actions slowly, focusing on

each element and identifying mistakes. At the same time, excessive prolongation of this stage can slow down the integration of individual actions into a coherent system, so the pace of execution should be gradually increased, allowing for controlled mistakes as part of the learning process. The quality of execution is also a determining criterion for the effectiveness of skill formation (Grossman, 2024). In the early stages of training, it is advisable to limit oneself to controlling the most essential parameters of the action, gradually complicating the tasks and increasing the requirements for accuracy and coordination of execution. The lack of purposeful control and the desire for improvement can lead to the consolidation of ineffective or erroneous methods of action, which reduces the overall level of preparedness. In cases where the amount of practical training is limited, particularly in BGMT conditions, it is advisable to provide for the possibility of independent training for military personnel. This approach helps to consolidate the knowledge gained and develop skills outside the formal training process, which increases the effectiveness of learning even when there is a lack of training hours.

In accordance with Military Standard STI 000G(V).58A (2019) and Military Standard STI 101A.26V (2019), the use of simulators provides the

opportunity to simulate real combat conditions and practise practical actions in a controlled environment. Simulators that reproduce typical situations and factors of combat conditions contribute to the formation of stable, automated reactions of military personnel. Effective forms of simulator training also include business games and specialised training courses, which allow theoretical knowledge to be combined with practical skills training (Military Publication 1-(18-21)160(13).01, 2021; Military Publication 1-00(160)03.01, 2021). When a servicemember performs a training activity, it is important to provide them with prompt, constructive feedback – to point out what mistakes they made, what actions were correct, and how well they achieved the set goal overall. It is important to correct the serviceman's actions in a timely manner, otherwise he may develop and reinforce incorrect habits. Understanding the results and mistakes in actions is one of the main conditions for successful skill formation. The soldier can obtain this information from a teacher, instructor, other servicemen, or through self-control. In the process of skill formation, special attention should be paid to the development of self-control, which consists in the ability of a serviceman to independently evaluate the results of his own activities, identify shortcomings, determine their causes and look for ways to eliminate them. This skill is not innate and is formed gradually under the influence of experience and systematic practice. Over time, as training tasks are completed, the ability to exercise self-control improves, which increases the effectiveness of skill acquisition and the quality of combat operations. According to a study by D. Grossman (2024), at the initial stage of developing a new skill, it is not advisable to involve military personnel in complex or responsible tasks. Despite outward confidence in mastering a new action, insufficient practical experience, psychological tension and stress caused by novelty can significantly reduce the effectiveness of skill acquisition. Thus, it is advisable to gradually introduce it into practical activities – from practising basic actions to performing complex tasks, with a gradual increase in complexity in line with the growth of professional experience and confidence of the serviceman. With limited training time, effective skill formation is ensured by a clear understanding of the algorithm of actions, intensive practice, and systematic feedback, which contributes to internal assimilation and consolidation of experience.

Based on the works of J.D. Fletcher & P.R. Chatelier (2000) and V.V. Syniavsky & O.P. Sergeenkova (2007), a training methodology model has been developed aimed at improving the effectiveness of skills formation in military personnel under limited conditions of combat readiness. The model was based on the formation of sequential tasks, the first of which requires removing all unnecessary elements and briefly conveying the algorithm for performing the action to the soldiers. The soldier must memorise the algorithm, understand it and clarify anything that is unclear. After the theoretical part with examples, an individual task can be given and feedback provided

(recommended time for completion is 10-12 minutes). The aim of the second task was to practise the algorithm and understand its capabilities. At this stage, the soldier must repeat the action as many times as possible and receive feedback. It is important to provide military personnel with hints that will help them complete the task correctly. For example, display the algorithm in the form of a short diagram or provide a checklist or flowchart that they can use to check their work. The goal of the soldier in the final task is to use the acquired skills and knowledge in conditions that are as close to real life as possible. To practise, it is advisable to simulate interaction in pairs or groups (recommended time for completion is 20 minutes in two approaches). The process of skill formation depends on several key factors: purposefulness, internal motivation and external instruction, which form the appropriate attitude; proper planning of exercises in accordance with the stages of training; the inclusion of skills in real and meaningful learning situations; providing feedback on performance results; and the servicemember's understanding of the general principle or pattern of action in the context of which the trained action is performed (Pruchnicki *et al.*, 2022). The formation of a skill is assessed by objective indicators: accuracy and quality of performance (absence of critical errors), speed of performing individual operations or their sequences, absence of the need for conscious control of performance and signs of tension, rapid fatigue or omission of intermediate elements of the action. In the context of mobilisation training, it is critically important to establish normative time intervals and threshold levels of competence for each key skill and compare them with the actual training time in order to reasonably determine whether the allotted period is sufficient for the reliable acquisition of basic combat skills (Melnychenko *et al.*, 2024). It is necessary to clearly distinguish between the concepts of "skill" and "habit", which are often mistakenly equated. A skill is formed consciously and purposefully in the process of learning, while a habit arises spontaneously and does not necessarily have a positive functional effect. According to V.V. Syniavsky & O.P. Sergeenkova (2007), a habit is a special form of human behaviour that manifests itself in a tendency to repeat the same type of actions in similar situations. Research by A. Romanyshyn & A. Neurova (2025) indicated that it takes an average of about 66 days to form a habit. However, this period can vary significantly – from 18 to 254 days – depending on the individual characteristics of the person, the complexity of the habit itself, the conditions of its formation, and other factors. Thus, a habit can be formed in 21 days, or in 18, 70, or even 200 days. The speed of this process is determined both by the nature of the habit and by external circumstances. The duration of skill formation varies significantly from person to person. Consequently, the time allocated for the BGMT for mobilised service members is insufficient for the proper formation of combat skills. This has a negative impact on the morale and psychological state of personnel and their resilience to the stress factors of a

combat environment. The situation is complicated by the lack of motivation of those responsible, limited material and technical resources, a shortage of qualified instructors, as well as the use of ineffective training methods and content that does not fully correspond to the real conditions of combat operations (Zlyvko & Lukomska, 2019). Based on the above, there is a need to amend the BGMT programme used to train mobilisation resources. While the 30-day duration of the course was previously justified by the complexity of the combat situation, given the recognition of the long-term nature of the war, it is reasonable to extend the BGMT period to at least 60 days. The proposed extension should be considered a priority compared to previous changes – to 49 days in November 2024 and to 51 days in July 2025 – in order to increase the readiness of mobilisation reserves and ensure an adequate level of their combat training (Cabinet of Ministers of Ukraine, 2025).

Motivation and perseverance are key determinants in the formation of professional skills. As emphasised by A.M. Vovna (2018), personal interest in acquiring a specific skill determines the frequency and quality of exercise performance, which affects the speed and stability of motor and cognitive component automation. One of the most important psychological prerequisites for the effectiveness of combat training is the formation, activation, and stable maintenance of a system of motives that regulate the training activities of military personnel. The assimilation of reality occurs in proportion to the degree of interest in the objects and tasks of this reality. Thus, the motivational component should be considered as a functional resource that determines the effectiveness of the training process. In M. Marushchak's (2023) study, the motives for learning activities are defined as internal driving forces that determine the direction and activity of a military personnel in the process of acquiring knowledge and skills, ensuring the setting and achievement of learning goals. The structure of the motivational system of military personnel's learning activities includes a number of interrelated components that reflect various aspects of the value-semantic orientation of the individual in the educational process. The assimilation of the content of educational activities occurs primarily through the use of traditional motivators provided for in the methodology of presenting educational material, in particular, emphasising its significance, relevance and practical importance. However, appealing to learning for the sake of learning itself is not effective enough in conditions of reduced positive motivational potential. Given the close relationship between the needs and goals of educational activities, it is advisable to consider the system of motivational factors comprehensively, covering both internal and external incentives for learning. General social motives include those based on an awareness of the social significance of the military profession, its prestige and role in ensuring national security. Such motives give military personnel a sense of involvement in important state affairs, which increases their level of responsibility and consistency in the learning process. Professional motives are directly

related to the desire to acquire the knowledge and skills necessary for the effective performance of official duties. Their role is to foster an understanding that mastering the relevant academic disciplines is a critical condition for professional development, survival and successful functioning in combat conditions. Cognitive motives reflect the serviceman's interest in the very process of cognition and acquisition of knowledge. The effectiveness of their formation largely depends on the pedagogical skills of the commander or teacher, who is able to present the training material in a logical, accessible and meaningful form, emphasising its practical significance for specific military service tasks. Social identification motives arise in the process of interpersonal interaction in the training group and determine the serviceman's desire to compare his own achievements with the results of other group members. Such motives contribute to an increase in the level of self-reflection, competitiveness and social activity, especially when individual goals can be achieved through group interaction. They become most effective when the training group acquires personal significance for the soldier – it becomes a source of support, recognition and authority. Pragmatic motives are determined by the practical usefulness of the knowledge gained for the serviceman. This refers to the awareness of the specific benefits that training provides, from increasing the effectiveness of combat missions to increasing the chances of professional advancement and success in future careers. A serviceman who clearly understands the practical value of the training material demonstrates greater engagement, discipline and responsibility in the training process (Marushchak, 2023). The holistic interaction of motives determines the effectiveness of the process of forming the knowledge, skills and abilities that form the basis of personnel combat readiness. In educational activities, there is no distinction between "good" and "bad" motivation – there are only factors that directly determine a soldier's activity in the learning process. The ideal situation is one in which all groups of motivational stimuli function simultaneously, but in practice this is not always the case. Thus, during each training session, the commander (teacher, instructor) should focus not on formal but on real motivation of military personnel, which ensures effective assimilation of training material (How to increase..., 2022). At the same time, it is necessary to take into account the dynamic nature of motives, which change under the influence of external conditions and factors such as length of service, material and living conditions, level of morale, and the specifics of the organisation and management of the training process. The main task of training centre officials is to constantly motivate military personnel to acquire knowledge. The main focus of the work was on the fact that the presence of knowledge and relevant skills will help to survive in battle.

A. Romanyshyn & A. Neurova (2025) formulated three basic principles for psychological training of armed forces personnel. The first principle is that soldiers should not be "killed" during training. The training leader (instructor or

teacher) should not declare military personnel “dead” during training. Simulated combat, which causes stress, presents the soldier with a psychological choice when “hit” by a weapon. If a participant stops after being “hit” during training (as if the scenario is complete), this instils an undesirable and potentially harmful behaviour pattern in their mind. Regardless of whether they have been “shot” or not, the training scenario should not end until the soldier is able to successfully continue the battle, take up an advantageous position, call for help and, while waiting for it to arrive, control the situation on the battlefield. Other outcomes do not provide a constructive survival experience in real-world conditions. According to the second principle, a lesson or training session should never end in failure for a soldier. First, the instructor guides the soldier through a scenario in which he suffers defeat in order to identify weaknesses in his training. Then, during training, the instructor helps him overcome these weaknesses and achieve success. Thus, upon completion of the training session, the soldier will be more prepared and confident. The third principle is that criticism should be confidential, and public comments are unacceptable. The basic rule for a military leader is to make comments privately and express praise openly. Corrective comments should be made individually, while positive results and achievements should be noted openly to create a positive motivational climate in the team. It should be borne in mind that the level of a serviceman’s actions in combat conditions corresponds to his level of preparedness, not his potential capabilities. The lack of basic knowledge and skills significantly complicates or makes it impossible to master more complex elements of training. An important factor in the effectiveness of the training process is the high-quality professional and psychological selection of personnel. The presence among the trainees of individuals who, due to their individual psychological characteristics, are unable to master the basic training course has a negative impact on group dynamics, worsens the moral and psychological climate in the team, and increases the risk of interpersonal conflicts. Understanding the structure of a skill, its components, and the possibilities for step-by-step mastery of each element significantly accelerates the process of developing professional competence (Buczko & Kowalczyk, 2025). At the same time, there is the problem of ensuring an adequate level of psychological and pedagogical training for the command, teaching, and instructional staff of training units. It should be emphasised that significant combat experience is not always a sufficient condition for effective performance of the functions of an instructor, since such activity requires special knowledge in the field of pedagogy, psychology and teaching methods. A. Romanyshyn & A. Neurova (2025) identified seven basic laws of skill formation that reflect the psychological and neurophysiological mechanisms of this process:

1. Uneven pace of skill development. The acquisition of any skill occurs at an uneven pace: at the initial stage, there is rapid growth, which gradually slows down during further training. On a graph, this process may take the

form of a curve with a sharp rise at the beginning and a gradual levelling off. The critical moment is the transition from rapid progress to slow consolidation, especially in cases of skill formation that involve potential risk to the life or safety of military personnel.

2. Temporary deterioration in results is a normal stage in skill development. After initial progress, there is a phase of “plateau” or even partial regression. This is due to the restructuring of cognitive structures and does not indicate a loss of learning effectiveness. Such fluctuations are natural and reflect the process of adaptation of the psyche to new forms of activity.

3. No limits to perfection. Skill development has no static limits; improvement is possible continuously through the further restructuring of cognitive and neural structures. Automation increases the effectiveness of activities. Effectiveness grows as a performer shifts from conscious control to automatised execution. Automation reduces cognitive load, enabling attention to be focused on more complex aspects of an activity. The greater the proportion of actions performed automatically, the more effective the activity as a whole.

4. Transfer and interconnection of similar skills. New actions are learned more quickly if they are structurally similar to existing skills. Previous experience in related activities helps to speed up the learning process. However, this principle does not apply to skills with different cognitive or motor structures, and changing previously established behaviour is often more difficult than forming new behaviour. The need for systematic training. Any skill gradually fades away if it is not used in practice. The speed of loss depends on the level of complexity of the action, but the restoration of previously formed skills occurs faster than initial learning.

5. Effectiveness as a key motivator. Effective skill formation requires visible results. Awareness of one’s own progress maintains motivation, provides positive reinforcement, and stimulates further development.

At the same time, it is important to note that when learning and consolidating skills at the level of muscle memory or automated actions (“autopilot”), it is necessary to limit the number of options for performing an exercise or task as much as possible. Research by S.-H. Woo & K.-M. Lee (2007) showed that increasing the number of possible response options from even one to two leads to a significant increase in reaction time. In other words, increasing the number of possible options for action in a situation causes a proportional increase in the time needed to make a decision, which in turn leads to a slower reaction. Systematic training, motivational support for the learning process, and maintenance of acquired skills are key conditions for effective combat operations.

◆ Conclusions

The study found that the process of skill formation and development in military personnel is subject to a number of psychological and pedagogical patterns. The main patterns and principles of skill formation were identified, as well

as the role of perseverance and motivation in this process. Effective learning is impossible without internal motivation, while its presence significantly increases effectiveness. Motivation can be formed by creating a situation of cognitive interest, when a military personnel realises the purpose of the task, understands the logic of actions and experiences the first successes in their implementation. This, in turn, contributes to an increase in the level of interest and involvement in the learning process. It has been found that the sustainable formation of skills is ensured only through systematic repetition, which contributes to the automation of actions. At the same time, even after reaching a high level of proficiency, there is still potential for further improvement. At the same time, a long break in the application of the acquired skills can lead to a partial loss of automated skills, which negatively affects the effectiveness of performing combat tasks. However, these skills can be restored through targeted retraining. In unfamiliar or extreme conditions, in the absence of the necessary level of training, a soldier is forced to exercise constant conscious control over his actions. This is accompanied by tension, negative emotional reactions and, as a result, a

decrease in the effectiveness of activities. Thus, systematic training, motivation to learn, and maintaining the acquired level of skills are critically important conditions for effective combat operations. A number of recommendations and prospects for effective psychological training of armed forces personnel have been formulated. Promising areas for further research include substantiating and verifying the effectiveness of new methods for developing professional skills in military personnel during combat training. In particular, it is advisable to study the impact of individual characteristics, modern training technologies, and motivational factors on the speed and quality of skill acquisition and reproduction.

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◆ References

- [1] Bryndikov, Y.L. (2018). *Rehabilitation of combatant military personnel in the social services system: Theoretical and methodological foundations*. Khmelnytskyi: Khmelnytskyi National University.
- [2] Buczko, E., & Kowalczyk, J. (2025). Outline of military psychology – history, contemporary challenges, and educational implications. *Colloquium*, 17(2), 35-54. doi: 10.34813/20coll2025.
- [3] Cabinet of Ministers of Ukraine. (2025). *Focus on psychological resilience: The Armed Forces of Ukraine have updated their basic military training programme*. Retrieved from <https://surl.li/kxibzn>.
- [4] Derera, K. (n.d.). *Knowledge, skills and abilities: Everything you need to know*. Retrieved from <https://www.thehumancapitalhub.com/articles/knowledge-skills-and-abilities-everything-you-need-to-know>.
- [5] Fletcher, J.D., & Chatelier, P.R. (2000). *An overview of military training*. Alexandria, VA: Institute for Defence Analyses. doi: 10.21236/ADA408439.
- [6] Grossman, D. (2024). *Murder: The psychological cost of learning to kill in war and peace*. Lviv: Astrolabia Publishing.
- [7] Grossman, D., & Christensen, L. (2023). *On combat: The psychology and physiology of deadly conflict in war and in peace*. Lviv: Astrolabia Publishing.
- [8] How to increase the fighting spirit of our army? (2022). Retrieved from <https://surl.li/futmtf>.
- [9] Khan, Z.A., Adnan, J., & Raza, S.A. (2023). Cognitive learning theory and development: Higher education case study. In D. Ortega-Sánchez (Ed.), *Education annual volume 2023*. London: IntechOpen. doi: 10.5772/intechopen.110629.
- [10] Law of Ukraine No. 4538-IX “On Amendments to Article 11 of the Law of Ukraine ‘On Military Duty and Military Service’ Regarding Military Training of Ukrainian Citizens under the Reserve Medical Service Officer Training Programme” (2025, July). Retrieved from <https://zakon.rada.gov.ua/laws/show/4538-20#Text>.
- [11] Marushchak, M. (2023). Psychological foundations of the adaptation of Ukrainian armed forces military personnel to combat conditions. *Psychological and Pedagogical Problems of the Modern School*, 2(10), 35-44. doi: 10.31499/2706-6258.2(10).2023.290567.
- [12] Melnychenko, S., Ovchynnyk, V., Hudal, S., & Kulyk, M. (2024). Pedagogical aspects of the development of leadership qualities in cadets of higher military educational institutions. *Scientific Bulletin of Mukachevo State University. Series “Pedagogy and Psychology”*, 10(1), 87-97. doi: 10.52534/msu-pp1.2024.87.
- [13] Military Publication 1-(18-21)160(13).01. (2021). *Methodical recommendations on psychological training of naval personnel of the Naval Forces of the Armed Forces of Ukraine for developing stress resilience to act in conditions of sudden change in the combat situation*. Retrieved from <https://surl.li/nqqrhx>.
- [14] Military Publication 1-00(160)03.01. (2021). *Instruction on the protocols for providing psychological assistance to the servicemen of the Armed Forces of Ukraine in combat (extreme) conditions*. Retrieved from <https://surl.li/xbankt>.
- [15] Military standard STI 000G(V).58A. (2019). *Leader's reaction band (Leadership course)*. Retrieved from <https://surl.li/weydbi>.
- [16] Military standard STI 101A.26V. (2019). *Special training (professional training)*. Retrieved from <https://surl.li/dwrebfi>.

- [17] Ministry of Defence of Ukraine. (2025). *Essential information on Basic General Military Training in higher education institutions*. Retrieved from <https://mod.gov.ua/en/news/essential-information-on-basic-general-military-training-in-higher-education-institutions>.
- [18] Moskalenko, N.V., Otkydach, V.S., Korchagin, M.V., & Baldetskiy, A.A. (2022). Formation of psycho-physical readiness of military personnel by means of special physical training. *Scientific Journal of National Pedagogical Dragomanov University. Series 15 Scientific and Pedagogical Problems of Physical Culture (Physical Culture and Sports)*, 9(154), 63-67. doi: 10.31392/NPU-nc.series15.2022.9(154).15.
- [19] Neminsky, I., Roy, O., Romanyshyn, A., Olenchuk, V., Pshenychuk, G., Hyzhnyak, M., Kravchenko, K., Kvych, S., & Hoptiy, O. (2023). In V. Klochokov (Ed.), *Collection of standards for psychological training of the Armed Forces of Ukraine: Training manual*. Kyiv: Scientific and Research Centre of Humanitarian Issues of the Armed Forces of Ukraine.
- [20] Pruchnicki, W., Smal, T., & Tomaszewski, M. (2022). Shaping leadership in selected military academies. *Administration and Public Management*, 39, 170-188. doi: 10.24818/amp/2022.39-10.
- [21] Romanyshyn, A., & Neurova, A. (2025). *To the commander about the psychological training of personnel*. Kharkiv: Kafedra.
- [22] Sagan, O.V. (2022). Gamification as a modern educational trend. *Collection of Scientific Works "Pedagogical Sciences"*, 100, 12-18. doi: 10.32999/ksu2413-1865/2022-100-2.
- [23] Syniavsky, V.V., & Sergeenkova, O.P. (2007). In N.A. Pobirchenko (Ed.), *Psychological dictionary*. Kyiv: Scientific World.
- [24] Vovna, A.M. (2018). *Psychology of the mobilized: Essay*. Ternopil: Mandrivets.
- [25] Woo, S.-H., & Lee, K.-M. (2007). Effect of the number of response alternatives on brain activity in response selection. *Human Brain Mapping*, 28(10), 950-958. doi: 10.1002/hbm.20317.
- [26] Zlyvkov, V.L., & Lukomska, S.O. (2019). *Theory and practice of psychological training*. Nizhyn: PE Lysenko M.M.

Методика формування у військовослужбовців навичок в ході занять з бойової підготовки

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♦ **Анотація.** Невідповідність між наявними ресурсами та завданнями, обмежений час підготовки та потреба в якісному відпрацюванні дій роблять критично важливою оптимізацію методик формування бойових навичок з урахуванням індивідуальних темпів засвоєння й безпекових обмежень. Мета статті полягала в доведенні необхідності вдосконалення методик бойової підготовки особового складу та визначенні найкращих методів її реалізації. На основі огляду нормативних документів і військових стандартів Міністерства оборони України виявлено недоліки чинної системи психологічної підготовки військовослужбовців та сформульовано засади її подальшого удосконалення. Шляхом аналізу науково-педагогічних джерел, було виокремлено основні закони формування навичок. Досліджено відмінності між навичкою та звичкою як різними рівнями опанування поведінкових дій, а також проаналізовано психологічні чинники, що визначають їх формування – насамперед роль мотивації та наполегливості у досягненні результату. Узагальнено етапи, форми, методи й прийоми навчання, спрямовані на підвищення ефективності засвоєння бойових умінь і навичок. Підкреслено важливість системного підходу до організації навчального процесу, узагальнено етапи, форми та методи навчання, спрямовані на підвищення ефективності засвоєння бойових умінь і навичок. Обґрунтовано доцільність поєднання модульного підходу, цілеспрямованих тренувальних сценаріїв і системного контролю результатів. Окремо охарактеризовано потенціал мікронавчання як сучасного підходу, що відзначається стислістю, практичною орієнтацією, адаптивністю до індивідуального темпу засвоєння, використанням цифрових засобів навчання та регулярним зворотним зв'язком, який забезпечує високу оперативну ефективність підготовки в умовах обмеженого часу. Виявлено вплив особистісного досвіду та мотивації на етапи та тривалість формування навичок. Результати дослідження можуть бути інтегровані в проєктування та модифікацію навчальних програм, розроблення методичних рекомендацій і тренінгових сценаріїв бойової підготовки підрозділів, що сприятиме підвищенню ефективності формування професійних навичок, раціоналізації навчального часу та зниженню оперативних ризиків, пов'язаних із недостатнім рівнем підготовки особового складу

♦ **Ключові слова:** психологічна підготовка; навчальна діяльність; мікронавчання; мотивація; звичка



Linguistic and paralinguistic predictors of suicidal behaviour among military personnel and veterans: A review of the literature

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◆ **Abstract.** The problem of suicide among military personnel and veterans has become particularly acute in the context of military operations in Ukraine. Prolonged deployment in the combat zone, loss of comrades, and a combination of physical and psychological trauma significantly increase the risk of developing depression and suicidal intentions. Traditional methods of psychological diagnosis often do not provide adequate sensitivity, as military personnel often hide their problems due to fear of stigmatisation or unwillingness to seek help. This highlights the need to find innovative approaches, among which the analysis of linguistic and prosodic characteristics as potential predictors of suicide plays a leading role. The aim of the study was to review current scientific approaches to identifying the risk of suicidal behaviour in the military environment by systematising linguistic and prosodic indicators and determining their diagnostic and prognostic value for the development of early suicide warning systems. The work was carried out in the format of a systematic review of scientific literature using methods of analysis, synthesis, induction and generalisation. Publications in psychology, psychiatry, neurobiology, linguistics and related disciplines were reviewed. Particular attention was paid to studies that examined linguistic and vocal markers of depressive and suicidal states in the context of military service and post-service adaptation. It was found that the speech of military personnel at increased risk of suicide is characterised by a number of features: frequent use of categorical statements, preference for first-person singular pronouns, reduced syntactic complexity, a tendency to use negative constructions, and a predominance of negatively coloured vocabulary. Prosodic analysis revealed monotony of voice, reduced volume, slowed tempo, and uniformity of intonation patterns. Combining these indicators with machine learning data can significantly improve the accuracy of risk prediction and create multimodal systems for assessing psycho-emotional state. The results obtained have applied significance for improving approaches to the prevention of suicidal behaviour in the military environment. The use of automated systems for analysing textual and acoustic speech parameters creates the conditions for timely monitoring of the mental state of military personnel and veterans, early detection of crisis trends, and implementation of preventive measures in conditions of limited access to psychological assistance

◆ **Keywords:** linguistic markers; early suicide warning; mental health; post-traumatic stress disorder; thought processes

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♦ Introduction

The problem of suicide among military personnel and veterans is particularly relevant because it has not only an individual but also a social dimension, affecting the moral and psychological state of military communities and the overall level of security of the state. Suicide is one of the leading causes of death worldwide, and the prevention of suicidal behaviour is one of the priorities of global mental health policy (Sierra *et al.*, 2021). According to the findings of Y. Sokol *et al.* (2021), military personnel and veterans are a particularly vulnerable group, with suicide risks exceeding the average for the civilian population. According to T. Khraban (2022), the most common precursors include post-traumatic stress disorder, depression, alcohol and substance abuse, chronic pain, family conflicts, and feelings of hopelessness. An additional danger is the availability of lethal means, primarily firearms, which in the case of military personnel significantly increases the likelihood of completed suicide. This problem is particularly significant in the context of the full-scale war in Ukraine, which has been ongoing since 2022. Combat operations, mass destruction, the death of comrades, the forced displacement of civilians, and prolonged stays on the front lines create a critical level of psychological stress for military personnel (Khraban, 2024). Based on the experience of world wars, R. Randles *et al.* (2025) and A. Finnegan *et al.* (2025) identified a combination of combat stress, prolonged separation from family, and feelings of social isolation as factors that increase the risk of suicidal thoughts and actions. In the case of Ukraine, these factors are exacerbated by the scale and duration of the war, as well as the uncertainty of its end. As emphasised by K.M. Schafer *et al.* (2024), after demobilisation or rotation, veterans often face difficulties in social adaptation, family relationship breakdowns, economic problems and a sense of loss of meaning.

J.A. Naifeh *et al.* (2025) identified post-traumatic stress disorder, depression, and comorbid mental states as some of the key determinants of suicidal behaviour in the military. In the Ukrainian context, this phenomenon is complicated by the impact of collective trauma on society, which is reflected in the psychological state of veterans and military personnel. The risk of suicide among military personnel increases due to a number of specific factors. First, military service is associated with increased disciplinary responsibility, where failures or misconduct can be perceived as a serious burden and lead to feelings of guilt. Second, there is a culture of courage and endurance in the army, which often prevents open access to psychological help. Third, the social stigma surrounding mental disorders reduces the willingness of military personnel and veterans to acknowledge their own problems, making early intervention difficult (Schafer *et al.*, 2024). M. Silvestrini & J.A. Chen (2023) noted that military personnel are more likely than civilians to choose more lethal methods of suicide, such as firearms, which significantly increases the rate of completed cases. In the context of the war in Ukraine, this factor is particularly significant, as military

personnel's direct access to weapons and experience in using them increase the likelihood of lethal means being used in crisis situations, necessitating early risk detection and timely intervention. The search for new tools capable of detecting indirect markers of psycho-emotional states is of particular importance. This is where linguistics opens up new horizons for research and practice. Since language reflects a person's inner world, their thoughts, emotions and values, the analysis of linguistic features can be a sensitive indicator of mental state. As noted by K. Sun *et al.* (2020), language patterns are a kind of "mirror" of the psyche that allows us to detect changes in the emotional sphere. In this context, the use of sentiment analysis, machine learning and natural language processing methods opens up prospects for the creation of innovative tools for identifying suicide risks. Analysis of texts created by military personnel or veterans on social networks, in chat rooms, diaries, or during private conversations can reveal specific linguistic markers of risk. A significant breakthrough in this area has been the application of machine learning algorithms and deep text analysis. An analysis by X. Du & Y. Sun (2022) showed that combining traditional linguistic characteristics with mood and emotion polarity analysis significantly improves the accuracy of text classification based on psychological state. In the case of military personnel and veterans, this approach can provide more effective monitoring of their mental health, especially in environments where direct contact with a psychologist is not possible. According to C. Lao *et al.* (2022), social media provides researchers with a unique opportunity to analyse users' sincere expressions of their inner experiences. The anonymity guaranteed by some platforms encourages more open expression of emotions and thoughts, including suicidal ones. The use of such data in combination with natural language processing algorithms allows the creation of early warning systems that can signal the need for intervention before a fatal step is taken. Thus, the war in Ukraine has brought to the fore the problem of suicidal behaviour among military personnel and veterans, while at the same time creating the conditions for the introduction of innovative approaches to its monitoring and prevention. Linguistic methods, combined with artificial intelligence technologies, can play a key role in the development of such approaches. The linguistic characteristics of texts can reveal hidden patterns of risk, and their analysis contributes to the creation of more accurate and sensitive diagnostic tools. This is particularly important in the context of a protracted military conflict, when the psychological resources of military personnel and veterans are under maximum strain and society must provide effective support mechanisms. The aim of the article was to analyse current scientific approaches to identifying suicide risks among military personnel and veterans through a systematic review of linguistic and prosodic speech markers, to summarise their diagnostic potential, and to outline the prospects for integrating these indicators into multimodal early warning systems for suicidal behaviour.

◆ Literature Review

Contemporary literature has seen the emergence of several interdisciplinary approaches that take different approaches to identifying suicidal tendencies through linguistic and related markers:

1. Cognitive-psychological research. The first conceptual models explaining the link between thought processes and suicidal behaviour appeared in the mid-20th century, when the idea of a negative cognitive triad was formulated, encompassing distorted perceptions of oneself, the world and the future (Beck *et al.*, 1999). Further research expanded this concept by describing dysfunctional thought patterns, including catastrophising, all-or-nothing thinking, and overgeneralisation, which are often found in the speech of individuals with depressive symptoms (Wenzel & Jager-Hyman, 2012). Studies by L.L. Fazakas-DeHoog *et al.* (2017), S. Jager-Hyman *et al.* (2014), and S.K. Satyander (2024) aimed to systematise cognitive distortions, with a particular focus on the role of absolutist thinking and cognitive rigidity in the formation of suicidal risks. M. Al-Mosaiwi & T. Johnstone (2018) and K. Kim *et al.* (2019) have shown that absolutist vocabulary (“always,” “never,” “everything”) occurs significantly more often in the speech of individuals with depressive and suicidal tendencies, and excessive focus on one’s own experiences is manifested in the high frequency of use of first-person singular pronouns. The current stage of research was characterised by the integration of cognitive-psychological ideas with natural language processing and machine learning methods, which allows speech patterns to be identified as reflections of internal cognitive processes and used as early indicators of suicidal risk (Sun *et al.*, 2020).

2. Neurobiological and neuroimaging studies. The first works that attempted to explain suicidal behaviour from the perspective of neurobiology appeared at the end of the 20th century, when the role of serotonin dysfunction in the development of impulsivity and depressive states directly related to suicide risk was proposed (Mann *et al.*, 1999). Studies conducted between 2010 and 2020 began to use neuroimaging methods to identify structural and functional differences in the brains of individuals with suicidal tendencies. J.J. Mann (2013) and N. Tsujii *et al.* (2017) demonstrated that patients who have attempted suicide exhibit abnormalities in the prefrontal cortex, which is responsible for regulating emotions and controlling behaviour, as well as changes in the serotonin system that affect decision-making and stress resistance. In the 2020s, the focus shifted to studying how cognitive and emotional states are reflected in the brain and how they correlate with verbal manifestations. Traditional approaches to assessing suicide risk are based on clinical examinations, psychodiagnostic techniques, and self-assessment questionnaires, such as the Columbia Suicide Severity Rating Scale (C-SSRS) or the Patient Health Questionnaire (Lao *et al.*, 2022). However, according to K. Hawton *et al.* (2022), the effectiveness of these tools is limited by a number of factors: first, not all military personnel and veterans are willing to openly

report their thoughts or problems; second, access to qualified assistance in the combat zone or after demobilisation is often difficult. In this context, there has been growing interest in neurocognitive and linguistic approaches that can more objectively reflect internal mental states. Functional magnetic resonance imaging data have shown that representations of mental states are relatively stable regardless of the type of stimulus – visual or linguistic – which has led to talk of the “supramodality” of mental processes (Weaverdyck *et al.*, 2021). This conclusion confirmed that speech patterns can be reliable indicators of internal emotional states and reflect the same neural mechanisms that are revealed in visual experiments. The current stage was characterised by the active integration of neuroimaging and linguistic approaches. Thus, studies have begun to appear in which the results of brain activity analysis are compared with machine learning algorithms that process linguistic data. According to R. Huang *et al.* (2024), this opens up opportunities for creating complex models capable of taking into account both biological and linguistic risk markers. Z. Ceja *et al.* (2025) determined that suicidal behaviour among military personnel is multidimensional and cannot be explained by a single factor. Its occurrence is determined by a combination of psychological, social, economic, and biological determinants. This interdisciplinary approach forms the basis for more accurate suicide early warning systems, particularly in high-stress groups such as military personnel and veterans.

3. Linguistic-computational research (machine learning (ML) and natural language processing (NLP)). The first works on natural language processing in the field of mental health appeared in the 2000s and used statistical methods and dictionaries such as LIWC, which made it possible to analyse language patterns and link them to psycho-emotional states (Tausczik & Pennebaker, 2009). In the study by J. Pestian *et al.* (2020), NLP was applied to the analysis of children’s narratives, demonstrating the potential for automatic detection of suicidal texts. After 2010, there was a shift towards machine-learning methods: support vector machines (SVM), Random Forest, and LSTM began to be used for classifying messages from social networks such as Reddit and Twitter (Ramírez-Cifuentes *et al.*, 2020). This stage confirmed that automated models can achieve high accuracy in recognising suicidal expressions. The contemporary stage was characterised by the widespread application of deep learning and transformer-based models (BERT, GPT). The works of X. Du & Y. Sun (2022) and R. Huang *et al.* (2024) showed that integrating linguistic features with sentiment polarity increases predictive accuracy, while the use of multimodal models combining textual and behavioural data provides even greater predictive power.

4. Prosodic research. The first studies demonstrated that voice monotony and reduced speech tempo correlate with depressive states (Darby *et al.*, 1984). In the 2000s, methods for automatic voice analysis developed actively, with particular attention to frequency characteristics as potential markers of mental state (France *et al.*, 2000). In

the 2010s, the implementation of machine-learning methods made it possible to predict depressive states based on prosodic parameters (Low *et al.*, 2011). Findings from the study by A. Belouali *et al.* (2021) showed that combining prosodic and linguistic features in the analysis of veterans' audio-narratives increases the accuracy of predicting the risk of suicidal behaviour.

5. Socio-communicative research on online communities. Analyses of online forums by D. Baker & S. Fortune (2008) and K.M. Harris *et al.* (2009) demonstrated that users regularly express suicidal thoughts within virtual communities. Contemporary studies, including those by C. Lao *et al.* (2022) and L. Bojanić *et al.* (2025), focus on anonymous platforms such as Reddit, where users tend to express their thoughts more openly and sincerely. Data from such resources have proved particularly valuable for the early detection of suicidal behaviour risk among military personnel and veterans. Moreover, it has been shown that language patterns in online communication may be more authentic compared with information obtained during clinical interviews.

6. Clinical research on assessment and prevention methods. Throughout the 1970s–2000s, the main tools for assessing suicide risk remained clinical interviews and standardised psychodiagnostic scales, such as the Columbia Suicide Severity Rating Scale (C-SSRS) and the Patient Health Questionnaire-9 (PHQ-9) (Kroenke & Spitzer, 2002). However, their sensitivity for detecting potential risk was limited. Further developments in suicidology highlighted the necessity for more specialised screening tools. In contemporary clinical practice, validated, scientifically grounded questionnaires that have proven effective in medical and primary-care settings are widely used. These include the Ask Suicide-Screening Questions (ASQ) and the Suicide Behavior Questionnaire-Revised (SBQ-R). Adapted versions of previously established methods are also in demand – the Columbia Suicide Severity Rating Scale – Triage Version (C-SSRS), the Patient Health Questionnaire-9 Adolescent Version (PHQ-9A), and the Patient Safety Screener – 3 (PSS-3) (Wright-Berryman *et al.*, 2023). Studies by T.H. McCoy *et al.* (2016) and J. Pestian *et al.* (2020) showed that automatic analysis of electronic medical records can reveal hidden risk patterns that are inaccessible to traditional methods. Combined models integrating linguistic, behavioural, and clinical data into a single system of early warning of suicidal risks have also demonstrated their effectiveness (Lauderdale *et al.*, 2025). The evolution of scientific approaches – from the cognitive-psychological concepts of the 1960s to contemporary multimodal models based on NLP, prosodic analysis, and neuroimaging in the 2020s – illustrates a gradual shift from general descriptions to high-precision tools for identifying suicidal risks. However, it is multimodal approaches that combine the analysis of language, voice, and behavioural data that can form the basis for early-warning systems, which are particularly vital in the context of the ongoing war in Ukraine.

◆ Materials and Methods

In current study, a systematic literature review was employed, which allowed for the consolidation of contemporary scientific approaches to identifying suicide risk among military personnel and veterans based on linguistic and prosodic speech characteristics. This approach enabled the integration of findings from both theoretical and empirical studies, as well as the identification of promising directions for the development of multimodal systems for assessing psycho-emotional states. The methodological basis of the study was based on the application of general scientific methods, in particular analysis, synthesis, induction, deduction and generalisation, which ensured the systematic and comprehensive processing of scientific sources. The source array consisted of articles reviewed in leading psychological, medical, and interdisciplinary publications, which examined the cognitive-psychological, neurobiological, linguistic-computational, prosodic, socio-behavioural, and clinical aspects of the study of suicidal behaviour. Particular emphasis was placed on publications that analysed linguistic and prosodic markers of depressive and suicidal states in the military environment and demonstrated the possibilities of integrating these data with machine learning methods and clinical indicators. The literature search was conducted in July-August 2025 using the PubMed, Scopus, Web of Science, and Google Scholar scientific databases. Keywords in Ukrainian and English were used: “linguistic markers of suicidal risk,” “prosodic analysis,” “military personnel,” and “veterans.” The selection was made based on the criteria of peer review, scientific significance, relevance, and direct relevance to the topic. The chosen methodology made it possible to identify both the main problem areas (insufficient sensitivity of traditional tools, limited adaptability of methods to the military context) and promising areas for development (creation of multimodal early warning systems, integration of linguistic and prosodic analysis, application of artificial intelligence algorithms to monitor the mental state of military personnel and veterans). The source data was processed using content analysis, comparative analysis and generalisation methods, which ensured the methodological integrity and internal logical consistency of the conclusions.

◆ Results and Discussion

A systematic review revealed a number of characteristic linguistic and prosodic patterns that correlate with an increased risk of suicidal behaviour among military personnel and veterans. Analysis of scientific sources has shown that changes in lexical, pronominal, syntactic, and prosodic characteristics of speech reflect deep cognitive-affective processes associated with depressive and crisis states. For clarity and systematisation of the results obtained, the summarised data are presented in Table 1, which outlines the main groups of markers, their typical manifestations and psycho-emotional interpretation in the context of suicide risk.

Table 1. *Linguistic and prosodic predictors of suicidal behaviour among military personnel and veterans*

Group of markers	Examples	Psycho-emotional interpretation/connection with suicidal risk
1. Lexical (Vocabulary) Patterns	[Absolutist adverb] + [assessment of a state/situation] – “always bad”, “never works out”, “completely pointless”; [Quantifier of generality] + [negative verb] – “no one will help”, “nothing can be changed”, “there is no peace anywhere”; [Emotional assessment] + [totality] – “everything is in vain”, “complete hopelessness”, “absolute emptiness”	Cognitive polarisation (“all or nothing”); decreased tolerance for uncertainty; impaired cognitive flexibility; emotional fixation on negativity, which reinforces suicidal thinking patterns
1.1. Self-blame/ internal helplessness	“I always ruined everything”; “I cannot change anything”; “I was never strong enough”	Absolutist adverbs (“always”, “never”, “nothing”) indicate rigid thinking, fixation on failures
1.2. Pessimistic overgeneralisation	“It is all over”; “life no longer has any meaning”; “there is nothing left”	Generalisation through the words “everything” and “nothing” demonstrates a reduction of the complexity of thinking to polarised assessments
1.3. Dysfunctional generalisation of social experience	“No one can be trusted”; “everyone has turned away”; “no one understands”	Absolutist quantifiers (no one, everyone) signal a loss of trust and social support
1.4. Hopelessness/lack of perspective	“It will never get better”; “it will always be this bad”; “there is no chance”	Categorical predictions (“never”, “always”, “none”) reflect cognitive fixation on hopelessness
1.5. Emotional self-discreditation	“I am completely broken”; “absolutely hopeless situation”; “I am worthless”	Hyperbolic intensification (“completely”, “absolutely”) reflects internal devaluation of the “I-image”
2. Pronominal Patterns	[I/me/myself] + [emotionally charged verb] – “I can not take it anymore”, “it hurts me”, “it is destroying me”; [We/ours] + [denial or devaluation of meaning] – “nobody needs us”, “our efforts are futile”; [I] + [opposition to the group or society] – “I am not like everyone else”, “I can not go back to living among people”	Shift in cognitive focus from external (social) to internal (intrapersonal) space; increased levels of self-reflection and self-blame, typical of depressive thinking; emotional detachment and impaired social integration
2.1. Self-centred perception of the situation	“I can not live like this anymore”; “no one understands me”; “I do not care what happens next”	Emphasis on “I” signals a focus on one’s own pain, emotional isolation, and loss of external reference points
2.2. Loss of team identity	“We are no longer a team”; “we have been forgotten”; “our sacrifices are worthless”	Decreased use of “we” or its negative connotation indicates a breakdown of social ties and disintegration of group support
2.3. Social alienation/distancing	“I am not like them”; “their lives go on, but I am stuck there”; “I have no one to talk to”	The emphasised opposition between “I” and “they” indicates a loss of belonging to the social community
2.4. Self-isolation and feelings of estrangement	“It is easier for me alone”; “I do not want to see anyone”; “I do not care what they think”	First-person pronouns are combined with lexemes of loneliness (“alone”, “by myself”, “nobody”), which reinforces the effect of alienation
3. Syntactic Patterns	[Negation] + [nominal construction/short sentence] – “There is no point”, “It is not worth it”, “I can not take it anymore”; [Separate fragments instead of complex sentences] – “I wanted to talk. Then I changed my mind. It is pointless anyway”; [Repetitions with a rhythmic pause] – “There was life. There was. Now – nothing”	Reduction in syntactic complexity, signalling a decline in cognitive productivity; Fragmentary speech associated with the disorganisation of thought processes; Frequent use of negation, which structures speech around themes of hopelessness, loss of control or meaning; Reduced variety of grammatical connections, reflecting internal closedness and difficulties with integrating experience
3.1. Reduction of syntactic complexity	“I do not know. I have no strength. It is just over”	Short, isolated sentences without connections – an indicator of reduced cognitive control and affective exhaustion
3.2. Fragmentary expression of thought	“I wanted to say... it did not work out... it does not matter anymore.”	Incomplete sentences, ellipsis, self-interruption – evidence of speech disorganisation characteristic of a depressive state
3.3. Dominance of negation	“I do not want anything. There is no one. There is no point”	Syntactic construction around negation (“no”, “not”, “there is no”) forms a completely negative semantic field
3.4. Shortened complex subordinate constructions	“I would like to go back, but I can not”	The use of minimal grammatical connections instead of detailed explanations demonstrates cognitive economy
3.5. Fragmentary reflections	“We were brothers. Now – silence. Just silence”	Short, rhythmic phrases with repetitions and pauses convey a state of emotional “freezing”
4. Prosodic (Acoustic) Patterns	[Low volume] + [slow tempo] + [monotonous intonation] – reflects “emotional exhaustion” (“I do not know... nothing makes sense...”); [Sharp drops in tone at the end of sentences] – a symptom of loss of energy and psychological “sliding” into hopelessness; [Mechanical repetition of phrases or sounds] – reflects fixation on internal conflict, monotonous “chewing over” of thoughts	A decrease in intonational dynamics signals emotional flatness and suppression of affect; A slowdown in speech tempo reflects cognitive inertia and loss of motivational tone; A decrease in volume and timbral expressiveness indicates energy depletion and apathy; Repetitive intonations are an indicator of rigidity of thinking and a decrease in the ability to regulate emotions
4.1. Monotony of voice	Statements are pronounced in an even, emotionless tone; intonation boundaries are almost imperceptible	Reflects a decrease in affective reactivity, emotional “freezing”
4.2. Reduced loudness	The voice becomes quiet, muffled, sometimes trembling; the interlocutor can barely distinguish the words	Indicates energy depletion, apathy, and internal fatigue

Table 1. Continued

Group of markers	Examples	Psycho-emotional interpretation/connection with suicidal risk
4.3. Slowed tempo	Pauses between words are prolonged, statements lose coherence	Indicates psychomotor retardation and cognitive overload
4.4. Repetition of intonational contours	Speech is rhythmically monotonous, with repeated intonations in phrases: "yes... I do not know... yes..."	A sign of emotional rigidity, limited emotional range
4.5. Disturbances of timbre and breathing	Periodic lowering of the voice at the end of phrases, shallow or uneven breathing	Indicates physiological tension or stress-related anxiety

Source: developed by the authors

At the lexical level, there is a predominance of absolutist and generalising constructions, which signal cognitive rigidity, dichotomous thinking and a tendency to globalise negative experiences. Pronoun patterns reveal a shift in focus to one's own experiences, increased self-reflection and emotional alienation, which may be an indicator of loss of social identity after combat experience. The syntactic level is characterised by reduced complexity, fragmentation, and a predominance of negation, reflecting weakened cognitive control, emotional exhaustion, and disorganised thinking. Prosodic indicators, including slow tempo, reduced volume, monotony, and repetitive intonations, correlate with states of apathy, psychomotor inhibition, and internal tension. Together, these patterns form an integrated linguistic and behavioural profile of suicidal vulnerability, which can serve as the basis for automated early diagnosis systems based on speech analysis. Speech is a unique tool that reflects a person's internal cognitive and emotional processes. Changes in speech, such as word choice, syntactic constructions, or prosodic characteristics, can signal transformations in mental state and an increased risk of suicidal intent (Homan *et al.*, 2022). In this context, linguistic analysis becomes not only a reflection of subjective experiences, but also a valuable source of predictors that can complement clinical assessment and monitoring methods. In contemporary scientific approaches to suicidal behaviour, integrative theoretical models are becoming increasingly important, in particular the interpersonal theory of suicide (ITS), the three-stage theory (3ST) and the integrated motivational-volitional model (IMV). They explain the development of suicidal intentions through a combination of interpersonal, cognitive, and motivational factors (O'Connor & Kirtley, 2018). The key elements are feelings of social isolation, perceived burden on others, as well as feelings of hopelessness and being "stuck" in one's own problems. These factors not only shape the internal readiness for suicide, but are also directly reflected in language patterns. The relevance of using linguistic analysis to identify suicidal states among military personnel and veterans is due to the specific circumstances in which this group finds itself. Full-scale war in Ukraine is accompanied by excessive stress, combat losses, and constant exposure to traumatic events, which significantly increases the risk of developing depressive and suicidal tendencies (Nock *et al.*, 2013). In this context, language can serve as a sensitive indicator of mental states, allowing risks to be identified even before critical symptoms appear. Linguistic analysis has made it possible to identify specific language patterns

that correlate with suicidal thoughts and behaviour. One of the most persistent signs is the use of absolutist vocabulary, which reflects a rigid style of thinking. Frequent use of words such as "always," "never," and "completely" indicates a dichotomous perception of reality and reduced cognitive flexibility (Al-Mosaiwi & Johnstone, 2018). A similar linguistic tendency has been identified in the texts of individuals with depression and suicidal intentions, making it an important predictor of psycho-emotional state. The use of personal pronouns is no less indicative. An increased frequency of first-person singular pronouns ("I") signals an egocentric focus, self-absorption, and social isolation (Kim *et al.*, 2019; Huang *et al.*, 2024). Conversely, reduced use of first-person plural pronouns ("we") reflects a loss of sense of belonging to a group and may indicate a breakdown in social ties (Sloan, 2005). In a military context, this is a particularly alarming signal, as cohesion and team identity are traditionally a resource for psychological resilience. Analysis of emotional vocabulary showed a predominance of negative words, particularly those associated with death, despair and hopelessness. The works of B. Desmet & V. Hoste (2018), R.A. Fahey *et al.* (2020), and B. O'Dea *et al.* (2021) confirm that such words occur much more frequently in the speech of individuals with suicidal ideation. At the same time, positive vocabulary in these texts is usually minimal. However, as noted by C. Herbert *et al.* (2019), it is important to consider the phenomenon of a temporary increase in the frequency of positive words immediately before suicide, which may mask the real emotional state.

In addition to lexical features, syntactic characteristics are also important. According to L. Pearl (2023), the syntactic organisation of utterances is an important source of information about the cognitive processes and psycho-emotional state of the speaker. In the case of military personnel and veterans who are depressed or exhibit suicidal tendencies, speech is characterised by simplified syntactic structures, shorter sentences and reduced variety of grammatical constructions. Such tendencies reflect a decrease in cognitive resources and difficulties with organising thoughts, which often accompany depressive disorders. The syntactic complexity index, which takes into account the number of subordinate clauses, the use of conjunctions and pronouns, is significantly lower in depressive texts than in control samples, indicating a limited ability to cognitively plan and structure speech (Homan *et al.*, 2022). In a military context, a decrease in syntactic complexity may be associated with fatigue and post-traumatic stress disorder, as well as with a sense of hopelessness, which

manifests itself in simplified speech patterns. It is also important to analyse the information structure of a sentence. H. Delage & U.H. Frauenfelder (2019) emphasised that in the texts of individuals with depressive or suicidal states, there is a decrease in the ability to highlight key information elements, which leads to fragmentary statements and a loss of communicative clarity. Syntactic simplicity is often combined with an increased number of negative constructions. Studies by M.M. Tadesse *et al.* (2020) and B. O'Dea *et al.* (2021) have shown that the speech of individuals with suicidal intentions more often contains negative statements ("I can not," "there is nothing") that reinforce feelings of helplessness and hopelessness. Such patterns are particularly evident in the texts of military personnel who have experienced the loss of comrades in battle or post-war isolation. Thus, syntactic features – shorter sentences, reduced complexity, fragmented statements, and frequent use of negation – are important linguistic markers of suicidal states. Their analysis, combined with other linguistic characteristics, allows the creation of comprehensive risk assessment models capable of detecting dangerous psycho-emotional states in military personnel and veterans at an early stage.

Prosodic speech parameters are an important source of information about a person's psycho-emotional state and are increasingly seen as reliable indicators of suicidal risk among military personnel and veterans. The main markers of suicidal risk include: monotony of voice – lack of intonation fluctuations, indicating emotional "freezing" and decreased sensitivity to external stimuli; decreased volume – a quiet, muffled voice, which may reflect apathy and inner fatigue; slowed speech rate – prolonged pauses and slow articulation, often associated with cognitive overload or low psychomotor activity; mechanical, repetitive intonation patterns – rhythmic repetition of the same intonation patterns, which may be a manifestation of rigidity of thinking or emotional suppression (Homan *et al.*, 2022). According to D.J. France *et al.* (2000), such changes not only reduce emotional expressiveness but also reflect deep affective and cognitive disorders characteristic of depressive and crisis states. However, L.S. Low *et al.* (2011) noted that prosodic features are dynamic: they change depending on emotional state, physical condition, and social context, making them a valuable source of information for monitoring the mental health of military personnel. The integration of prosodic characteristics with linguistic markers – such as vocabulary, syntax, and sentence structure – demonstrates high predictive value. For example, a study of veterans by A. Belouali *et al.* (2021) showed that combining intonation parameters with vocabulary analysis can significantly improve the accuracy of machine learning algorithms in detecting suicidal intent. Modern technologies open up new opportunities for the practical use of this data. Automated voice analysis systems, including mobile applications for real-time monitoring, allow for the assessment of the psycho-emotional state of military personnel and veterans and the timely signalling of potential crisis situations. The use of modern audio signal processing methods and artificial intelligence algorithms allows even

subtle changes in the voice to be detected, which are difficult to notice with traditional expert assessment (Iyer & Meyer, 2022; Dhelim *et al.*, 2023). Thus, prosodic characteristics of the voice, considered in conjunction with linguistic markers, constitute a valuable analytical resource for detecting suicidal tendencies among military personnel and veterans. Their integration into multimodal early warning systems could become one of the key areas of suicide prevention in the military environment, ensuring timely detection of crisis situations and increasing the effectiveness of interventions.

◆ Conclusions

The study demonstrated that language is a unique tool that reflects a person's internal cognitive and emotional processes. Changes in speech, including word choice, syntactic structures, and prosodic characteristics, can signal an increased risk of suicidal intent among military personnel and veterans. Linguistic analysis in this context is an important complement to traditional clinical methods of mental health assessment and monitoring. The identification of specific speech patterns, such as absolutist vocabulary, frequent use of first-person singular pronouns, simplified syntactic constructions, and negations, provides additional predictors of psycho-emotional state. Prosodic characteristics of speech – monotone voice, reduced volume, slow tempo, and repetitive intonation patterns – reflect affective and cognitive impairments and can serve as early indicators of suicidal risk. Their dynamic nature allows for real-time tracking of changes in mental state. Timely detection of suicidal risks is particularly important in environments where access to qualified psychological care professionals is limited. Linguistic analysis allows crisis states to be identified even before obvious symptoms appear, which is critically important for military units and veterans, especially in the context of the war in Ukraine. It has been determined that the integration of linguistic and prosodic parameters into multimodal early warning systems opens up prospects for timely response, increased effectiveness of preventive measures and psychological intervention. Automated technologies, including mobile applications and artificial intelligence algorithms, allow tracking subtle changes in speech and quickly assessing the mental state of military personnel and veterans. Thus, linguistic analysis combined with the assessment of prosodic characteristics of the voice is a valuable analytical resource for identifying suicidal tendencies and can become a key element of early warning systems in the military environment. Further research into linguistic and prosodic markers of suicidal risk among military personnel and veterans could significantly improve the effectiveness of early detection of crisis situations. One priority area is research into the dynamics of speech patterns over time, which allows for the timely identification of critical points of increased risk. In addition, the development of artificial intelligence technologies and automated platforms for voice and text analysis opens up prospects for continuous monitoring of the mental state of military personnel and veterans. Combining these approaches with clinical

methods can increase the effectiveness of preventive measures and psychological intervention.

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◆ References

- [1] Al-Mosaiwi, M., & Johnstone, T. (2018). In an absolute state: Elevated use of absolutist words is a marker specific to anxiety, depression, and suicidal ideation. *Clinical Psychological Science: A Journal of The Association for Psychological Science*, 6(4), 529-542. doi: [10.1177/2167702617747074](https://doi.org/10.1177/2167702617747074).
- [2] Baker, D., & Fortune, S. (2008). Understanding self-harm and suicide websites: A qualitative interview study of young adult website users. *Crisis*, 29(3), 118-122. doi: [10.1027/0227-5910.29.3.118](https://doi.org/10.1027/0227-5910.29.3.118).
- [3] Beck, A.T., Brown, G.K., Steer, R.A., Dahlsgaard, K.K., & Grisham, J.R. (1999). [Suicide ideation at its worst point: A predictor of eventual suicide in psychiatric outpatients](https://doi.org/10.1027/0227-5910.29.3.118). *Suicide and Life-Threatening Behavior*, 29(1), 1-9.
- [4] Belouali, A., Gupta, S., Sourirajan, V.Yu.J., Allen, N., Alaoui, A., Dutton, M.A., & Reinhard, M.J. (2021). Acoustic and language analysis of speech for suicidal ideation among US veterans. *BioData Mining*, 14(1), article number 11. doi: [10.1186/s13040-021-00245-y](https://doi.org/10.1186/s13040-021-00245-y).
- [5] Bojanić, L., Hunt, I.M., Flynn, S., Ibrahim, S., & Turnbull, P. (2025). Exploring suicide-related internet use among suicidal mental health patients in the United Kingdom: Cross-sectional questionnaire study. *JMIR Mental Health*, 12, article number e70458. doi: [10.2196/70458](https://doi.org/10.2196/70458).
- [6] Ceja, Z., van Velzen, L.S., Campos, A.I., Jahanshad, N., Medland, S.E., Edwards, A.C., Schmaal, L., & Rentería, M.E. (2025). Recent breakthroughs in genetic and brain structural correlates of suicidal behaviors: A short review. *Biological Psychiatry*, 97(8), 775-785. doi: [10.1016/j.biopsych.2024.09.010](https://doi.org/10.1016/j.biopsych.2024.09.010).
- [7] Darby, J.K., Simmons, N., & Berger, P.A. (1984). Speech and voice parameters of depression: A pilot study. *Journal of Communication Disorders*, 17(2), 75-85. doi: [10.1016/0021-9924\(84\)90013-3](https://doi.org/10.1016/0021-9924(84)90013-3).
- [8] Delage, H., & Frauenfelder, U.H. (2019). Syntax and working memory in typically-developing children: Focus on syntactic complexity. *Language, Interaction and Acquisition*, 10(2), 141-176. doi: [10.1075/lia.18013.del](https://doi.org/10.1075/lia.18013.del).
- [9] Desmet, B., & Hoste, V. (2018). Online suicide prevention through optimised text classification. *Information Sciences*, 439, 61-78. doi: [10.1016/j.ins.2018.02.014](https://doi.org/10.1016/j.ins.2018.02.014).
- [10] Dhelim, S., Chen, L., Ning, H., & Nugent, C. (2023). Artificial intelligence for suicide assessment using audiovisual cues: A review. *Artificial Intelligence Review*, 56(6), 5591-5618. doi: [10.1007/s10462-022-10290-6](https://doi.org/10.1007/s10462-022-10290-6).
- [11] Du, X., & Sun, Y. (2022). Linguistic features and psychological states: A machine-learning based approach. *Frontiers in Psychology*, 13, article number 955850. doi: [10.3389/fpsyg.2022.955850](https://doi.org/10.3389/fpsyg.2022.955850).
- [12] Fahey, R.A., Boo, J., & Ueda, M. (2020). Covariance in diurnal patterns of suicide-related expressions on Twitter and recorded suicide deaths. *Social Science & Medicine*, 253, article number 112960. doi: [10.1016/j.socscimed.2020.112960](https://doi.org/10.1016/j.socscimed.2020.112960).
- [13] Fazakas-DeHoog, L.L., Rnic, K., & Dozois, D.J.A. (2017). A cognitive distortions and deficits model of suicide ideation. *Europe's Journal of Psychology*, 13(2), 178-193. doi: [10.5964/ejop.v13i2.1238](https://doi.org/10.5964/ejop.v13i2.1238).
- [14] Finnegan, A., Salem, K., & Ainsworth-Moore, L. (2025). "One is too many" preventing self-harm and suicide in military veterans: A quantitative evaluation. *BMJ Military Health*, 171(3), 213-220. doi: [10.1136/military-2023-002623](https://doi.org/10.1136/military-2023-002623).
- [15] Harris, K.M., McLean, J.P., & Sheffield, J. (2009). Examining suicide-risk individuals who go online for suicide-related purposes. *Archives of Suicide Research: Official Journal of the International Academy for Suicide Research*, 13(3), 264-276. doi: [10.1080/13811110903044419](https://doi.org/10.1080/13811110903044419).
- [16] Hawton, K., Lascelles, K., Pitman, A., Gilbert, S., & Silverman, M. (2022). Assessment of suicide risk in mental health practice: Shifting from prediction to therapeutic assessment, formulation, and risk management. *The Lancet. Psychiatry*, 9(11), 922-928. doi: [10.1016/S2215-0366\(22\)00232-2](https://doi.org/10.1016/S2215-0366(22)00232-2).
- [17] Herbert, C., Bendig, E., & Rojas, R. (2019). My sadness – our happiness: Writing about positive, negative, and neutral autobiographical life events reveals linguistic markers of self-positivity and individual well-being. *Frontiers in Psychology*, 9, article number 2522. doi: [10.3389/fpsyg.2018.02522](https://doi.org/10.3389/fpsyg.2018.02522).
- [18] Homan, S., et al. (2022). Linguistic features of suicidal thoughts and behaviors: A systematic review. *Clinical Psychology Review*, 95, article number 102161. doi: [10.1016/j.cpr.2022.102161](https://doi.org/10.1016/j.cpr.2022.102161).
- [19] Huang, R., Yi, S., Chen, J., Chan, K.Y., Chan, J.W.Y., Chan, N.Y., Li, S.X., Wing, Y.K., & Li, T.M.H. (2024). Exploring the role of first-person singular pronouns in detecting suicidal ideation: A machine learning analysis of clinical transcripts. *Behavioral Sciences*, 14(3), 225. doi: [10.3390/bs14030225](https://doi.org/10.3390/bs14030225).
- [20] Iyer, R., & Meyer, D. (2022). Detection of suicide risk using vocal characteristics: Systematic review. *JMIR Biomedical Engineering*, 7(2), article number e42386. doi: [10.2196/42386](https://doi.org/10.2196/42386).
- [21] Jager-Hyman, S., Cunningham, A., Wenzel, A., Mattei, S., Brown, G.K., & Beck, A.T. (2014). Cognitive distortions and suicide attempts. *Cognitive Therapy and Research*, 38(4), 369-374. doi: [10.1007/s10608-014-9613-0](https://doi.org/10.1007/s10608-014-9613-0).

- [22] Khraban, T. (2022). Combat and military-professional stress: The influence of emotions and emotional states on the choice of coping strategies. *Insight: The Psychological Dimensions of Society*, 8, 71-87. doi: [10.32999/2663-970X/2022-8-6](https://doi.org/10.32999/2663-970X/2022-8-6).
- [23] Khraban, T. (2024). Developing a well-balanced military identity among female military personnel. *Polish Sociological Review*, 225(1), 69-82. doi: [10.26412/psr225.04](https://doi.org/10.26412/psr225.04).
- [24] Kim, K., Choi, S., Lee, J., & Sea, J. (2019). Differences in linguistic and psychological characteristics between suicide notes and diaries. *Journal of General Psychology*, 146(4), 391-416. doi: [10.1080/00221309.2019.1590304](https://doi.org/10.1080/00221309.2019.1590304).
- [25] Kroenke, K., & Spitzer, R.L. (2002). The PHQ-9: A new depression diagnostic and severity measure. *Psychiatric Annals*, 32(9), 509-515. doi: [10.3928/0048-5713-20020901-06](https://doi.org/10.3928/0048-5713-20020901-06).
- [26] Lao, C., Lane, J., & Suominen, H. (2022). Analyzing suicide risk from linguistic features in social media: Evaluation study. *JMIR Formative Research*, 6(8), article number e35563. doi: [10.2196/35563](https://doi.org/10.2196/35563).
- [27] Lauderdale, S.A., Schmitt, R., Wuckovich, B., Dalal, N., Desai, H., & Tomlinson, S. (2025). Effectiveness of generative AI-large language models' recognition of veteran suicide risk: A comparison with human mental health providers using a risk stratification model. *Frontiers in Psychiatry*, 16, article number 1544951. doi: [10.3389/fpsyt.2025.1544951](https://doi.org/10.3389/fpsyt.2025.1544951).
- [28] Low, L.S., Maddage, N.C., Lech, M., Sheeber, L.B., & Allen, N.B. (2011). Detection of clinical depression in adolescents' speech during family interactions. *IEEE Transactions on Bio-Medical Engineering*, 58(3), 574-586. doi: [10.1109/TBME.2010.2091640](https://doi.org/10.1109/TBME.2010.2091640).
- [29] Mann, J.J. (2013). The serotonergic system in mood disorders and suicidal behaviour. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 368(1615), article number 20120537. doi: [10.1098/rstb.2012.0537](https://doi.org/10.1098/rstb.2012.0537).
- [30] Mann, J.J., Waternaux, C., Haas, G.L., & Malone, K.M. (1999). Toward a clinical model of suicidal behavior in psychiatric patients. *American Journal of Psychiatry*, 156(2), 181-189. doi: [10.1176/ajp.156.2.181](https://doi.org/10.1176/ajp.156.2.181).
- [31] McCoy, T.H., Castro, V.M., Roberson, A.M., Snapper, L.A., & Perlis, R.H. (2016). Improving prediction of suicide and accidental death after discharge from general hospitals with natural language processing. *JAMA Psychiatry*, 73(10), 1064-1071. doi: [10.1001/jamapsychiatry.2016.2172](https://doi.org/10.1001/jamapsychiatry.2016.2172).
- [32] Naifeh, J.A., Ursano, R.J., Shor, R., Mash, H.B., Aliaga, P.A., Fullerton, C.S., Kao, T.C., Sampson, N.A., Kessler, R.C., & Stein, M.B. (2025). Suicidal behavior in US Army Special Operations Forces. *JAMA Network Open*, 8(8), article number e2527395. doi: [10.1001/jamanetworkopen.2025.27395](https://doi.org/10.1001/jamanetworkopen.2025.27395).
- [33] Nock, M.K., Deming, C.A., Fullerton, C.S., Gilman, S.E., Goldenberg, M., Kessler, R.C., McCarroll, J.E., McLaughlin, K.A., Peterson, C., Schoenbaum, M., Stanley, B., & Ursano, R.J. (2013). Suicide among soldiers: A review of psychosocial risk and protective factors. *Psychiatry*, 76(2), 97-125. doi: [10.1521/psyc.2013.76.2.97](https://doi.org/10.1521/psyc.2013.76.2.97).
- [34] O'Connor, R.C., & Kirtley, O.J. (2018). The integrated motivational-volitional model of suicidal behaviour. *Philosophical Transactions of the Royal Society of London. Series B, Biological Sciences*, 373(1754), article number 20170268. doi: [10.1098/rstb.2017.0268](https://doi.org/10.1098/rstb.2017.0268).
- [35] O'Dea, B., Boonstra, T.W., Larsen, M.E., Nguyen, T., Venkatesh, S., & Christensen, H. (2021). The relationship between linguistic expression in blog content and symptoms of depression, anxiety, and suicidal thoughts: A longitudinal study. *PLoS One*, 16(5), article number e0251787. doi: [10.1371/journal.pone.0251787](https://doi.org/10.1371/journal.pone.0251787).
- [36] Ozdas, A., Shiavi, R.G., Silverman, S.E., Silverman, M.K., & Wilkes, D.M. (2004). Investigation of vocal jitter and glottal flow spectrum as possible cues for depression and near-term suicidal risk. *IEEE Transactions on Bio-Medical Engineering*, 51(9), 1530-1540. doi: [10.1109/TBME.2004.827544](https://doi.org/10.1109/TBME.2004.827544).
- [37] Pearl, L. (2023). Computational cognitive modeling for syntactic acquisition: Approaches that integrate information from multiple places. *Journal of Child Language*, 50(6), 1353-1373. doi: [10.1017/S0305000923000247](https://doi.org/10.1017/S0305000923000247).
- [38] Pestian, J., Santel, D., Sorter, M., Bayram, U., Connolly, B., Glauser, T., DelBello, M., Tamang, S., & Cohen, K. (2020). A machine learning approach to identifying changes in suicidal language. *Suicide & Life-threatening Behavior*, 50(5), 939-947. doi: [10.1111/sltb.12642](https://doi.org/10.1111/sltb.12642).
- [39] Ramírez-Cifuentes, D., Freire, A., Baeza-Yates, R., Puntí, J., Medina-Bravo, P., Velazquez, D.A., Gonfaus, J.M., & González, J. (2020). Detection of suicidal ideation on social media: Multimodal, relational, and behavioral analysis. *Journal of Medical Internet Research*, 22(7), article number e17758. doi: [10.2196/17758](https://doi.org/10.2196/17758).
- [40] Randles, R., Burroughs, H., Green, N., & Finnegan, A. (2025). Prevalence and risk factors of suicide and suicidal ideation in veterans who served in the British Armed Forces: A systematic review. *BMJ Military Health*, 171(2), 166-172. doi: [10.1136/military-2023-002413](https://doi.org/10.1136/military-2023-002413).
- [41] Satyander, S.K. (2024). Suicidal ideation and cognitive distortions among undergraduate students. *Educational Administration: Theory and Practice*, 30(5), 11239-11245. doi: [10.53555/kuey.v30i5.4922](https://doi.org/10.53555/kuey.v30i5.4922).
- [42] Schafer, K.M., Melia, R., & Joiner, T. (2024). Risk and protective correlates of suicidality in the military health and well-being project. *Journal of Affective Disorders*, 363, 258-268. doi: [10.1016/j.jad.2024.07.141](https://doi.org/10.1016/j.jad.2024.07.141).
- [43] Sierra, G., Andrade-Palos, P., Bel-Enguix, G., Osornio-Arteaga, A., Cabrera-Mora, A., García-Nieto, L., & Sierra-Aparicio, T. (2021). Suicide risk factors: A language analysis approach in social media. *Journal of Language and Social Psychology*, 41(3), 312-330. doi: [10.1177/0261927X211036171](https://doi.org/10.1177/0261927X211036171).

- [44] Silvestrini, M., & Chen, J.A. (2023). "It's a sign of weakness": Masculinity and help-seeking behaviors among male veterans accessing posttraumatic stress disorder care. *Psychological Trauma: Theory, Research, Practice and Policy*, 15(4), 665-671. doi: [10.1037/tra0001382](https://doi.org/10.1037/tra0001382).
- [45] Sloan, D.M. (2005). It's all about me: Self-focused attention and depressed mood. *Cognitive Therapy and Research*, 29(3), 279-288. doi: [10.1007/s10608-005-0511-1](https://doi.org/10.1007/s10608-005-0511-1).
- [46] Sokol, Y., Gromatsky, M., Edwards, E.R., Greene, A.L., Geraci, J.C., Harris, R.E., & Goodman, M. (2021). The deadly gap: Understanding suicide among veterans transitioning out of the military. *Psychiatry Research*, 300, article number 113875. doi: [10.1016/j.psychres.2021.113875](https://doi.org/10.1016/j.psychres.2021.113875).
- [47] Sun, K., Liu, H., & Xiong, W. (2020). The evolutionary pattern of language in scientific writings: A case study of philosophical transactions of royal society (1665-1869). *Scientometrics*, 126, 1695-1724. doi: [10.1007/s11192-020-03816-8](https://doi.org/10.1007/s11192-020-03816-8).
- [48] Tadesse, M.M., Lin, H., Xu, B., & Yang, L. (2020). Detection of suicide ideation in social media forums using deep learning. *Algorithms*, 13(1), article number 7. doi: [10.3390/a13010007](https://doi.org/10.3390/a13010007).
- [49] Tausczik, Y.R., & Pennebaker, J.W. (2009). The psychological meaning of words: LIWC and computerized text analysis methods. *Journal of Language and Social Psychology*, 29(1), 24-54. doi: [10.1177/0261927X09351676](https://doi.org/10.1177/0261927X09351676).
- [50] Tsujii, N., Mikawa, W., Tsujimoto, E., Adachi, T., Niwa, A., Ono, H., & Shirakawa, O. (2017). Reduced left precentral regional responses in patients with major depressive disorder and history of suicide attempts. *PloS One*, 12(4), article number e0175249. doi: [10.1371/journal.pone.0175249](https://doi.org/10.1371/journal.pone.0175249).
- [51] Weaverdyck, M.E., Thornton, M.A., & Tamir, D.I. (2021). The representational structure of mental states generalizes across target people and stimulus modalities. *NeuroImage*, 238, article number 118258. doi: [10.1016/j.neuroimage.2021.118258](https://doi.org/10.1016/j.neuroimage.2021.118258).
- [52] Wenzel, A., & Jager-Hyman, S. (2012). [Cognitive therapy for suicidal patients: Current status](#). *The Behavior Therapist*, 35(7), 121-130.
- [53] Wright-Berryman, J., Cohen, J., Haq, A., Black, D.P., & Pease, J.L. (2023). Virtually screening adults for depression, anxiety, and suicide risk using machine learning and language from an open-ended interview. *Frontiers in Psychiatry*, 14, article number 1143175. doi: [10.3389/fpsy.2023.1143175](https://doi.org/10.3389/fpsy.2023.1143175).

Мовні та паралінгвістичні предиктори суїцидальної поведінки військовослужбовців та ветеранів: огляд літератури

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♦ **Анотація.** Проблема суїцидів серед військових та ветеранів набула особливої гостроти в умовах воєнних дій в Україні. Тривале перебування у зоні бойових дій, втрати серед побратимів, поєднання фізичних і психологічних травм суттєво підвищують ризик розвитку депресивних станів та формування суїцидальних намірів. Традиційні методи психологічної діагностики часто не забезпечують належної чутливості, оскільки військовослужбовці нерідко приховують власні проблеми через страх стигматизації або небажання звертатися по допомогу. Це актуалізує необхідність пошуку інноваційних підходів, серед яких провідне місце посідає аналіз мовних і просодичних характеристик як потенційних предикторів суїцидів. Метою дослідження був огляд сучасних наукових підходів до ідентифікації ризику суїцидальної поведінки у військовому середовищі шляхом систематизації лінгвістичних і просодичних показників та визначення їх діагностичної й прогностичної цінності для розроблення систем раннього попередження суїцидів. Робота виконана у форматі систематичного огляду наукової літератури з використанням методів аналізу, синтезу, індукції та узагальнення. Опрацьовано публікації з психології, психіатрії, нейробіології, лінгвістики та суміжних дисциплін. Особлива увага приділялася дослідженням, у яких вивчалися мовні та голосові маркери депресивних і суїцидальних станів у контексті військової служби та адаптації після неї. Встановлено, що мовлення військовослужбовців із підвищеним ризиком самогубства характеризується низкою особливостей: частим використанням категоричних висловлювань, перевагою займенників першої особи однини, зниженням синтаксичної складності, схильністю до заперечних конструкцій і переважанням негативно забарвленої лексики. Просодичний аналіз виявив монотонність голосу, зниження гучності, уповільнення темпу та одноманітність інтонаційних моделей. Поєднання цих показників із даними машинного навчання дозволяє значно підвищити точність прогнозування ризиків і створювати мультимодальні системи оцінки психоемоційного стану. Отримані результати мають прикладне значення для вдосконалення підходів до профілактики суїцидальної поведінки у військовому середовищі. Використання автоматизованих систем аналізу текстових та акустичних параметрів мовлення створює передумови для своєчасного моніторингу психічного стану військовослужбовців і ветеранів, раннього виявлення кризових тенденцій та реалізації превентивних заходів в умовах обмеженого доступу до психологічної допомоги

♦ **Ключові слова:** лінгвістичні маркери; раннє попередження суїцидів; психічне здоров'я; посттравматичний стресовий розлад; мисленнєві процеси

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