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PTSD in military personnel: diagnosis, treatment and support

TEPT en el personal militar: diagnóstico, tratamiento y apoyo

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Abstract


Posttraumatic stress disorder (PTSD) in military personnel demands urgent attention for enhanced diagnosis, treatment, and support, addressing mental health challenges in this crucial demographic. The main goal is to offer a detailed comprehension of how PTSD is diagnosed, treated, and supported among military personnel. This research utilizes established such methodology as surveys from respected sources, such as Hill & Ponton and the Center for Advancing Health. The criteria for including scientific sources underwent a rigorous selection process using academic. In the results it was discussed the treatments for PTSD in the military, such as psychotherapy, pharmacotherapy, and other approaches aimed at reducing stress and alleviating distress. Special attention is paid to support for service members with PTSD, which may include social support, rehabilitation programs and other interventions


Resumen


El trastorno de estrés postraumático (TEPT) en el personal militar exige una atención urgente para mejorar el diagnóstico, el tratamiento y el apoyo, abordando los desafíos de salud mental en este grupo demográfico crucial. El objetivo principal es ofrecer una comprensión detallada de cómo el TEPT es diagnosticado, tratado y apoyado entre el personal militar. Esta investigación utiliza metodología establecida como encuestas de fuentes respetadas, como Hill & Ponton y el Center for Advancing Health. En los resultados se analizaron los tratamientos para el TEPT en los militares, como la psicoterapia, la farmacoterapia y otros enfoques destinados a reducir el estrés y aliviar la angustia. Se presta especial atención al apoyo a los miembros del servicio con TEPT, que puede incluir apoyo social, programas de rehabilitación y otras intervenciones para su vuelta vida normal tras una experiencia traumática. Se descubrió que un diagnóstico y tratamiento

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for their return to normal life after a traumatic experience. It was found that effective diagnosis and treatment of PTSD in military personnel can significantly improve their quality of life and reduce the risk of mental deterioration. The conclusions emphasize the need for further improvement of the support system for military personnel with PTSD and spreading awareness about this problem in order to improve the quality of life of this group of people.

Keywords: military veterans, mental health, trauma impact, psychological well-being, therapeutic approaches, comprehensive support, psychological rehabilitation.

Introduction

Posttraumatic stress disorder (PTSD) remains a pressing concern for military personnel, underscoring the profound psychological impact of exposure to traumatic events during their service. As a complex mental health condition, PTSD not only poses challenges to individual well-being but also jeopardizes the overall effectiveness and resilience of military forces. The persistent nature of PTSD within the military milieu underscores the urgent need for tailored interventions and support structures. Its repercussions reverberate throughout military ranks, influencing not only individual psychological well-being but also permeating the operational readiness and cohesion of armed forces.

In navigating the aftermath of traumatic experiences, addressing and mitigating the far-reaching consequences of PTSD becomes imperative for sustaining a robust and resilient military force. The prevalence of PTSD in military populations has spurred a growing body of literature focusing on diagnosis, treatment, and support systems tailored to the unique needs of military personnel. Despite considerable efforts, the research problem persists – how can we comprehensively understand and effectively manage PTSD among military members? This question highlights the critical need for ongoing research and intervention strategies that consider the multifaceted aspects of PTSD within the military context.

To contribute to the existing body of knowledge, this study delves into the intricacies of PTSD among military personnel. The primary objective is to provide a nuanced understanding of diagnosis, treatment modalities, and support mechanisms available to military members grappling with PTSD. The study will undertake

eficaces del TEPT en el personal militar pueden mejorar significativamente su calidad de vida y reducir riesgo de deterioro mental. Las conclusiones subrayan la necesidad de seguir mejorando el sistema de apoyo al personal militar con TEPT y difundir la concienciación sobre este problema para mejorar la calidad de vida de este grupo de personas.

Palabras clave: veteranos militares, salud mental, impacto del trauma, bienestar psicológico, enfoques terapéuticos, apoyo integral, rehabilitación psicológica.

specific tasks, including a thorough literature review, analysis of diagnostic criteria, examination of treatment effectiveness, and exploration of support systems.

By addressing these tasks, the research aims to unravel the complexities of PTSD within military contexts and offer insights that can inform more targeted and effective approaches to diagnosis, treatment, and support. Ultimately, this study aspires to contribute valuable knowledge that enhances the well-being of military personnel and advances the broader understanding of PTSD as a psychological phenomenon. In the following sections, we will provide a brief summary of each, outlining our approach to literature review, analysis of diagnostic criteria, examination of treatment effectiveness, and exploration of support systems within the military context.

Literature review

In the backdrop of contemporary conflicts, such as the ongoing hybrid war in Ukraine and conflicts in regions like Israel and Syria empirical investigations reveal an alarming susceptibility to specific psychological disorders, with a particular focus on chronic post-traumatic stress disorder (PTSD) among combatants. A study conducted by Hrynzovskyi et al. (2022) brought attention to a significant diagnosis rate of approximately 20% for chronic PTSD among former participants in the Anti-terrorist operation (ATO) and those presently engaged in the Joint Forces Operation in Ukraine. The intricate interplay between warfare and mental and physical health has become a pivotal focal point in the scholarly discourse, especially in the context of ongoing conflicts. Scholars have systematically probed the psychological challenges faced by combatants, shedding light

on various strategies for their social reintegration and support (Bowd & Özerdem, 2013; Duel et al., 2019). The examination of the psychological well-being of individuals engaged in conflicts, such as those in Ukraine and other regions, remains critical for understanding the broader implications of warfare on mental health (Kryvolapchuk & Protsyk, 2020; Melnyk, Prykhodko & Stadnik, 2019). Current studies underscore the need for comprehensive research that goes beyond diagnosing mental health disorders, emphasizing the development of effective support mechanisms and interventions tailored to the unique challenges faced by combatants in contemporary conflicts. The modernization of medical care systems, particularly in the context of armed conflicts, has garnered significant attention in recent research literature. Iliina-Stohniienko and Malets (2022) delve into the modernization of the medical care system for victims of armed conflicts, focusing on the Ukrainian experience. Their work explores innovative approaches to medical care, shedding light on the challenges and advancements in providing healthcare services to those affected by armed conflicts. Rakhimov and Mukhamediev (2022) shift the focus towards the implementation of digital technologies in future medicine. Their study examines the role of digital technologies in shaping the future of healthcare, presenting a forward-looking perspective on the integration of technology into medical practices. Kaminsky and Viesova (2022) contribute to the discourse on innovative activities in healthcare institutions of the future. In their research, they discuss models for overcoming dilemmas and challenges within healthcare, providing valuable insights into the evolving landscape of healthcare practices. Studies on the modernization of healthcare systems in conflict zones have highlighted the importance of innovation and technology to improve the quality of care.

The exploration of psychological rehabilitation for military personnel has not only been a focus in global contexts but has also extended to the experiences in Latin America, particularly in Colombia. A series of studies sheds light on various aspects of trauma, PTSD, and resilience among military service members, guerrilla, and paramilitary soldiers in this region. Bonanno et al.'s (2012) prospective cohort study examines trajectories of trauma symptoms and resilience in deployed US military service members. The study provides insights into the dynamic nature of trauma responses and the factors contributing to resilience among deployed personnel. The findings contribute to understanding the long-

term impact of military deployment on mental health and underscore the importance of resilience as a crucial factor in coping with trauma. In the Colombian context, de la Espriella, Pingel, and Falla (2010) engage in the (de)construction of a psychiatric diagnosis, specifically PTSD, among former guerrilla and paramilitary soldiers. The study highlights the complexity of diagnosing and understanding PTSD in the unique socio-political context of Colombia. By examining the experiences of individuals involved in armed conflict, the research sheds light on the challenges of applying traditional psychiatric diagnoses in diverse cultural and contextual settings. Hourani, Williams, Bray, and Kandel (2015) delve into gender differences in the expression of PTSD symptoms among active-duty military personnel. This study brings attention to the nuanced ways in which PTSD may manifest differently in men and women within military contexts. Understanding gender-specific expressions of trauma symptoms is crucial for tailoring effective interventions and support systems. Maldonado et al. (2024) contribute valuable lessons learned in military trauma in Colombia, providing insights into the practical aspects of managing trauma in a complex and dynamic environment. Their work outlines practical approaches and considerations in dealing with military trauma, offering a comprehensive perspective on the challenges faced in trauma care in the Colombian context. Lastly, Thoene, García Alonso, and Blanco Bernal (2020) focus on memory and trauma among soldier victims in the Colombian Armed Conflict. The study delves into the psychological aspects of memory and trauma, shedding light on the enduring impact of armed conflict on the mental health of military personnel. Understanding the interplay between memory and trauma is crucial for developing targeted interventions and support strategies. In summary, these studies collectively contribute to a nuanced understanding of trauma, PTSD, and resilience among military personnel, with a specific focus on the experiences in Latin America, particularly Colombia. The exploration of trajectories, cultural nuances, gender-specific expressions, practical lessons, and the interplay between memory and trauma enriches the broader discourse on psychological rehabilitation for military members. As the current study delves into PTSD in military personnel, these insights will inform and contextualize the exploration of diagnosis, treatment, and support mechanisms within the unique context of armed forces facing contemporary conflicts.

Moreover, Chovhaniuk, Bashkirova, Meleha, and Yakymenko (2023) present a study on the state of health in conditions of constant numerous transitional and intermediate stages. Their research explores the dynamics of health under challenging circumstances, contributing to a nuanced understanding of health in transitional phases. Vostrotnin and Litovchenko (2023) focus on the clinical and paraclinical features of psychopathological disorders in right hemisphere stroke. Their research explores the psychological aspects of stroke, contributing to the broader understanding of mental health in the context of neurological disorders. Lastly, the work of Dobrovol'ska, Moroz, Shpak, Tsekhmister and Vovchenko (2021) delves into motivational mechanisms for emotional intelligence development in practicing psychologists. Their study explores the factors influencing the development of emotional intelligence among psychologists. These studies provide a comprehensive overview of diverse topics within the realm of healthcare, ranging from the modernization of medical care systems in conflict zones to the role of technology, innovative activities and mental health dynamics. The synthesis of these works contributes to a holistic understanding of the evolving landscape of healthcare practices and challenges.

Collectively, these diverse studies offer a comprehensive overview of the multifaceted challenges and innovations within the healthcare landscape of conflict zones. In alignment with the insights gained from this literature, the current study on PTSD in military personnel seeks to contribute to this discourse by specifically focusing on the diagnosis, treatment, and support mechanisms within the unique context of armed forces facing contemporary conflicts. By synthesizing and building upon the key findings of the reviewed studies, our research aims to provide a nuanced understanding of the complexities surrounding PTSD among military personnel, offering insights that can inform more targeted and effective approaches to enhance the well-being of those serving in challenging environments. This endeavor aligns with the broader goal of advancing the understanding of mental health in conflict settings and underscores the significance of ongoing research and intervention strategies to address the intricate challenges faced by military personnel.

Hence, the topic of posttraumatic stress disorder among military personnel continues to be highly relevant in the face of ongoing conflicts and the emergence of new possibilities. Therefore, this research aims to synthesize existing knowledge

and provide a fresh perspective on the treatment and support of military personnel experiencing this disorder. Efforts to consolidate existing data and introduce new approaches are crucial steps in ensuring quality assistance and understanding the intricacies of this disorder within a military context. As contemporary conflicts can expose military personnel to various traumatic situations, understanding, diagnosing, and treating PTSD become essential tasks to ensure their optimal physical and mental well-being.

Methodology

Research design

Posttraumatic stress disorder (PTSD) remains a pervasive and critical issue within the military landscape, necessitating a comprehensive examination of the multifaceted challenges faced by military personnel exposed to traumatic events during active service. Recognized as a complex mental health condition, PTSD extends its impact beyond individual well-being, affecting the overall effectiveness and resilience of military forces.

Data collection

1. Quantitative data collection: survey

The study leverages existing surveys sourced from reputable platforms, including Hill & Ponton (Hill & Ponton., (n.d.)) and National Center for PTSD (U. S. Department of veterans affairs (2023)). A detailed examination of the statistical data was obtained from these surveys, emphasizing key statistics related to the prevalence, diagnosis, and treatment outcomes of PTSD among military personnel.

Prior to using surveys from Hill & Ponton and the National PTSD Center, this study used Statistica to process the data.

2. Qualitative data collection: scientific literature

The inclusion criteria for scientific sources involve a meticulous selection process using academic databases like Google Scholar, Scopus, and WoS, Publons, Crossref.

A comprehensive search using keywords such as "military personnel", "PTSD diagnosis" "treatment strategies", "rehabilitation" and "psychological support". The selection of sources within a specific date range ensures relevance and recency, encompassing scholarly

articles, books, and reports that address the diagnosis, treatment, and support of PTSD among military personnel.

The selection of literature for a study was a critical process that involved the careful consideration of various criteria to ensure the relevance, credibility, and reliability of the sources:

1. **Relevance to the research topic.** The literature had to directly address or contribute to the understanding of the research topic, in this case, PTSD among military personnel. Each selected source needed to provide valuable insights, data, or perspectives related to the specific aspects of diagnosis, treatment, and support mechanisms for PTSD in the military.
2. **Publication date.** Recent and up-to-date sources were preferred to ensure that the information reflected the latest developments, research findings, and advancements in the field. However, seminal works or foundational theories could also be included, with an emphasis on incorporating contemporary literature.
3. **Authoritativeness and credibility.** The credibility of the author or source was crucial. Scholarly articles, peer-reviewed journals, books from reputable publishers, and reports from established organizations contributed to the reliability of the literature. The academic and professional background of the authors also played a role in determining the credibility of the source.
4. **Methodology and research design.** For empirical studies, the methodology and research design had to be sound. Research that employed rigorous methods, such as randomized controlled trials, longitudinal studies, or systematic reviews, enhanced the reliability of the information presented.
5. **Currency of statistical data.** When the literature included statistical data, it was essential to consider the timeliness of the data. Statistics needed to be current and relevant to the time frame of the study. This was particularly important for understanding the prevalence rates, diagnostic criteria, and treatment outcomes associated with PTSD.
6. **Peer Review.** Peer-reviewed sources underwent a rigorous evaluation process by experts in the field. These sources were more likely to be accurate, reliable, and of high quality. Including peer-reviewed articles enhanced the scholarly integrity of the literature.

By adhering to these criteria, the researcher built a robust literature review that formed the foundation for a comprehensive and credible exploration of PTSD among military personnel, addressing the specific objectives of the study.

Data analysis

Quantitative Data Analysis:

The quantitative survey data collected will undergo a thorough and rigorous statistical analysis. This process will utilize descriptive statistics to concisely summarize key findings derived from the survey responses. The quantitative survey data were subjected to rigorous statistical analysis using Microsoft Excel, employing descriptive statistics to summarize key findings and inferential analyses.

Qualitative Data Analysis:

In the qualitative domain, the literature review underwent a robust thematic analysis. This involved identifying recurrent themes pertaining to the diagnosis, treatment, and support of military personnel with PTSD within the selected scholarly sources. To enhance the credibility of the qualitative findings, transparent coding procedures were implemented. Moreover, an exploration of intercoder reliability was undertaken, reinforcing the trustworthiness of the qualitative insights extracted from the literature. Through these meticulous procedures, the qualitative analysis aimed to provide a nuanced understanding of the complexities surrounding PTSD in military personnel.

Synthesis of Qualitative and Quantitative Insights:

This research adopts an integrative approach, synthesizing qualitative insights from scholarly literature with rigorously analyzed quantitative data derived from surveys. By combining these two distinct but complementary methods, the study aspires to construct a comprehensive and cohesive understanding of PTSD among military personnel. The overarching goal is to generate valuable insights that inform effective strategies for the diagnosis, treatment, and support of military personnel experiencing posttraumatic stress disorder.

Results and discussion

Posttraumatic stress disorder (PTSD) among military personnel is often exposed to intense and life-threatening situations, such as combat,

natural disasters, or other high-stress scenarios, which can trigger symptoms of PTSD (Palmer et al., 2019). PTSD can significantly impact a military member's daily life, relationships, and overall well-being (Engel et al., 2016). It is essential to diagnose and treat PTSD promptly to enhance the individual's quality of life and functioning. Therefore, recognizing and addressing PTSD is crucial for supporting the mental health and resilience of military personnel who have faced the challenges of traumatic experiences during their service. American researchers studying PTSD in military personnel argue that when providing assistance, attention should also be paid to the possibility of suicide and violence towards others, especially family members (Duel et al., 2019). In the United States, it has been observed that more veterans died by suicide after the Vietnam War than were killed in combat. Studies show a connection between guilt

feelings and suicide (Duel et al., 2019). It should also be noted that there is a higher risk of suicide in physically injured military personnel.

The presented statistics in modern survey shed light on the multifaceted aspects of posttraumatic stress disorder among military personnel, emphasizing the prevalence and consequences of trauma within this demographic (Engel et al., 2016). The development of PTSD among military personnel is critical dimension. Approximately 660,000 out of 5.5 million American military personnel who served in specific areas are reported to have developed PTSD (Hill & Ponton, n.d.). The prevalence of PTSD varies with age, with a higher incidence among veterans aged 18 to 29 years (29.3%) compared to those over the age of 60 (4%) (U. S. Department of veterans affairs, 2023). (See Figure 1).

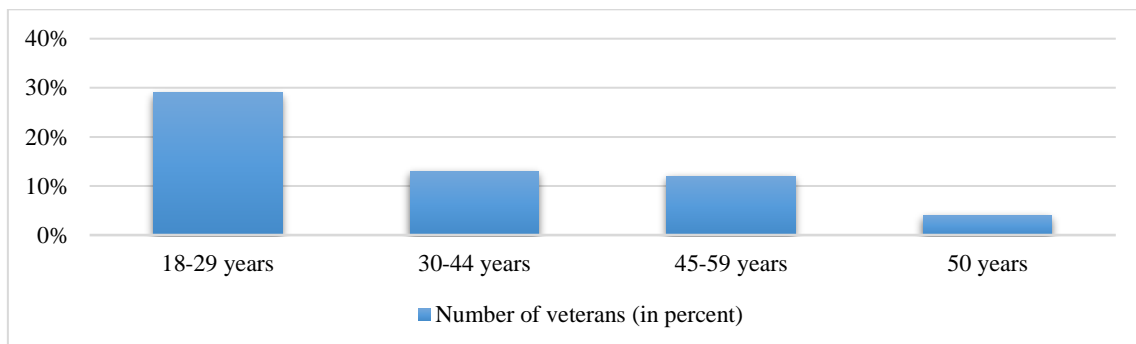


Figure 1. Prevalence of PTSD among American veterans by age group.
Source: Author's development

Moreover, the prevalence statistics of post-traumatic stress disorder (PTSD) among Ukrainian military personnel suggest that many veterans may conceal their psychological issues. Specifically, 54% of veterans feel ashamed or reluctant to acknowledge certain problems related to PTSD (Gordiychuk, 2017). This indicates that social stigmas or the fear of revealing personal difficulties may impact openness about psychological struggles. Significantly, 22% of veterans have chosen to keep their problems hidden (Gordiychuk, 2017).

This may reflect a desire to avoid disclosing internal conflicts or an attempt to refrain from societal judgment. Such an approach could lead to a portion of veterans not receiving the necessary psychological assistance or support, negatively affecting their overall mental well-being and adaptation to civilian life. Therefore, it is crucial to develop programs and initiatives aimed at reducing social stigmatization and fostering open discussions about psychological issues among Ukrainian veterans (See Figure 2).

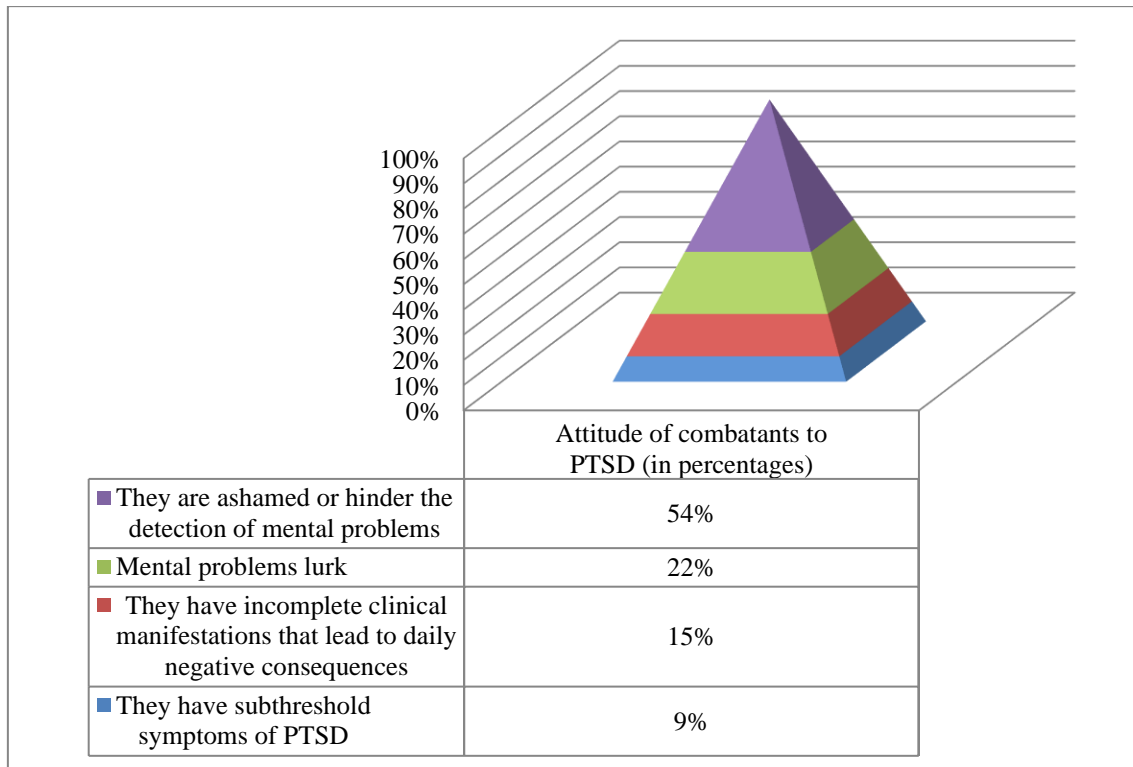


Figure 2. The attitudes of combatants towards receiving psychological assistance for addressing PTSD (in percentages).

Source: based on Gordiychuk (2017)

In the international classification of mental disorders, PTSD is characterized by three groups of symptoms: symptoms of re-experiencing (or intrusion symptoms); avoidance symptoms; and symptoms of physiological hyperarousal (Brownlow et al., 2018). In response to a traumatic event, dissociative, somatoform, panic disorders, depression, antisocial behavior, and addictions may also develop. Some European authors suggest supplementing the diagnosis of PTSD with post-traumatic personality disorders, as chronic PTSD symptoms can be felt throughout a person's life (Walsh & Rosenblum, 2022). This is why such individuals require social and psychological support. In the other hand, combat-related PTSD is generally understood as prolonged or delayed conditionally adaptive mental changes and disorders that arise as a result of the influence of combat factors. Some of these mental changes in wartime are adaptive, but in peacetime, they lead to various forms of social adaptation.

Exploring the effectiveness of interventions, a 2021 study suggests that about 10 weeks of treatment in a military clinic can significantly improve mental health issues among military personnel (Hill & Ponton, (n.d.)). The positive outcomes are reflected in the statistics, where 38% of individuals experienced significant

improvements in their PTSD checklist or PCL scores. Furthermore, 28% of individuals no longer met the criteria for PTSD after the intervention, indicating a noteworthy reduction in symptoms. A success rate of 12.8% underscores the positive impact of targeted treatments on the overall well-being of military personnel dealing with PTSD (U. S. Department of veterans affairs, 2023). In summary, these comprehensive findings underscore the urgent need for addressing sexual harassment and PTSD within the military. The success rates reported in interventions, particularly in military clinics, highlight the potential for positive outcomes and signify the importance of ongoing efforts to support and improve the mental health of military personnel. The following are the main psychological and physiological manifestations of post-traumatic stress disorders in combatants: excessive vigilance, exaggerated reactions, emotional blunting, aggressiveness, memory and attention concentration impairments, depression, general anxiety, outbursts of anger, substance abuse, intrusive memories, hallucinatory experiences, sleep problems, suicidal thoughts, and guilt for surviving (Palmer et al., 2019). Researchers showed that 75% of PTSD patients experienced headaches and feelings of weakness in various parts of the body, 56% experienced nausea, heart and back pain, dizziness, feelings

of heaviness in the limbs, numbness in various parts of the body, "lump in the throat," and 40% of those surveyed had difficulty breathing (Hussain, 2022; Kaminsky & Viesova, 2022). Psychological rehabilitation is part of the overall rehabilitation complex (along with medical, vocational, and social) aimed at restoring lost (disturbed) mental functions, optimal performance, social activity, restoring (correcting) self-esteem and social status of military personnel with mental disorders, combat injuries, and disabilities (Napryeyenko et al.,

2019; Rakhimov & Mukhamediev, 2022; Chovhaniuk et al., 2023). Rehabilitative tools of psychological assistance during PTSD in military personnel encompass a variety of approaches aimed at addressing the complex effects of trauma on mental health and well-being (Zang et al., 2017). These tools are designed to help individuals cope with and recover from traumatic experiences, regain a sense of control over their lives, and improve their overall quality of life (See Table 1).

Table 1.
Rehabilitative tools of psychological assistance during PTSD

Tools	Characteristic
Cognitive Behavioral Therapy (CBT)	Cognitive Behavioral Therapy (CBT) is widely used in treating PTSD and helps individuals identify and change negative thought patterns and behaviors related to their traumatic experience. This therapy aims to reduce symptoms and improve coping strategies.
Exposure Therapy	Exposure therapy gradually exposes individuals to memories, thoughts, or situations related to their trauma in a safe and controlled environment. This approach helps them confront and process their traumatic experiences, ultimately reducing the intensity of their emotional responses over time.
Eye Movement Desensitization and Reprocessing (EMDR)	EMDR is a specialized therapy that utilizes bilateral stimulation, such as eye movements, to assist individuals in processing traumatic memories and alleviating emotional distress.
Mindfulness-Based Therapies	Mindfulness-based approaches, like mindfulness-based stress reduction (MBSR) or mindfulness-based cognitive therapy (MBCT), can aid individuals in cultivating heightened awareness and acceptance of their thoughts and emotions. This can be beneficial in effectively managing symptoms of PTSD.
Group Therapy	Group therapy provides a supportive environment for individuals to share their experiences, learn from others, and develop coping strategies together. It can help reduce feelings of isolation and stigma often associated with PTSD.
Medication	In certain instances, medications like antidepressants or anti-anxiety medications may be prescribed to assist in symptom management for PTSD. These medications are frequently utilized alongside therapy (Vostrotin & Litovchenko, 2023).
Education and Psychoeducation	Providing information about PTSD, its symptoms, and available treatments can help individuals better understand their condition and engage more effectively in their recovery process.
Peer Support	Peer support programs connect individuals with lived experience of PTSD, allowing them to share insights, offer mutual support, and learn from each other's experiences.
Physical Activity and Recreation	Engaging in physical activity and recreational activities can help reduce stress, improve mood, and promote overall well-being, which can be beneficial for individuals with PTSD.

Source: Author's development

Contemporary research confirms the effectiveness of pharmacological medications in treating this syndrome. In the realm of PTSD treatment, medications such as paroxetine and sertraline have been employed. A noteworthy double-blind, placebo-controlled trial revealed that the continuation of sertraline treatment resulted in a mere 5% relapse rate, a stark contrast to the 26% relapse rate observed in patients administered a placebo. Beyond

medications specifically designed for PTSD, researchers undertook a comprehensive examination encompassing over a thousand medications (Marx & Gutner, 2015). Employing incidence rate ratios (IRR), the study identified 15 medications demonstrating protective associations or robust protective effects against PTSD. Notably, these drugs not only refrained from escalating the risks of PTSD but also exhibited risk reduction ranging from

approximately 30% to over 50%. The IRRs of these drugs manifest a bias toward the protective direction, with a higher IRR indicating a stronger inclination towards protection. The IRRs for the identified medications are as follows: propranolol: 0.63; dexmethylphenidate:

0.68; Atomoxetine: 0.64; Guanfacine: 0.64; Disulfiram: 0.48; Dextroamphetamine: 0.73; Methylphenidate: 0.65; Clonidine: 0.65; Prazosin: 0.33 and others (U. S. Department of veterans affairs, 2023). (See Figure 3).

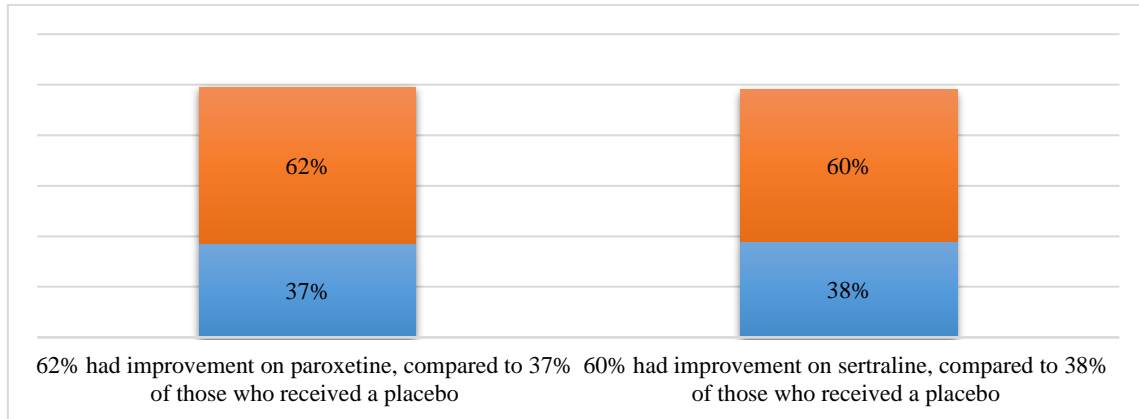


Figure 3. Effectiveness of medications for PTSD
Source: Author’s development

These rehabilitative tools can be tailored to meet the individual needs and preferences of military personnel with PTSD, helping them effectively manage their symptoms and improve their

overall quality of life (Zang et al., 2017). Support for military personnel with PTSD is crucial and can come in various forms. Researchers wrote about some examples of it (See Table 2).

Table 2.
Forms of support of military personnel with PTSD

Forms	Characteristic
Therapeutic Interventions	Offering access to evidence-based therapies like Cognitive Behavioral Therapy (CBT), Eye Movement Desensitization and Reprocessing (EMDR), and group therapy can assist individuals in processing their trauma and developing coping strategies..
Medication Management	In certain instances, medications like antidepressants or anti-anxiety medications may be prescribed to aid in managing symptoms of PTSD.
Family Support	Involving family members in therapy or providing education about PTSD can help create a supportive environment at home.
Education and Awareness	Raising awareness about PTSD and reducing the stigma associated with mental health problems can encourage individuals to seek assistance.
Employment and Vocational Support	Assisting individuals in transitioning back to civilian life or finding meaningful employment can improve their overall well-being.
Access to Healthcare	Ensuring that military personnel have access to mental health services and resources is essential for effective treatment.
Crisis Intervention	Offering immediate support during moments of crisis or acute distress is critical in preventing further harm.
Holistic Approaches	Incorporating holistic approaches such as yoga, meditation, or art therapy can complement traditional treatments and promote overall well-being.
Continued Monitoring and Follow-Up	Regular check-ins and follow-up appointments can help track progress and address any new challenges that may arise.

Source: author’s development based on Vujanovic et al. (2011)

Overall, a comprehensive and multi-faceted approach to supporting military personnel with PTSD is essential in helping them recover and lead fulfilling lives.

Several studies suggest that a brief course of Cognitive Behavioral Therapy (CBT) for PTSD can result in symptom reduction. Specifically, within a six-week period, 21% to 46% of PTSD patients receiving CBT exhibited a 50% decrease in the severity of their mental health symptoms.

Another study indicated that around 32% to 53% of PTSD patients who underwent at least 10 CBT sessions experienced a 50% reduction in the severity of their mental health symptoms. However, it is important to note that 14% of PTSD patients discontinued psychotherapy, with exposure therapy having the highest dropout rate at 50% (Hill & Ponton (n.d.)).

These results illuminate that psychological rehabilitation emerges as a vital component of the overall rehabilitation complex, focusing on restoring mental functions, optimal performance, and social activity while addressing self-esteem and social status. Early initiation of psychological rehabilitation, particularly during the formation of psychopathology and post-treatment, is crucial for effective intervention, as confirmed in works such as (Agah, 2022; Brownlow et al., 2018). These asserting that the rehabilitative tools of psychological assistance during PTSD in military personnel encompass diverse approaches aimed at addressing the complex effects of trauma on mental health and well-being are also supported in contemporary works by Marx & Gutner (2015), where patient interviews describe their recovery and realization. Specifically, according to Rona et al. (2012) and Sommer et al. (2022), these tools aim to help individuals cope with and recover from traumatic experiences, regain control over their lives, and enhance their overall quality of life.

On the other hand, the obtained results somewhat contradict certain claims of contemporary researchers. The findings challenge the assertion that there is a direct link between heightened arousal caused by PTSD and immune dysfunction, potentially leading to autoimmune diseases (Bookwalter et al., 2020). While evidence suggests an interaction, the precise mechanisms and causative factors remain complex and may involve numerous contributing elements beyond PTSD itself. However, it is worth agreeing with hypotheses regarding a noticeable connection between hearing loss and posttraumatic stress disorder (PTSD) (MacGregor et al., 2020; McLean et al., 2019). Researchers noted that first-time hearing loss was identified in 14.4% of the wounded with varying degrees of severity (10.3% unilateral, 4.1% bilateral). At the same time, the rates of diagnosed posttraumatic stress disorder (PTSD) differed between groups: 9.1% for those with no hearing loss, 13.9% for unilateral hearing loss, and 29.2% for bilateral hearing loss (MacGregor et al., 2020). Thus, these results indicate a potentially significant link between bilateral hearing loss and increased vulnerability to PTSD,

emphasizing the importance of further exploration and understanding of these relationships in the context of traumatic injuries (MacGregor et al., 2020).

Similarly, a point of departure from Simon et al. (2019) involves the assumption that "lower levels of perceived social support (PSS) will be reported for the Complex Posttraumatic Stress Disorder (CPTSD) group compared to the non-CPTSD group." It is crucial to consider that various factors could influence the relationship between perceived social support and complex posttraumatic stress disorder (CPTSD), and this hypothesis might oversimplify the complexity of this connection. Additionally, the authors of this study presume causal relationships between lower PSS and CPTSD, but it is important to recognize that correlation does not necessarily imply a causal relationship. Bidirectional influences may exist, where CPTSD affects social support and vice versa.

Hence, the novelty of the research lies in its focused examination of Posttraumatic Stress Disorder (PTSD) within the specific context of military personnel. While PTSD is a well-studied condition, this research uniquely tailors its approach to the distinctive challenges encountered by those in the military. It delves into the intricate interplay of factors that contribute to PTSD within this demographic, acknowledging the nuances that set military-related trauma apart. In terms of diagnosis, treatment, and support, the study adopts a holistic perspective, recognizing the interconnected nature of these elements in addressing the psychological impact of military service. This integrative approach goes beyond isolated examinations of each aspect, providing a more comprehensive understanding of how these components interact and influence the overall well-being of military personnel. Practically, the research holds significant implications for the development of targeted interventions and support systems for military members grappling with PTSD. The findings offer practical insights for mental health professionals, policymakers, and military leadership, guiding the formulation of more effective strategies to diagnose, treat, and support individuals dealing with PTSD in the military.

Conclusions

Hence, the study highlights the critical dimensions of PTSD among military personnel, emphasizing its prevalence, consequences, and potential connections to various factors. The

prevalence of PTSD varies with age, with higher incidence among younger veterans, and specific symptoms, such as headaches and feelings of weakness, are reported by a significant percentage of individuals with PTSD.

Psychological rehabilitation, an integral part of the overall rehabilitation complex, focuses on restoring lost mental functions, optimal performance, and social activity. This comprehensive approach aims to correct self-esteem and social status among military personnel dealing with mental disorders, combat injuries, and disabilities. Initiated even in the presence of pre-pathological mental changes caused by extreme psychogenic influence, psychological rehabilitation is crucial at early psychopathology stages and becomes especially active in the final stages of treatment and post-treatment. Therefore, the research emphasizes the multifaceted aspects of posttraumatic stress disorder among military personnel, recognizing the significance of psychological rehabilitation as a vital component of the overall rehabilitation complex. It supports the idea that diverse tools of psychological assistance are essential for helping individuals cope with and recover from traumatic experiences, enhancing their overall quality of life.

In light of the obtained results, it is essential to provide key recommendations for further actions and improvement of support for military personnel dealing with post-traumatic stress disorder (PTSD).

1. Enhancement of psychological rehabilitation. Considering the successful outcomes of interventions, particularly in military clinics, it is crucial to support and develop psychological rehabilitation programs for military personnel. Exploring the extension of the duration and accessibility of such programs is advisable.
2. Early detection and intervention. Recognizing the importance of early identification of PTSD, it is crucial to develop systems for timely diagnosis and effective interventions. Training medical personnel and increasing awareness about these matters can enhance outcomes.
3. Post-service and deployment support. Given the potential for delayed PTSD, ensuring access to psychological support after completing service is crucial. The development of services for veterans and their adaptation to civilian life can help mitigate negative consequences.

These recommendations underscore the need for an integrated and systematic approach to addressing issues related to PTSD among military personnel, with a focus on psychological support and rehabilitation.

On the same time, the research among military personnel is limited by several factors. For example, it is hard for researchers to obtain permission and access to military personnel for research purposes can be restricted due to internal military protocols and confidentiality of information. Researchers may find it challenging to obtain sufficient data for studying a large number of military personnel with varying levels of traumatic experiences and PTSD. Also, it can be challenging to recruit an effective control group in PTSD research among military personnel, making it difficult to determine the effectiveness of treatments and support. There are some diversities of sociocultural factors in military populations can affect how treatment and support are perceived and responded to. Despite these limitations, researching PTSD among military personnel remains crucial for improving the diagnosis, treatment, and support for this vulnerable population. The study provides valuable insights into the diagnosis, treatment, and support of military personnel with PTSD. Future research could delve deeper into refining intervention strategies based on the specific needs and experiences of different subgroups within the military population.

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