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### **REVIEW**





# The Impact of Post-Traumatic Stress Disorder on the Psychological and Physical Health of Military Personnel

# El impacto del trastorno de estrés postraumático en la salud psicológica y física del personal militar

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## **ABSTRACT**

**Introduction:** given that PTSD is a complex problem in military personnel, it is important to characterize its impact on both mental and physical health.

**Objectives:** the purpose is to analyze the impact of post-traumatic stress disorder on the psychological and physical health of military personnel based on the consideration of illustrative clinical cases.

**Method:** the methods of systematic literature analysis, thematic analysis, comparison and observation were used. The latter was expressed in 2 forms: clinical and everyday observation. Based on a strict selection of scientific sources (10 inclusion criteria were formed), the most relevant and relevant literature was selected. **Results:** the results showed that symptoms can include agitation, reflective feelings, flashbacks to painful events.

**Conclusions:** the paper summarizes that PTSD can manifest itself at different stages, starting with acute acute PTSD (from 1 to 3 months), chronic PTSD (more than 3 months) to delayed PTSD (after 6 months) and complex PTSD. It can lead to cardiovascular problems, digestive problems, headaches, fibromyalgia, etc. Thus, it has been established that the impact of PTSD is multifaceted, as it includes both mental and physical health problems.

Keywords: Military Personnel; Trauma; Post-Traumatic Stress Disorder; War; Health.

## **RESUMEN**

**Introducción**: dado que el TEPT es un problema complejo en el personal militar, es importante caracterizar su impacto en la salud mental y física.

**Objetivos**: el propósito es analizar el impacto del trastorno de estrés postraumático en la salud psicológica y física del personal militar a partir de la consideración de casos clínicos ilustrativos.

**Método**: se utilizaron los métodos de análisis sistemático de la literatura, análisis temático, comparación y observación. Esta última se expresó de 2 formas: observación clínica y observación cotidiana. A partir de una selección estricta de las fuentes científicas (se formaron 10 criterios de inclusión), se seleccionó la bibliografía más pertinente y relevante.

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**Resultados:** los resultados mostraron que los síntomas pueden incluir agitación, sentimientos reflexivos, flashbacks a eventos dolorosos.

Conclusiones: el trabajo resume que el TEPT puede manifestarse en diferentes etapas, empezando por el TEPT agudo (de 1 a 3 meses), el TEPT crónico (más de 3 meses) hasta el TEPT retardado (después de 6 meses) y el TEPT complejo. Puede provocar problemas cardiovasculares, digestivos, cefaleas, fibromialgia, etc. Así pues, se ha establecido que el impacto del TEPT es polifacético, ya que incluye problemas de salud tanto mentales como físicos.

Palabras clave: Personal Militar; Trauma; Trastorno De Estrés Postraumático; Guerra; Salud.

## **INTRODUCTION**

Post-traumatic stress disorder (PTSD) is a serious psychological problem that appears in military personnel because of active participation in combat operations. Such a disorder can develop after experiencing or witnessing various traumatic events that can occur in war. The impact of PTSD on military personnel can be complex, as it encompasses both psychological and physical health consequences. In particular, the psychological consequences of PTSD may include sleep problems, emotional instability, severe anxiety, depression, problems with expressing emotions, and various flashbacks of traumatic events. (23,29) In addition, the scientific literature has also determined that military personnel suffering from PTSD may have difficulties adapting to civilian life. (12, 30) For this reason, several studies have shown that it can lead to social isolation, problems in family relationships and difficulties with employment. (11) At the same time, the scientific literature has also determined that the physical consequences of PTSD are also serious. Chronic stress can lead to various chronic diseases. (36) In addition, according to recent studies, military personnel with PTSD are more likely to engage in risky behaviors. (33) This also further complicates their physical Therefore, the study of such effects of PTSD on military personnel is extremely relevant, primarily in view of the importance of the formation of effective support and treatment strategies that can help them return to normal life physical health of military personnel based on the consideration of special illustrative cases, which are present in modern scientific literature. The research questions are as follows:

- 1. What are the features of PTSD in war survivors?
- 2. What is the impact of PTSD on the mental health of military personnel based on the analysis of individual clinical cases?
- 3. What is the impact of PTSD on the physical health of servicemen based on the consideration of specific cases in the literature?

In modern studies, various consequences of military participation in hostilities are described. Modern authors have emphasized both physical and psychological consequences. This issue is described in detail in a study by Andrew Castro & Dursun (2019), which describes in detail the transition process of military personnel to civilian life, in particular, the authors emphasized the main difficulties and challenges faced by veterans during reintegration into society after service. (1) The researchers emphasized the importance of support from both government initiatives and military families. Andrews et al. (2) compared PTSD that occurs immediately after a traumatic event with PTSD that develops with a delay. Researchers described differences in symptoms, prognosis and treatment among military veterans. At the same time, Babson et al. (3) analyzed sleep quality among US military veterans with PTSD. Scientists have also studied the relationship between PTSD symptoms and sleep problems. (3) According to the study by Back et al. (4) combatants are more prone to risky behavior they are more often exposed to alcohol and drugs. These researchers examined in detail the coexistence of PTSD and substance dependence among military veterans, as well as their treatment preferences. A review by Bergman, Przeworski & Feeny<sup>(5)</sup> looked at the prevalence of subclinical PTSD in the US military and service members. The authors also discussed its significance and implications for the future life of the military. Bowd & Özerdem<sup>(6)</sup> analyzed different methods of assessing the social reintegration of ex-combatants. The authors also paid special attention to the analysis of tools and approaches used to measure the success of reintegration programs. Crone et al. (9) compared PTSD treatment outcomes among homeless and housed veterans receiving treatment in a veteran's clinical program. At the same time, scientific studies have proven a direct connection between a high level of emotional intelligence and experienced trauma. Scientists have proven that the higher the emotional intelligence, the easier it is for a soldier to survive traumatic events. (8,18) Also, Garcia Zea, Sankar & Isna<sup>(14)</sup> described the impact of emotional intelligence on the work environment in the military, its role in improving work efficiency and moral climate. Currier, Holland & Drescher<sup>(10)</sup> identified the significance of spirituality in predicting PTSD treatment outcomes among US military veterans. Also important is the work of Fossey et al. (13), which describes the main processes and programs aimed at supporting the transition of the

military to civilian life. In modern studies, it is also determined that digital technologies play an important role in the effective winterization of a stable state. (17,35,37) The work of Gates et al. (15) is also important in that their work provides a critical review of PTSD screening and case-recognition methods among veterans and military personnel. Thus, modern researchers raised various issues of integration of military personnel into civilian life. At the same time, many of them focused on the emergence and methods of diagnosing PTSD. However, the issue of impact on physical and mental health is not so widely presented. In addition, various clinical cases of this influence are not fully presented in the scientific literature, which are important gaps in the problematic of the issue. This research will try to solve these aspects.

#### **METHOD**

#### Research approach

This study is a mixed-methods approach, as it is based on the methods of systematic literature analysis and observation. In particular, the sources selected for analysis were validated by verifying the information by comparing it in different sources: medical manuals, methodological guidelines, and other scientific papers. In addition, the authors' own observations of individual clinical cases were also considered.

#### Data collection

Data collection involved the selection of the main scientific and metric databases in which the search was conducted. Thus, we selected Web of Science, Google Scholar, PubMed, and Ebsco. These systems were chosen because they contain peer-reviewed articles of high quality. The following keywords were entered into the search databases: clinical cases, PTSD, Posttraumatic Stress Disorder, trauma, reintegration, civilian life, stress, military in these search databases. The initial number of results was 2345. After reducing the time range: from 2000-2024. The number of sources decreased to 1756. After that, it was decided to reduce the time range to 2009, as the medical field is developing and new indicators and studies should be taken into account. Thus, the date range was reduced to 1345 sources. After that, the emphasis was placed on the geographical focus of the study: preference was given to authors from the United States, Ukraine, Syria, and countries affected by wars or military conflicts. However, this criterion is not applicable to fundamental and methodological works. For this reason, the list of selected sources was reduced to 876 items. After that, a thorough analysis of titles and abstracts was carried out to include the most relevant literature. For this reason, 345 sources were selected. Each source was then checked for compliance with the following inclusion criteria:

- 1. The research widely addresses the issue of military reintegration into civilian life.
- 2. The study characterizes the impact of military participation in active combat operations.
- 3. The article describes the role of trauma and stress.
- 4. The study describes different methods of diagnosing PTSD.
- 5. The paper characterizes the main factors and components of PTSD formation.
- 6. The study describes different clinical cases of PTSD.
- 7. The study describes ways to overcome PTSD.
- 8. The study identifies the impact of PTSD on physical development.
- 9. The study describes the impact of PTSD on mental development.
- 10. The study presents ways to support military personnel who suffer or have suffered from PTSD.

If a study met more than 7 criteria, it was included in the analysis. The main emphasis was placed on meeting criteria 4-9. Thus, based on this strict selection, 39 most relevant materials were selected.

# Data analysis

The following modern methods were used to analyze the data:

- 1. Systematic analysis;
- 2. Thematic analysis;
- 3. Comparison;
- 4. Observations

Data analysis involved the use of Microsoft Excel software. Data such as the author, year of publication, described diagnostic methods, PTSD components, impact on health, and ways of support were entered into these tables. After that, the data was systematized based on thematic analysis. This helped to formulate the main research cases and considerations regarding the emergence, development and impact of PTSD on military personnel. The study also used the method of comparison. This helped to compare the data obtained with the data found in the literature.

In addition, the observation method was used to determine the impact of post-traumatic stress disorder (PTSD) on the psychological and physical health of military personnel. In particular, the focus is on direct observation.

#### Clinical observation

Military personnel were observed during medical examinations, psychotherapy sessions or medical practices. In turn, this directly allowed the authors to observe the manifestations of PTSD symptoms, its development and improvement.

# Daily behaviour

In some cases, observations of the daily life of servicemen were also carried out. This helped to study their interaction with family, friends and colleagues and to characterize certain problems of social adaptation and the impact of PTSD on relationships.

#### **RESULTS**

Among veterans of war, post-traumatic stress disorder is thought to be one of the most prevalent mental illnesses. It is a disorder marked by a variety of symptoms that impair a person's physical and mental health and arises when they are unable to manage the stress these occurrences generate. These symptoms can include agitation, reflectional feelings, avoidance of specific social situations, and flashbacks to painful events (see figure 1).

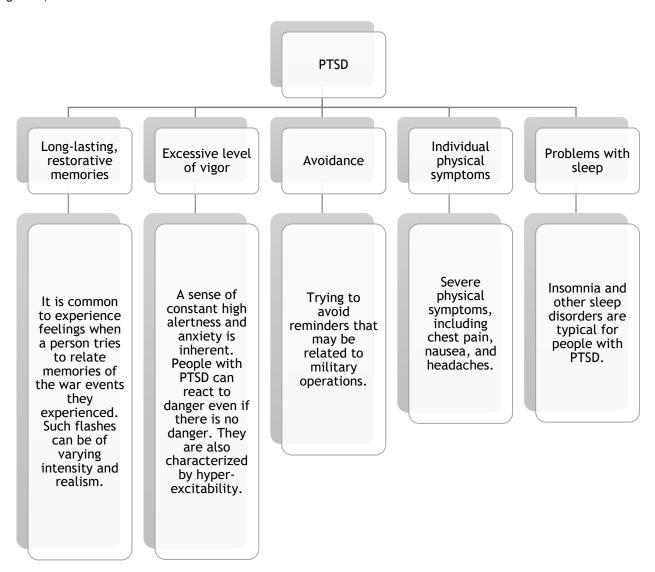


Figure 1. Key characteristics of PTSD Source: (21)

In case 1, the impact of PTSD on the veteran's psychological state was observed, including intrusive memories, increased anxiety, and difficulties with emotional expression. Physical injuries were also present, and despite their healing, feelings of survivor's guilt and worthlessness persisted. However, with active and timely therapy focused on emotional regulation and trauma processing, emotions were successfully managed.

Additionally, with the support of medical professionals and family, a gradual restoration of a sense of meaning in civilian life occurred.



The 30-year-old combat veteran, who had experience in hypervigilance, intrusive recollections, and emotional numbness upon returning from deployment as symptoms of post-traumatic stress disorder (PTSD). Even as his physical wounds healed, Patient 1 experienced extreme emotions of worthlessness and survivor guilt. Besides, he was able to reconcile his experiences during the conflict and learn how to manage his emotions through treatment that emphasized emotional regulation and trauma processing. He gradually acquired a feeling of meaning and purpose in civilian life.

Figure 2. Illustrative clinical case
Source: Center for Substance Abuse Treatment (7).



A 31-year-old female soldier, who served in war zones on several deployments, during which she took part in and observed horrific incidents. She suffered from angry outbursts, nightmares. Also she avoided the reminders of her military experience after returning home. Besides, Patient 2 troubled ties with her family and friends. Through interpersonal skills and coping strategy-focused individual and group therapy, Patient 2 was able to successfully articulate her emotions and regain trust in her relationships. She set out on a path of self-discovery and rehabilitation with the help of her therapy group, and she ultimately found purpose in her advocacy for mental health awareness among military members.

Figure 3. Illustrative clinical case

Source: Center for Substance Abuse Treatment (2014) (7).

Case 2 also describes the impact of PTSD on the mental state. In particular, the patient was characterized by outbursts of anger and sleep problems. At the same time, she avoided reminders of her military service. Patient 2 also found it difficult to realize communication with others. Case 2 described that she had a difficult relationship with her family. However, because of timely individual and group therapy aimed at developing interpersonal skills, they managed to improve their condition.

As can be seen in case 3, the combat veteran was characterized by severe anxiety, depression, and flashbacks. He also suffered from nightmares and was emotionally unstable. As a result of constant stress, Patient 3 began to suffer from chronic back and joint pain. He was characterized by high blood pressure and frequent headaches. In addition, because of lack of sleep and constant anxiety, his immune system was weakened. This led to frequent illnesses. However, because of cognitive behavioral therapy, Patient 3 began to control his emotions. At the same time, to improve the quality of sleep, Patient 3 received recommendations on sleep hygiene and began to practice meditation. As he had physical problems, he started exercising, which helped to reduce chronic pain and improve his overall physical condition.



A 40-year-old combat veteran returned home after a long stay in the war zone. He began to experience depression and flashbacks from the fighting. He also had trouble sleeping. He also became more irritable and emotionally unstable. In addition, as a result of the constant trauma, he began to suffer from chronic back pain. Besides, he was also characterized by constant high blood pressure and frequent headaches. He started undergoing cognitive behavioral therapy. It helped him improve his mental state. He also started doing some physical exercises to improve his musculoskeletal system. Over time, Patient 3 made a full recovery.

Figure 4. Illustrative clinical case Source: Author's development



A 26-year-old combat medic worked in a combat zone and was severely injured. After returning, he began to feel emotionally exhausted and lost interest in the activities he used to enjoy. In addition, there was an inherent sense of guilt that he could not save everyone. He avoided situations that reminded him of the war. He also suffered from constant stomach problems and chronic fatigue. Separately, he began to lose weight due to lack of appetite and nausea. His cardiovascular system was also suffering, with arrhythmias characteristic of him. He then turned to a specialist who began working with the EMDR (eye movement desensitization and reprocessing) method. This method helped her reduce the intensity of flashbacks and emotional stress. Patient 4 also went to a nutritionist and rehabilitation therapist. This helped to improve her condition completely.

Figure 5. Illustrative clinical case **Source:** Author's development

As can be seen in case 4, the combat medic experienced severe emotional exhaustion, loss of interest in previously favourite activities and a persistent sense of guilt for helping everyone. As for physical problems, Patient 4 suffered from stomach problems. Besides, he was also characterized by chronic fatigue and arrhythmia. As a result of using EMDR, the intensity of flashbacks and emotional stress decreased. Additionally, Patient 4 also started attending support groups for veterans. This helped him feel more social. To improve his physical condition, he received consultations from a nutritionist and physical therapist. Thanks to this comprehensive approach, the patient managed to recover his condition.

So, as can be seen in Case 5, Patient 5, who was a unit commander, returned home after several years of service in the combat zone. He was characterized by constant stress, fear and anxiety. He also suffered from insomnia and frequent panic attacks. PTSD also had a physical impact he experienced pain in his muscles and joints due to high levels of stress. At the same time, his blood pressure was high, and due to insomnia, Patient 5 felt persistent fatigue and lack of energy. This patient started a course of cognitive behavioral therapy. As a result, he began to understand and manage his anxious thoughts and emotions. Besides, he also received recommendations on how to improve his sleep. This included various physical exercises and meditation. Patient 5 received medication to stabilize his blood pressure. As a result of this comprehensive approach, he began to participate in social activities and restore his relationship with his family. As can be seen from the previous cases, PTSD can have different physical and psychological effects on military personnel. Among the physical impacts, there were cardiovascular problems, sleep disorders (insomnia, nightmares), digestive problems,

headaches, and various chronic diseases. The psychological impact can also vary. It is characterized mainly by depression and increased anxiety. At the same time, soldiers with PTSD avoid social contacts, they may be characterized by outbursts of aggression, various flashbacks, feelings of guilt and shame. Therefore, it is important to provide timely assistance and support to the military, which should be based not only on the medical but also on the governmental level. (24) Table 1 summarizes the main aspects of the psychological and physical impact of PTSD in the military.



The 42-year-old unit commander returned home after several years of service in the combat zone. He experienced constant stress and fear in large quantities. He also suffered from insomnia and panic attacks. The physical impact of PTSD was characterized by joint pain. His blood pressure was constantly high. He started a course of cognitive behavioral therapy. To improve his condition, he performed some physical exercises.

**Figure 6.** Illustrative clinical case **Source**: Author's development

Table 1. Main manifestations of the physical and psychological impact of PTSD in the military	
Type of impact	Description
Physical impact	
Cardiovascular problems	Various heart diseases, hypertension, arrhythmia, strokes
Sleep disorders	Insomnia, nightmares, incessant sleep, chronic lack of sleep
Digestive problems	Chronic abdominal pain, nausea, diarrhea, intestinal disorders, irritable bowel syndrome
Chronic pain	Fibromyalgia, persistent headaches, chronic diseases
Substance abuse	Possible abuse of alcohol and narcotic drugs as a means of independent therapy
Psychological impact	
Anxiety and depression	High levels of anxiety, panic attacks, persistent anxiety, depression
Social isolation	Desire to avoid social contacts, isolate from family or friends
Outbursts of aggression	Irritation, outbursts of anger, aggressive behavior, and inability to control emotions are possible
Memories and flashbacks	Complicated unpleasant memories, flashbacks, retrospectives
Problems with concentration	Difficulties with concentration, problems with making your own decisions
Feelings of guilt and shame	Possible manifestations of guilt, shame for their actions or events during service in combat zones

Thus, the main manifestations of the physical and psychological impact of PTSD on the military can be diverse. However, timely response to their symptoms and professional treatment help to effectively restore physical and mental health.

## **DISCUSSION**

Given the aim of this study, which was to comprehensively examine the impact of PTSD on physical and mental development, several important aspects have been established. About the first research question, PTSD features include excessive levels of wakefulness and anxiety, sleep problems, avoidance, and certain physical symptoms. These aspects are accepted in the scientific literature and confirmed. (20,25,28) However, they also form the main symptoms of PTSD. (34,26) At the same time, the results of Taft et al. (38) demonstrated that the main symptoms of PTSD are caused by hypersensitivity, aggression, avoidance, and numbness. This also correlates with the present study, however, this work demonstrated much broader traits and symptoms of

PTSD that can relate to both mental and physical abuse. In addition, the results of current research indicate that the hyperarousal cluster of PTSD symptoms shows a strong association with aggression at the two-factor level compared to other PTSD symptom clusters. (38) However, the study showed that when the PTSD symptom clusters were considered together as predictors, symptoms of hyperarousal showed a significant relationship with aggression, and symptoms of avoidance/numbing were mostly unrelated to aggression. At the same time, research on potential mediators suggests that symptoms of hyperarousal may be associated with aggression and in some situations are associated with aggression, including in relation to specific alcohol use problems. (31,33) However, this study does not demonstrate a direct link between PTSD and its symptoms with alcohol use. However, several other researchers do emphasize this connection, especially in military survivors of combat and those with unstable levels of emotional intelligence. (31,33) Therefore, it can be stated that there is a direct link between emotional intelligence and severe PTSD symptoms, which is also confirmed in several modern works. (19,22,39) This aspect is also confirmed in the work of MacEwan & Gibson, (27) which defines the role of emotional intelligence development for the military. In view of the second research question, it is determined that PTRS has a multifaceted impact on the mental health of the military. It is emphasized that military personnel can suffer from depression, anxiety, outbursts of aggression, have problems concentrating, feel shame and guilt, and have various complex memories and reflections. This is also confirmed in other works that analyze the practice of aiding military personnel affected by PTSD. (16,40,41) Considering the latter research question, it has been determined that the physical impact of TBI is also multifaceted. In particular, it includes various cardiovascular diseases, sleep disorders, digestive problems, chronic pain, etc. Contemporary authors have also paid some attention to the impact of PTRS on physical well-being. In particular, Stefanovics, Potenza, and Pietrzak<sup>(15)</sup> emphasized several problems with the cardiovascular system. Thus, the study found that PTRS has a severe impact on both the psychological and physical health of the military. This correlates with a study that found that PTSD is a disorder that affects 7-8 % of the US population at some point in their lives. This study also proved that the prevalence of this disease is much higher among active-duty military personnel or war veterans. Therefore, the novelty of this study is to comprehensively determine the impact of PTSD on the physical and mental health of military personnel. Limitations of this study include the lack of attention to empirical data, including surveys and questionnaires of the military themselves who experienced PTSD. In addition, the subjectivism present in scientific works can be a limitation. These limitations also shape the following directions for further research on this issue; in particular, future studies will focus on processing empirical data obtained from military questionnaires. Therefore, the specificity of psychological correction methods lies in their focus on achieving sustainable changes in aspects of human psychology and behaviour directly aimed at improving the client's mental state in the long term. (42)

# **CONCLUSIONS**

In summary, PTSD is one of the most common mental illnesses among veterans. This illness characterized by a variety of symptoms that affect both mental and physical health. The main symptoms of PTSD were anxiety, depression, anger outbursts, intrusive memories, flashbacks, social isolation, and physical problems (for example, chronic pain, cardiovascular disease, sleep and digestive disorders). Besides, PTSD can manifest itself at different stages, ranging from acute PTSD (1 to 3 months) to chronic PTSD (over 3 months) to delayed PTSD (after 6 months) and complex PTSD. Moreover, it can lead to cardiovascular problems such as hypertension and arrhythmias, sleep disorders (insomnia, nightmares), digestive problems (chronic abdominal pain, diarrhea), chronic pain (headaches, fibromyalgia), and substance abuse. The psychological consequences of PTSD include high levels of anxiety, depression, social isolation, outbursts of aggression, flashbacks, problems with concentration, and feelings of guilt and shame. Timely diagnosis and a comprehensive approach to treatment, including cognitive behavioral therapy, EMDR therapy, exercise, meditation, medication, and support from family and support groups, contribute to the effective recovery of veterans' physical and mental health. The analysis of individual cases demonstrates the diversity of physical and psychological manifestations of PTSD. The study also identified the importance of a personalized approach to treatment. In general, PTSD is a complex disorder that requires a systematic approach for effective treatment of military personnel.

#### **REFERENCES**

- 1. Andrew Castro C, Dursun S. Introduction to military-to-civilian life transition. In: Military Veteran Reintegration. Elsevier; 2019. p. 1-3. doi: 10.1016/b978-0-12-815312-3.00001-2.
- 2. Andrews B, Brewin CR, Stewart L, Philpott R, Hejdenberg J. Comparison of immediate-onset and delayedonset posttraumatic stress disorder in military veterans. J Abnorm Psychol [Internet]. 2009 [cited 2024 Oct. 1];118(4):767-777. Available from: https://doi.org/10.1037/a0017203.
  - 3. Babson KA, Blonigen DM, Boden MT, Drescher KD, Bonn-Miller MO. Sleep quality among U.S. military

veterans with PTSD: A factor analysis and structural model of symptoms. J Trauma Stress [Internet]. 2012 [cited 2024 Oct. 1];25(6):665-674. Available from: https://doi.org/10.1002/jts.21757.

- 4. Back SE, Killeen TK, Teer AP, Hartwell EE, Federline A, Beylotte F, Cox E. Substance use disorders and PTSD: An exploratory study of treatment preferences among military veterans. Addict Behav [Internet]. 2014 [cited 2024 Oct. 1];39(2):369-373. Available from: https://doi.org/10.1016/j.addbeh.2013.09.017.
- 5. Bergman HE, Przeworski A, Feeny NC. Rates of subthreshold PTSD among U.S. military veterans and service members: A literature review. Mil Psychol [Internet]. 2017 [cited 2024 Oct. 1];29(2):117-127. Available from: https://doi.org/10.1037/mil0000154.
- 6. Bowd R, Özerdem A. How to assess social reintegration of ex-combatants. J Interv Statebuild [Internet]. 2013 [cited 2024 Oct. 1];7(4):453-475. Available from: https://doi.org/10.1080/17502977.2012.727537.
- 7. Center for Substance Abuse Treatment (US). Trauma-informed care in behavioral health services. Substance Abuse and Mental Health Services Administration; 2014. Available from: https://www.ncbi.nlm.nih.gov/books/NBK207201/.
- 8. Chiorcea I, Cioranu I. Emotional intelligence in military leadership. Rom Mil Think [Internet]. 2021 [cited 2024 Oct. 1];2021(1):152-167. Available from: https://doi.org/10.55535/rmt.2021.1.10.
- 9. Crone B, Arenson M, Cortell R, Carlin E. Comparing trauma treatment outcomes between homeless and housed veterans in a VA PTSD clinical program. Community Ment Health J [Internet]. 2022 [cited 2024 Oct. 1];59:797-807. Available from: https://doi.org/10.1007/s10597-022-01061-2.
- 10. Currier JM, Holland JM, Drescher KD. Spirituality factors in the prediction of outcomes of PTSD treatment for U.S. military veterans. J Trauma Stress [Internet]. 2015 [cited 2024 Oct. 1];28(1):57-64. Available from: https://doi.org/10.1002/jts.21978.
- 11. Demchenko I, Zahariichuk O, Dergach M, Porodko M, Pryzvanska R. The psychological and pedagogical aspect of the life quality of citizens with disabilities. Revista Amazonia Investiga [Internet]. 2022 [cited 2024 Oct. 1];11(54):339-348. Available from: http://dx.doi.org/10.34069/ai/2022.54.06.32.
- 12. Duel J, Godier-McBard L, MacLean MB, Fossey M. Challenging missions: vulnerable veterans leaving the armed forces and promising avenues to support them. In: Military Veteran Reintegration. Elsevier; 2019. p. 95-134. doi: 10.1016/b978-0-12-815312-3.00006-1.
- 13. Fossey M, Lazier R, Neil Lewis M, Williamson N, Caddick N. Military-to-civilian transition policies, processes, and program efforts. In: Military Veteran Reintegration. Elsevier; 2019. p. 51-74. doi: 10.1016/b978-0-12-815312-3.00004-8.
- 14. Garcia Zea D, Sankar S, Isna N. The impact of emotional intelligence in the military workplace. Hum Resour Dev Int [Internet]. 2023 [cited 2024 Oct. 1];26(1):85-101. Available from: https://doi.org/10.1080/136 78868.2019.1708157.
- 15. Gates MA, Holowka DW, Vasterling JJ, Keane TM, Marx BP, Rosen RC. Posttraumatic stress disorder in veterans and military personnel: Epidemiology, screening, and case recognition. Psychol Serv [Internet]. 2012 [cited 2024 Oct. 1];9(4):361-82. Available from: https://doi.org/10.1037/a0027649.
- 16. Haagen JFG, Smid GE, Knipscheer JW, Kleber RJ. The efficacy of recommended treatments for veterans with PTSD: A metaregression analysis. Clin Psychol Rev [Internet]. 2015 [cited 2024 Oct. 1];40:184-94. Available from: https://doi.org/10.1016/j.cpr.2015.06.008.
- 17. Huda O. Use of the Moodle platform in higher education institutions during training masters: Experience under martial law. E-Learning Innov J [Internet]. 2023 [cited 2024 Oct. 1];1(2):4-20. Available from: https://doi.org/10.57125/ELIJ.2023.06.25.01.
- 18. Jeppesen D. Emotional intelligence and military advisors. J Sci Med Sport [Internet]. 2017 [cited 2024 Oct. 1];20. Available from: http://dx.doi.org/10.1016/j.jsams.2017.09.605.

- 19. Kao MC, Chen YY. Emotional intelligence, trauma severity, and emotional expression. Int J Psychiatry Med [Internet]. 2016 [cited 2024 Oct. 1];51(5):431-41. Available from: https://doi.org/10.1177/0091217416680198.
- 20. Kharchenko A. Structural features for cognitive representations of traumatic emotional experience among demobilized combatants in Ukraine with post-stress psychological disadaptation. Psychol Couns Psychother [Internet]. 2019 [cited 2024 Oct. 1];12:64-69. Available from: https://doi.org/10.26565/2410-1249-2019-12-07.
- 21. Klymenko I, Tverdokhlib N, Zlobin O, Karachynskyi O, Kononenko O. PTSD in military personnel: diagnosis, treatment and support. Amazonia Investiga [Internet]. 2024 [cited 2024 Oct. 1];13(74):286-98. Available from: https://doi.org/10.34069/AI/2024.74.02.24.
- 22. Koh CB, O'Higgins E. Relationships between emotional intelligence, perceived and actual leadership effectiveness in the military context. Mil Psychol [Internet]. 2018 [cited 2024 Oct. 1];30(1):27-42. Available from: https://doi.org/10.1080/08995605.2017.1419021.
- 23. Krasnodemska I, Savitskaya M, Berezan V, Tovstukha O, Rodchenko L. Psychological consequences of warfare for combatants: ways of social reintegration and support in Ukraine. Rev Amazonia Investiga [Internet]. 2023 [cited 2024 Oct. 1];12(70):78-87. Available from: https://doi.org/10.34069/ai/2023.70.10.7.
- 24. Kryvolapchuk V, Protsyk L. Psychological and legal features of reintegration of combatants. Nauka i pravookhorona [Internet]. 2020 [cited 2024 Oct. 1];(2):295-306. Available from: https://doi.org/10.36486/ np.2020.2(48).30.
- 25. Kugler J, Andresen FJ, Bean RC, Blais RK. Couple-based interventions for PTSD among military veterans: An empirical review. J Clin Psychol [Internet]. 2019 [cited 2024 Oct. 1];75(10):1737-55. Available from: https:// doi.org/10.1002/jclp.22822.
- 26. Kulichenko A, Shramko R, Rakhno M, Polyezhayev Y. Two-dimension educational resistance in the modern Ukrainian tertiary educational establishment. Apuntes Universitarios [Internet]. 2023 [cited 2024 Oct. 1];13(1):474-93. Available from: https://doi.org/10.17162/au.v13i1.1351.
- 27. MacEwan D, Gibson A. Emotional intelligence in military medical officers in the Defence Medical Services. BMJ Mil Health [Internet]. 2023 [cited 2024 Oct. 1];169(6):554-8. Available from: https://doi.org/10.1136/ bmjmilitary-2021-002068.
- 28. Miloradova N. Current assessment methods of investigator's psychological readiness for professional activities: Improvement perspectives. Futurity of Social Sciences [Internet]. 2023 [cited 2024 Oct. 1];1(2):45-58. Available from: https://doi.org/10.57125/FS.2023.06.20.04.
- 29. Mobbs MC, Bonanno GA. Beyond war and PTSD: The crucial role of transition stress in the lives of military veterans. Clin Psychol Rev [Internet]. 2018 [cited 2024 Oct. 1];59:137-44. Available from: https://doi. org/10.1016/j.cpr.2017.11.007.
- 30. Nikiforenko V, Kuryliuk Y, Kukin I. Geostrategic aspects of global security (using the example of Russian aggression). AD ALTA J Interdiscip Res [Internet]. 2022 [cited 2024 Oct. 1];12(2):170-5. Available from: https:// doi.org/10.33543/1202170175.
- 31. Norman SB, Haller M, Hamblen JL, Southwick SM, Pietrzak RH. The burden of co-occurring alcohol use disorder and PTSD in U.S. military veterans: Comorbidities, functioning, and suicidality. Psychol Addict Behav [Internet]. 2018 [cited 2024 Oct. 1];32(2):224-9. Available from: https://doi.org/10.1037/adb0000348.
- 32. Oden KB, Lohani M, McCoy M, Crutchfield J, Rivers S. Embedding emotional intelligence into military training contexts. Procedia Manuf [Internet]. 2015 [cited 2024 Oct. 1];3:4052-9. Available from: https://doi. org/10.1016/j.promfg.2015.07.976.
- 33. Owens GP, Steger MF, Whitesell AA, Herrera CJ. Posttraumatic stress disorder, guilt, depression, and meaning in life among military veterans. J Trauma Stress [Internet]. 2009 [cited 2024 Oct. 1];22(6):654-7. Available from: https://doi.org/10.1002/jts.20460.

- 34. Pedlar D, Thompson JM, Andrew Castro C. Military-to-civilian transition theories and frameworks. In: Military Veteran Reintegration. Elsevier; 2019. p. 21-50. doi: 10.1016/b978-0-12-815312-3.00003-6.
- 35. Pyrohovska V, Rezvorovych K, Pavlichenko I, Sushytska Y, Ostashova V. Human rights protection in the context of information technology development: Problems and future prospects. Futurity Economics & Law [Internet]. 2024 [cited 2024 Oct. 1];4(1):38-51. Available from: https://doi.org/10.57125/FEL.2024.03.25.03.
- 36. Stefanovics EA, Potenza MN, Pietrzak RH. PTSD and obesity in U.S. military veterans: Prevalence, health burden, and suicidality. Psychiatry Res [Internet]. 2020 [cited 2024 Oct. 1];291:113242. Available from: https://doi.org/10.1016/j.psychres.2020.113242.
- 37. Storozhyk M. Philosophy of future: analytical overview of interaction between education, science, and artificial intelligence in the context of contemporary challenges. Futurity Philos [Internet]. 2024 [cited 2024 Oct. 1];3(1):23-47. Available from: https://doi.org/10.57125/FP.2024.03.30.02.
- 38. Taft CT, Kaloupek DG, Schumm JA, Marshall AD, Panuzio J, King DW, Keane TM. Posttraumatic stress disorder symptoms, physiological reactivity, alcohol problems, and aggression among military veterans. J Abnorm Psychol [Internet]. 2007 [cited 2024 Oct. 1];116(3):498-507. Available from: https://doi.org/10.1037/0021-843x.116.3.498.
- 39. Pryzvanska R, Borysova O, Mozgova G, Fedorenko A. Clinical cases and recommendations for post-traumatic rehabilitation based on El. Rev Amazon Investig [Internet]. 2024 [cited 2024 Oct. 1];13(74):227-38. Available from: https://doi.org/10.34069/ai/2024.74.02.19.
- 40. Tuck D, Patlamazoglou L. The relationship between traumatic stress, emotional intelligence, and posttraumatic growth. J Loss Trauma [Internet]. 2019 [cited 2024 Oct. 1];24(8):721-35. Available from: https://doi.org/10.1080/15325024.2019.1621543.
- 41. Vostrotin O, Litovchenko T. Clinical and paraclinical features of psychopathological disorders in right hemisphere stroke. Futurity Medicine [Internet]. 2023 Sep. 30 [cited 2024 Oct. 1];2(3):29-40. Available from: https://futurity-medicine.com/index.php/fm/article/view/49
- 42. Lazorko O, Overchuk V, Zhylin M, Bereziak K, Savelchuk I. Modern types of psychological correction and their practical application. Syst Rev Pharm [Internet]. 2020 Nov 30 [cited 2024 Oct 8];11(11):1316-1322. Available from: https://www.sysrevpharm.org/articles/modern-types-of-psychological-correction-and-their-practical-application.pdf

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# **CONFLICT OF INTEREST**

The authors declare that there is no conflict of interest.

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