

SOCIO-PSYCHOLOGICAL CONSEQUENCES OF COMBAT STRESS ON MILITARY PERSONNEL PARTICIPATING IN COMBAT OPERATIONS

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Abstract. *The article explores contemporary scientific approaches to studying and understanding the combat stress environment and its key factors, significantly impacting military staff participating in combat actions and afterward in their civilian life. It highlights and provides evidence for the socio-psychological effects of combat stress on military personnel engaged in combat operations. Furthermore, the article analyzes the key factors of the combat environment and expands the interpretation of the combat stress concept, taking into account the realities of today. The article aims to clarify the list of the leading modern theoretical and methodological approaches to studying "combat stress" and to identify and substantiate the socio-psychological consequences that arise in veterans returning to peaceful life in the present-day realities.*

Keywords:

combat stress factors, combat stress, combatants, PTSD, State border guard service of Ukraine.

Introduction

Topicality of research. The content of the latest scientific achievements of stress researchers reflects the latter's belief that stress is a significant factor affecting the quality of people's lives, closely related to mental and, most likely, many physical health problems (Puzyrev, 2006). Unfortunately, Ukraine has faced armed aggression by the Russian Federation, which involved on the battlefield a variety of components of its Armed Forces. Hundreds of thousands of military personnel from both sides are involved in the fighting. The circumstances of the serviceman of the State Border Guard Service of Ukraine (SBGS) in conditions of significant combat stress with the need to make optimal decisions in real-time and in a limited time produce high standards of requirements for the mental health of its servicemen (Lazos, 2020). Given the high motivation to protect the territorial integrity and sovereignty of Ukraine and the improvement of military professional and psychological training systems in the service, some servicemen still face mental health problems as a result of participation in hostilities, manifested by the development of an acute stress reaction, accompanied by combat and chronic stress. Subsequently,



the symptoms can become posttraumatic stress disorder (PTSD), which causes a range of problems for combatants at the interpersonal and social levels (Lazos, 2020).

The research conducted over the last thirty years by foreign and native scientists has revealed the significance of combat stress's impact on a serviceman's mentality. Such factors as combat situations can influence the development of the consequences of the subjective experience of combat stress, individual psychological characteristics of a person, level of professional and psychological preparation of a combatant for combat operations, etc. (Blinov, 2019). However, the need to clarify and supplement the content of this list of combat stress factors, taking into account the Russian-Ukrainian war's experience to improve the medical and psychological rehabilitation system of military personnel participating in combat operations, led to the choice of the research topic. That's why the object of the study is combat stress in military personnel participating in combat operations, and its subject is to identify and substantiate the socio-psychological consequences of combat stress in combatants of the State Border Guard Service of Ukraine. That's why the **purpose of the article** is to identify, clarify, and substantiate combat stress factors and its socio-psychological consequences in military personnel participating in combat operations of the State Border Guard Service of Ukraine, as well as to substantiate the feasibility of choosing and applying the most effective psychotherapy methods.

Research period and the methods. The study was carried out at Bohdan Khmelnytskyi National Academy of the State Border guard Service of Ukraine in the period of August 2023 up to July 2024 in the real conditions of the military higher educational establishment on the basis of the general scientific methods of theoretical level and methods of the empirical research.

Particularly the sociometric method has allowed us to determine the clarify, and substantiate combat stress factors and its socio-psychological consequences.

The results of the modern theoretical and methodological approaches to studying "combat stress" in native and foreign scientific sources have been analyzed. Thus, the phenomenon of combat stress and its socio-psychological consequences have been studied by such researchers as L. Kitaev-Smyk, S. Litvintsev, A. Romanishyn, M. Holyk, V. Liashenko, A. Romanishyn, Y. Romanovskyi, S. Sukiasyan, I. Prykhodko, O. Blinov, P. Voloshyn, N. Maruta, L. Shestopalova, O. Kokun and others. Modern scientific views on the socio-psychological consequences of combat stress were highlighted in the works of foreign researchers such as A. Flood (2017), R.J. Keegan (2021), Rebecca B. Wisco (2021), Dr. Mark W. Miller

(2022), D. Murphy (2023), Charles W. Hoge (2024), Amy Adler (2024) and others.

The study of the socio-psychological consequences of combat stress belongs to psychologists, among whom the leading role is military, clinical and social psychologists R. Abdurakhmanov, O. Karayani, Y. Karayani, P. Korchomnyi, S. Kolov, O. Kosova, T. Nikitina, M. Reshetnikov, I. Syromiatnikov, O. Zhadaniuk, O. Utiuganov.

Phenomenological Analysis of the Essence and Key Factors of “Combat Stress”. In conducting a phenomenological analysis of the essence and primary factors associated with “combat stress,” we reviewed the most cited descriptions of this term in Ukrainian and foreign academic sources. Our analysis focuses on the most commonly used definitions of this concept:

Combat stress is a psychological manifestation of a stress response among military personnel resulting from exposure to combat activity factors. Combat stress prompts radical changes in military personnel's affective, cognitive, and behavioral spheres, significantly influencing their operational performance and thus necessitating psychological protection from its effects (Puzyrev, 2006).

According to K.O. Kravchenko, “combat stress” is defined as a set of psychological disorders experienced by combat participants as they adapt to the specific conditions of the combat environment, characterized by threats to their health and life (Zhyhaylo, 2022).

Blinov O. A interprets “combat stress” as a state of psychological tension in military personnel while adapting to combat conditions by utilizing available resources (Blinov, 2019).

R. Gabriel describes “combat stress” as an accumulation of unproductive actions and their consequences as the body adapts to the combat situation, resulting in homeostatic self-regulation and manifesting in a wide range of psychophysiological changes (Lyash, 2021).

R. Sapolsky defines “combat stress” as the body’s intense response to danger during combat, involving physiological and psychological aspects (Sapolsky, 2009).

According to research by H. Kormos, combat stress involves adaptive actions of the human body during combat, strengthening states of reactive self-regulation and adaptive psychophysiological changes (Zhyhaylo, 2022).

N. Zhigaylo defines “combat stress” as a specific type of stress characterized by the effects of a general adaptation syndrome complex. In most cases, combat stress takes the form of distress, with extremely high, often overwhelming intensity for the body, accompanied by psychological disorders with pre-pathological and pathological consequences (Leung, 2018).

L.Ye. Kuznetsova describes “combat stress” as characterized by excessive mental and emotional tension, which can lead to reduced sensitivity, slowed responses to external stimuli, impaired motor coordination, weakened attention, and memory—factors that undeniably diminish or threaten the execution of combat missions (Kuznetsova, 2018).

The results of comparative and phenomenological analysis of the essence and content of the term “combat stress” in Ukrainian and foreign scientific sources reveal a lack of unified definitions or a standardized theoretical construct. This is due to the specificity of the scientific paradigms – biology, medicine, psychology, sociology, and others – through which this concept is studied. Given the unique nature of combat conditions, researchers in combat stress propose using constructs such as combat mental trauma, combat stress, combat-related mental pathology, post-traumatic stress disorders, and other terms that are distinguished by the psychophysiological and socio-psychological consequences that emerge over time from the “zero moments” of trauma.

Given the above, we will systematize and distinguish the objective and subjective groups of factors of the combat environment in which serviceman may experience the effects of combat stress.

Thus, the emergence of a pre-pathological destabilizing state of combat stress is influenced by many factors, the main of which is 1) "fear of death or injury". This fear relates to the loss of one's own physical integrity or witnessing the severe injuries and death of others. Since the brain has special centres for assessing threats, a threat from another person causes a much higher stress level. Thus, a soldier may be most afraid of being killed or injured by the actions of another person, which increases stress.

Evolutionarily, humans have an attitude of 2) "do not kill your own type" to preserve the species and reduce the tendency to intraspecific aggression. Without special military training, most people are unable to kill an "enemy human," and such an act causes considerable stress. In addition, moral and ethical dilemmas between the duty to obey orders and personal moral convictions, especially in rapid decision-making with lethal consequences, contribute to mental exhaustion. Dangerous combat missions with limited resources require maximum concentration of cognitive, emotional and physical effort, which exacerbates the effects of combat stress.

One of the critical factors of combat stress is 3) "loud noises". Historically, we, as a species, have evolved in an environment where loud sounds were perceived as a danger signal that required an immediate response to save lives. Modern warfare is full of a variety of deafening sounds - from drones, drones, aeroplanes, helicopters, tank and artillery fire to mine and small arms explosions. The screams of wounded soldiers

also add a special effect to this intense acoustic atmosphere, exacerbating the stress response of the soldiers. 4) Prolonged exposure to constant threats to life and health, such as waiting in combat positions or regrouping near the enemy, leads to mental deprivation. This occurs due to the inability to meet essential life needs, such as a regular civilian lifestyle and contact with loved ones. Such conditions cause constant nervous tension and lead to a sense of isolation, which significantly increases combat stress and negatively affects the mental state of the military. 5) Also, frustration can arise when a service member is aware of objective insurmountable difficulties, such as the enemy's technical equipment and training superiority. This causes feelings of powerlessness and dissatisfaction due to the inability to win. In addition, frustration can be exacerbated by internal psychological conflict when a unit objectively has the combat capabilities to win but cannot act due to the lack of appropriate orders from the command. This situation creates a sense of internal conflict and hopelessness, which increases combat stress (Rosen, 2010). 6) The peculiarities of physical, geographical and climatic conditions sometimes lead to an extreme environment characterized by extreme heat, cold, wind, snow, rain or other manifestations, which can significantly complicate the combatants performing combat missions and contribute to an increase in stress. 7) Lack of time for sleep and recovery after combat missions, even if available, leads to physical and psycho-emotional exhaustion of the combatant in the long run. Combatants are often forced to perform complex combat missions for long periods with minimal rest periods. The nervous system is in a state of excitement for a long time. 8) Lack of adequate provisions and water to maintain vitality in combat conditions does not contribute to a combatant's physical or mental performance.

We have also identified another group of factors contributing to combat stress: 9) lack of proper support from the command. The directive, dry style of communication between commanders and subordinates, the unjustified remoteness of command posts and headquarters deep in the rear from the actual location of combatants on the contact line, and sometimes miscalculations in the planning of operations can increase the level of abandonment, helplessness and isolation of a combatant while performing their combat missions.

These factors affecting the stability of the mental health of combatants and their readiness for long-term combat missions in an environment of combat stress can be conditionally grouped into several categories: personal (biological and individual psychological), occupational, situational, psychogenic and socio-psychological (Daphna-Tekoah, 2023). All these factors form a multifaceted picture of the combat-stress environment. However, it should also be noted that, in the end, it is not so much the

factors of combat stress that are decisive regarding social and psychological consequences. In particular, it is the soldier's perception (critical thinking skills) of the complex psychophysiological consequences with the aim of further adaptation into adaptive professional activity in combat conditions. It is worth emphasizing that combat stress factors, as hazardous and life-threatening for a soldier, significantly provoke the emergence of combat-related mental trauma or other temporary maladaptive states in combatants but do not guarantee the emergence of more severe mental disorders. At the same time, low levels of introspection and reflection are more likely to provoke the development of a different range of social and psychological consequences of combat stress in combatants, thereby reducing their quality of life in peaceful conditions.

We surveyed borderguard cadets participating in combat operations to identify the critical factors of combat stress. The survey asked them to identify the factors they believed most significantly contributed to the onset of combat stress. They rated the most traumatic factor as 8, the least traumatic factor as 7, and so forth. A total of 23 individuals participated in the anonymous survey, of whom only 11 provided relevant responses on this topic. The rest completed this part of the survey with evident inaccuracies, indicating their reluctance to participate in the survey on this issue. The average age of respondents was 23.5 years, with their combat experience during the full-scale invasion ranging from 3 to 11 months.

According to the respondents, the most significant factor of combat stress is the lack of adequate support from the command, rated at 8 points. This is closely followed by factors related to insufficient conditions for rest, sleep, and recovery. Factors such as "loud noises" and "prolonged exposure to a constantly threatening environment" received an equal rating of 5 points. Factors associated with the fear of physical injury, death, and killing others were given relatively low ratings of 3 and 4 points by the respondents. The lowest-rated factor was related to unfamiliar social, living, and geographical conditions.

Combat stress factors, despite being highly dangerous or life-threatening, significantly contribute to the likelihood of developing combat-related psychological trauma or other mental disorders. However, they do not guarantee their occurrence. Recognizing these factors is essential for clarifying the nature of psychophysiological changes among combat participants over time and refining effective measures to mitigate the socio-psychological consequences.

As part of this study, we asked respondents to determine what they believe rehabilitation after combat-related trauma should entail. To do so, respondents were asked to select the options that resonated most with them. The distribution of responses is presented in the chart (Figure 1).

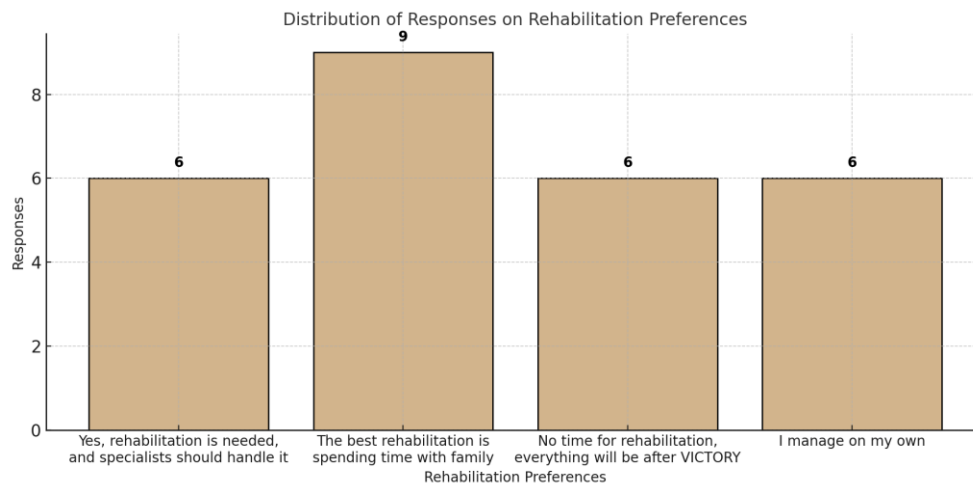


Figure 1 Attitudes of military personnel towards rehabilitation after combat-related trauma (Source: compiled by the author)

In the graphical diagram, we processed the results of a study on the perspectives of combat-experienced military personnel toward rehabilitation after combat-related trauma. As shown in the diagram (tab. 1), one-third of respondents (33.3%) consider spending time with family as the best form of rehabilitation. Only 22.2% expressed a practical attitude toward medical and psychological rehabilitation by selecting the option, 'rehabilitation is needed, and specialists should handle it.' Almost half of the respondents (44.4%) believe rehabilitation is 'not timely,' choosing either 'I manage on my own' or 'everything will be after thr Victory.'

Overall, these results are supported by statistical data indicating that 37% of military personnel experiencing specific symptoms of anxiety-depressive spectrum disorders and PTSD show low readiness to seek professional help, which in some cases leads to recurrences of mental health disorders and destructive consequences of trauma.

Considering the results of the scientific research on the factors of the combat environment, it is essential to identify and analyze the emotional, behavioural, and value-oriented groups of the socio-psychological consequences of combat stress in military personnel. Let us consider each of the proposed groups in more detail.

Emotional group of social and psychological consequences of combat stress in military personnel		
1	Anxiety conditions	Veterans who have experienced combat may experience persistent anxiety and panic attacks, which makes it difficult for them to function in their daily lives and social interactions. Anxiety disorders are accompanied by irritability, problems with sleep and concentration, as well as physical symptoms

		such as palpitations. Hyper-excitability forces veterans to constantly react to potential threats, which is mentally and physically draining. This condition can also provoke other disorders, such as depression or PTSD, which complicates the process of rehabilitation and integration into society (Proctor, 2010).
2	Depressive conditions	Veterans often develop depression, which manifests itself in the form of negative conclusions about themselves, other people and the world in general about the futility of all efforts, hopelessness, loss of interest in activities they used to love, and a general decrease in mood. It can lead to sleep problems, chronic fatigue, and even suicidal thoughts. Depression worsens not only the veteran's condition but also creates additional stress for their loved ones (Schnurr, 2023).
3	Emotional numbness	Combat veterans may experience emotional devastation and numbness, i.e. states of low intensity of the palette of feelings, which may seem as if they have lost the ability to feel or express any emotions. Emotional numbness is a defence mechanism that helps veterans avoid painful memories, but at the same time, it makes it difficult to maintain intimate, emotional, trusting, close relationships (Schnurr, 2023). It can create prerequisites for attachment style disorders from reliable to anxious, avoidant, or disorganized, which deepens the state of isolation and deprivation (Schnurr, 2023).
4	The feeling of guilt and shame	Veterans may experience intense feelings of guilt for their actions during combat, accompanied by obsessive self-critical thoughts. It leads to internal conflicts, social exclusion, and decreased self-esteem and self-confidence. Feelings of shame and guilt create additional barriers to communication and interaction (Schnurr, 2023).
5	Anger, rage	Increased irritability due to traumatic memories and a heightened sense of justice lead to categorical thinking, which intensifies emotional states of anger and rage. It can provoke aggressive behaviour and conflicts in social interactions, especially in the family and at work. Veterans become intolerant of injustice, which increases the risk of social conflicts and negatively affects their physical health, in particular, increasing the risk of cardiovascular disease (Chen, 2022).

Behavioural group of socio-psychological consequences of combat stress in military personnel		
1	Aggression	Veterans may show aggression as a reaction to stressful memories or provocative situations without considering the current context. It leads to conflicts in family, work and social interactions, and sometimes aggression is directed at oneself, causing additional psychological and physical trauma. Aggression is often associated with a sense of powerlessness and inability to control the situation in civilian life, which is

		atypical for veterans with PTSD. Transferring combat experience to everyday situations increases social isolation and can lead to job loss (Chen, 2022).
2	Alcohol or substance abuse	Some veterans may turn to alcohol or drugs as a quick way to relieve stress and emotional pain, gaining short-term benefits in the form of euphoria but also destroying relationships and worsening their health in the long run. Studies show that veterans with PTSD are at higher risk of developing alcohol and drug addiction. Long-term substance use negatively affects mental and physical health and can lead to problems with the law and financial difficulties, complicating their reintegration into society (Schnurr, 2023).
3	Problems with impulse control	Combatants may have difficulty controlling impulses, which manifests itself in dangerous or unpredictable behaviour, including sudden mood swings and inadequate reactions to stress. Increased excitability and the inability to effectively regulate emotions often necessitate an immediate response to stimuli, which makes it difficult to interact with others and go about daily life. It can lead to participation in risky activities that pose a threat to the health and safety of veterans. In addition, impulse control problems can negatively affect the effectiveness of professional activities (Schnurr, 2023).
4	Isolation	Veterans often avoid social situations, which leads to isolation and loneliness, weakening social support. It worsens mental health by increasing depression, anxiety and guilt. Isolation also leads to lower self-esteem and a sense of hopelessness, which complicates the rehabilitation process. As a result, veterans are less likely to seek help, which only worsens their psychological state and hinders successful medical and psychological rehabilitation (Proctor, 2010).
5	Suicidal thoughts and attempts	Some veterans may experience suicidal thoughts or make suicide attempts due to feelings of hopelessness and helplessness resulting from frustrating situations or a lack of hope for change. It is a severe behavioural problem that requires immediate intervention. Studies show that veterans with PTSD are at increased risk of suicide, especially those who feel deep guilt or shame. It is essential to provide rapid psychological support, including consultations with specialists, family support and access to crisis interventions (Proctor, 2010).
Value-oriented group of socio-psychological consequences of combat stress in military personnel		
1	Loss of the sense of life	After returning from combat, veterans may face a loss of meaning in life, which often leads to an existential crisis. They may feel aimless, depressed, and isolated, which is exacerbated by automatic negative thoughts about their worthlessness (Schnurr, 2023). Studies show that the loss of comrades-in-arms during hostilities exacerbates the crisis,

		making it difficult to adapt to civilian life (Schnurr, 2023). This condition can cause social isolation due to lacking motivation to interact. Therapeutic approaches should help veterans find a new meaning in life through involvement in volunteer activities, education, or new professional opportunities (Schnurr, 2023).
2	Changes in moral values	Combat actions can significantly change the content of veterans' moral values and beliefs, creating a conflict between actions in war and previous moral principles. It causes internal dissonance, accompanied by feelings of guilt, shame and lowered self-esteem. The skills needed to survive on the battlefield may contradict the rules of civilian life, making it difficult to get along with others. It is crucial to guide the integration of combat experience into the veteran's value system, helping them to find moral balance and adapt to peaceful life (Chen, 2022).
3	A sense of betrayal	Combat veterans may feel betrayed by their commanders and society, leading to losing trust in others and decreased motivation for social contact. This feeling may arise from a lack of support upon return or political decisions that contradict their expectations. This condition can cause internal conflict, leading to isolation and alienation. It is vital to promote the restoration of trust through the support of psychologists, social workers, and veterans with similar experiences, which will help resolve this conflict (Gross, 2024).
4	Religious crises	Veterans may face religious crises when their combat experiences contradict their religious beliefs, which can cause guilt and force them to re-examine their faith. Such crises often raise questions about justice, the meaning of suffering and the morality of war. Being sensitive to these aspects is essential when helping veterans find new spiritual guidance or integrate their combat experience into their religious system. It may include engaging chaplains, religious leaders or support groups for deeper spiritual reflection and support (Chen, 2022).
5	Attitude towards life and death	The experience of combat can significantly change veterans' attitudes toward life and death. They may become more cynical or begin to appreciate every moment more deeply, affecting their relationships and social contacts. Veterans often experience an increased awareness of mortality, which can lead them to risky behaviour or caution. These changes can affect their life decisions about work, family, and social interactions. An essential part of therapy is helping to find a balance between the awareness of mortality and the desire to live a whole life by activating veterans' social and professional roles (Maglione, 2022).

Conclusions and suggestions

Overall, understanding the essence of the term 'combat stress' which we interpret as a short-term, multi-level process of intense adaptive activity by a servicemember's body in response to the extreme conditions of the combat environment, accompanied by significant strain on biological and psychological self-regulation mechanisms, allows us to mitigate the impact and identify ways to prevent negative consequences.

The socio-psychological consequences of combat stress among servicemembers vary in intensity from mild to severe. As stress factors intensify, manifestations of combat stress may become more pronounced, leading to socio-psychological severe repercussions. Servicemembers may experience interpersonal relationship challenges, particularly within the family, which often result in confrontations and divorce. A lack of adequate social support and understanding from society can further exacerbate these problems, causing isolation and alienation.

In more severe stages, combat stress can lead to serious mental health disorders, such as post-traumatic stress disorder (PTSD), depression, and suicidal tendencies. The loss of comrades in arms and personal losses may cause profound emotional trauma, affecting servicemembers' ability to perform their duties and adapt to civilian life.

Particular attention should be paid to the socio-psychological aspects of combat stress, such as changes in public opinion and perceptions of the military's role in society. Public support and a positive attitude toward veterans can play a significant role in their rehabilitation and reintegration into civilian life. Conversely, negative attitudes or indifference can deepen feelings of isolation and hopelessness.

Thus, the socio-psychological consequences of combat stress are multifaceted and require a comprehensive approach to study and overcome. It is essential to ensure that servicemembers have access to qualified psychological assistance, develop support and rehabilitation programs, and raise public awareness of veterans' challenges. This will help reduce the negative consequences of combat stress and improve the quality of life for servicemembers and their families.

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