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ASSESSMENT OF RISKS OF POST-TRAUMATIC STRESS DISORDER AMONG UKRAINIAN MILITARY PERSONNEL AS A COMPONENT OF PUBLIC HEALTH PRESERVATION

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Abstract*. The paper is focused on exploring the potential impact of Post-Traumatic Stress Disorder (PTSD) among combatants on the national public health system. It utilizes scientific statistical data on the prevalence of PTSD symptoms among military personnel who have participated in armed conflicts worldwide over the past 50 years. For a deeper analysis of PTSD's potential influence on Ukraine's public health system, the research examines scientific data on major somatic and mental health disorders triggered by PTSD among military personnel. The study highlights the association between PTSD in combatants and the development of comorbid conditions such as depression, substance dependency, diabetes, and cardiovascular diseases. PTSD is identified as a key risk factor that should be accounted for when planning medical and preventive measures for Ukraine's Defense Forces. The article also analyzes global trends in the declining quality of life among military personnel due to reduced material and functional capabilities. It provides data on the direct and indirect costs of treatment and rehabilitation for PTSD and its associated comorbidities. Furthermore, the article discusses PTSD's impact on self-actualization abilities, such as education, employment, job retention, and interpersonal communication. These effects, resulting from PTSD's disruption of various aspects of life, inevitably lead to negative consequences and a sharp decline in the quality of life for affected individuals.*

Key words: public health, prevalence of PTSD, mental health, comorbidities, quality of life

After the annexation of Crimea and the beginning of the war in 2014, a socio-demographic crisis began in Ukraine, accompanied in particular by the spread of stress-related mental illnesses. In 2016, the United Nations High Commissioner for Refugees (O´Brien and Reiss, 2016) published information that the number of refugees among Ukrainians reached 1.8 million, among whom a significant number of respondents showed clinically significant symptoms of anxiety, which later manifested in the development of mental illnesses (Shevlin, 2018). The epidemiological situation regarding psychiatric disorders and illnesses worsened even more after the beginning of the full-scale invasion of the Russian Federation into Ukraine. This is especially true for post-traumatic stress disorder (PTSD), as this illness spreads among the servicemen of the Ukrainian Defense Forces (UDF), whose numbers are constantly increasing. Due to the continuous involvement of additional citizens in the UDF and the continuation of active hostilities, the mental well-being of Ukrainian servicemen and veterans is one of the priority areas of activity for domestic medicine and the public health system, as the mental state of this part of the population suffers the most as a result of the Russian-Ukrainian war (Poberezhets, 2022).

The war and related hostilities negatively affect all levels of public health in Ukraine. This occurs due to the decrease in the general level of health of citizens in connection with high physical injuries, disabilities, the spread of infectious and non-infectious, oncological diseases, the deterioration of the material condition of citizens, and the lack of full access to food, drinking water, medicines, etc. (Gonçalves Jr., 2022). In addition, the war creates a long-term burden on the public health system by reducing the effectiveness of the functioning of important state

institutions, worsening the quality of services in the fields of healthcare, food, environmental safety, education, science, etc. It is important to note that the war is accompanied not only by many types of somatic injuries and illnesses but also has negative consequences for mental health, which is especially relevant for servicemen and civilians who are in the combat zone or live near the line of contact (Brake, 2023).

The aim of study. To analyze scientific sources regarding the emergence of post-traumatic stress disorder among servicemen as a result of participation in hostilities, as well as to study disorders in the medical and socio-economic spheres of life of servicemen with a PTSD diagnosis.

Materials and methods. A retrospective analysis of the structure and causes of post-traumatic stress disorder among combatants in various countries was performed, and scientific information regarding the impact of this illness on the medical, social, and material spheres of the life of servicemen was studied.

Results and discussion. The significant prevalence of stress-related mental disorders and illnesses was recorded as a result of many armed conflicts in various parts of the world among civilians and servicemen. Thus, according to the results of a multi-stage cluster national study in Afghanistan, high anxiety symptoms were found in 72% of those examined, and symptoms of post-traumatic stress disorder (PTSD) were found in 42% of those examined (Alemi, 2023). As a result of the prolonged civil war in Cambodia, 55% of the country's servicemen reported high levels of stress, negative emotional well-being, signs of PTSD, and depression (Maddock, 2023). Similar results were observed among Chechen refugees, where two-thirds of the respondents reported high stress, anxiety levels, and PTSD symptoms (de Jong, 2007). Following the escalation of the military-political situation in Israel and the Gaza Strip in 2005, 76.7% of individuals who experienced psychological trauma due to combat reported high anxiety levels, PTSD symptoms, and depression. After the socio-political crisis in Lebanon, which culminated in civil war and the subsequent Israeli invasion, 42.1% of respondents showed signs of PTSD and depression (Solomon, 2020). During the prolonged state of war in Iraq, an outbreak of stress-related mental illnesses, including PTSD, was recorded among the population (Al-Hadethe, 2014). Among surveyed residents of Gaza, 32% reported severe PTSD symptoms, and 49.7% reported moderate symptoms. Participants in many other studies worldwide, particularly in Somalia, Rwanda, Sri Lanka, and Uganda, also reported high stress levels and the prevalence of stress-related mental disorders due to being in combat zones (Murthy, 2006). In 2015-2016, the National Center for PTSD in Virginia conducted a study on the prevalence of PTSD among U.S. servicemen. More than 500,000 U.S. military personnel who had been in combat zones between 2002-2015 participated in this study. The results showed that PTSD prevalence among U.S. servicemen was 30%. Importantly, the number of PTSD cases among U.S. military personnel-combatants has been rising yearly, as additional studies are conducted worldwide, involving participants who had not previously been examined by mental health professionals (Reisman, 2016).

Post-traumatic stress disorder (PTSD) is not only a severe mental illness with a challenging course and a high level of long-term subjective discomfort but also a socially significant mental health phenomenon. It has negative consequences for the medical, social, economic, professional, and cultural spheres of a country's life. Experiencing a stressful event that poses a threat to life and health is the primary etiological factor without which the onset of PTSD is impossible (Prykhodko, 2020). PTSD is considered the most common mental illness among combatants, associated with various negative consequences for public and healthcare systems (Kalashchenko, 2021). Common consequences of PTSD among servicemen include negative social dynamics, decreased functional capacity, deterioration in general health, significantly increased suicide risk, higher unemployment and poverty rates, a dangerous social environment, increased social tension, and more (Marwaha, 2023).

The diagnosis of PTSD is established based on observing a patient for a comprehensive set of specific signs and symptoms, categorized as follows: a) intrusion symptoms (flashbacks) – recurring memories and re-experiences of a traumatic situation, as well as intrusive thoughts and horrifying recurring nightmares about the traumatic event, psychophysiological and vegetative reactions to memories of traumatic stress (Spiller, 2023); b) avoidance symptoms – avoiding memories and thoughts about the traumatic situation (Hofmann, 2018); c) negative changes in mood and cognition – negative beliefs about oneself or the surrounding world that appeared after experiencing a traumatic event (Siegel, 2017); d) hyperarousal and reactivity symptoms – feelings of agitation, irritability, anxiety, constant vigilance, hypervigilance, increased startle responses, aggressiveness, conflict-prone behavior, and reduced self-control in behavior and emotions. The presence of such symptoms in an individual signals partial or complete manifestation of the disease and requires medical and psychological intervention, involvement of psychosocial support resources, preventive measures, and more (Casteen, 2022)

PTSD among servicemen can provoke the development of other socially significant illnesses within this category of citizens, particularly dangerous among which are various types of chemical dependency, including smoking, alcohol, and drug addiction. The explanation for the emergence of different types of chemical dependency in servicemen with PTSD lies in the fact that substance abuse serves as a means of alleviating anxiety and hyperarousal symptoms in individuals affected by this disorder. However, substance use exacerbates PTSD symptoms, and servicemen with various types of chemical dependency experience more severe dysfunction in all areas of life. Additionally, chemical dependency (Roberts, 2023). Alcohol dependence is a significant public health problem, leading to the deaths of more than three million people worldwide annually. Alcohol dependence also provokes the emergence of negative and long-term disruptions in the medical, social, personal, professional, and psychological spheres of life of both servicemen and civilians. Alcohol dependence worsens the cognitive and affective symptoms of PTSD, thereby intensifying the negative behavioral patterns of affected individuals, reducing their functional abilities and adaptive capacity, and requiring additional time, material, and human resources for successful treatment and rehabilitation of comorbid conditions (Hendriks, 2020).

According to information from American mental health workers and public health researchers, the prevalence of alcohol dependence among servicemen with PTSD is 65%, whereas the prevalence of this type of dependence among the civilian population does not exceed 27% (Na, 2023). Additionally, Fuehrlein published research findings showing that 42% of servicemen with PTSD also exhibit signs of alcohol dependence, which provoke partial changes in behavior and personality. According to the same study, only 14% of servicemen without PTSD exhibit uncontrolled alcohol consumption (Fuehrlein, 2016). Later, in 2021, a screening study on the prevalence of alcohol dependence among servicemen in Israel found a significant positive correlation between PTSD, emotional dysregulation, and alcohol dependence (Feingold, 2021). In 2022, an additional survey of 1,730 American servicemen found that 24% also exhibited concurrent PTSD and alcohol dependence (Adams, 2022).

The consequences of systematic alcohol consumption by servicemen and veterans with PTSD are particularly relevant in terms of reduced productivity and economic capability of this population group. For instance, in 2006, Schumm and Chard studied the actual economic and productivity costs associated with the constant alcohol consumption by servicemen with PTSD and found that the damages in the U.S. alone exceeded $1.5 billion annually. It is noteworthy that this sum includes direct expenditures on purchasing alcoholic beverages ($1.2 billion per year) and costs related to treating dependency symptoms ($425 million) (Schumm, 2012). Additionally, among 88,000 servicemen who were directly in combat zones in Iraq and experienced combat-related traumatic stress, 18.8% reported daily smoking, whereas this rate was 14.3% among the civilian population. According to data from the U.S. Department of

Veterans Affairs, an average of 23% of servicemen smoke regularly. Furthermore, the same study found that 11.4% of all economic expenditures, or over $1 billion, spent on treating all somatic and mental illnesses of servicemen who participated in combat are associated with the consequences of regular smoking (Widome, 2015).

An example of a potential increase in the burden on Ukraine's public health system is the study on the spread of drug dependence among servicemen with PTSD, conducted among American Vietnam War veterans. In this study, 44% of respondents reported regular, uncontrolled drug use. At the same time, the prevalence of drug dependence among the civilian population is 23%. Another similar study on the prevalence of drug dependence among servicemen with PTSD was jointly conducted by specialists from the Institute of Health and the U.S. Department of Veterans Affairs. As a result, a high prevalence of drug dependence was recorded among servicemen who returned after participating in combat in Iran and Afghanistan (Brady, 2009). A meta-analysis of 57 studies in the fields of epidemiology and public health revealed that 52% of servicemen with PTSD also exhibit mental symptoms that meet the diagnostic criteria for depressive disorder. Due to the high frequency of detecting both pathologies simultaneously, PTSD among servicemen is now considered an important predictor of depressive disorder, which is necessarily taken into account when planning treatment and rehabilitation measures for combatants. According to survey results, depression symptoms are five times more common among servicemen with PTSD compared to combatants without PTSD. Servicemen with PTSD and depression report higher levels of distress, emotional dysregulation, executive function impairments, and social maladjustment compared to those with only one disorder in their medical history. The development of comorbid mental pathologies with a prolonged and severe course is a significant public health issue, as the treatment and rehabilitation measures for each of these require substantial material resources as well as resources for medical-psychological assistance (Armenta, 2019).

An important problem for Ukraine's public health system is also evidence of a possible link between the occurrence of physical illnesses and PTSD among servicemen. It has been found that, in addition to psychiatric, emotional, and behavioral pathologies, PTSD among servicemen is also associated with numerous somatic disorders and illnesses, including obesity, diabetes, hypertension, and other cardiovascular diseases (Hoerster, 2019). A statistically significant relationship has been documented regarding the risk of developing type 1 and type 2 diabetes among servicemen with PTSD. Results from a series of laboratory studies involving 78,000 servicemen and 253,000 civilians with PTSD revealed that the prevalence of type 2 diabetes among servicemen is 12.1%, compared to 9.4% among civilians (Bergman, 2022). Behavioral disorders arising from PTSD, such as smoking, substance abuse, poor nutrition, sleep disturbances, and hormonal imbalances, are the primary causes of different types of diabetes among servicemen (Lunkenheimer, 2023). According to the American Heart Association, PTSD symptoms increase the likelihood of developing ischemic heart disease (IHD) by 61% (Akosile, 2018). Furthermore, veterans with PTSD demonstrate a 50% higher incidence of myocardial infarction and heart failure compared to servicemen without PTSD (Gradus, 2015). The relationship between PTSD and a high risk of cardiovascular pathologies was also identified through a meta-analysis of the results of a comprehensive examination of 401,712 servicemen and veterans. The study found that PTSD increases the risk of cardiovascular diseases by 53%. Beristianos and colleagues conducted a study involving 138,000 participants, which found that among veterans aged 55 and older, PTSD may increase the risk of myocardial infarction by 82% and the risk of other cardiovascular diseases by 49% (Beristianos, 2016).

Currently, the exact economic costs associated with the prevalence of cardiovascular diseases among servicemen with PTSD have not been determined, but general expenditures for treating cardiovascular diseases in the U.S. are estimated at $363.4 billion. This amount includes $216 billion in direct medical costs and $147.4 billion in indirect costs related to

productivity losses and premature mortality (Virani, 2021). However, approximately 80% of all cases of cardiovascular disease could be avoided by adhering to a healthy lifestyle and creating behavioral mediators for the prevention of cardiovascular diseases, which are more challenging to maintain (Levine, 2021). In addition to the negative impact on various aspects of physical and mental health among servicemen, PTSD also leads to disruptions in the social well-being factors of this population group, particularly reducing the economic capacity of combatants. According to WHO experts, material costs associated with PTSD will continue to increase due to the gradual complication of numerous societal factors and are projected to reach $16 trillion by 2030. Currently, for a more detailed and comprehensive assessment of economic costs related to PTSD, they are divided into two categories: direct and indirect economic costs (Al Jowf, 2022).

Direct costs include expenses incurred by servicemen for direct pharmacological and non-pharmacological treatments, which include the services of psychiatrists, psychologists, or psychotherapists. Direct costs also encompass the cost of goods and services not directly related to the healthcare system but still used in PTSD treatment, such as transportation to medical facilities, accommodation, and food in rehabilitation centers (Jo, 2014). The direct cost of PTSD treatment in the United States for one patient per year averages $20,000. It is worth noting the significant differentiation between the cost of treating PTSD in civilians and military personnel. For example, treating individuals whose mental trauma is related to combat often requires greater resources, including material resources, for successful recovery (Davis, 2022).

Indirect costs of PTSD are primarily related to job loss or the inability to find employment among affected individuals. On average, 10.5% of men and 15.8% of women in the civilian population are unemployed due to PTSD. Among servicemen, these figures are slightly lower, with 7% of men and 8.7% of women unemployed because of PTSD. In 2018, U.S. statistics calculated financial costs associated with unemployment due to PTSD, amounting to $34.8 billion, with $29.2 billion for the civilian population and $5.6 billion for servicemen. Overall, the U.S. spends $232.2 billion annually on PTSD treatment, with $189.5 billion (82%) allocated for civilian treatment and $42.7 billion (18%) for servicemen (Davis, 2022). Additionally, a significant factor contributing to indirect losses related to PTSD among servicemen is reduced work productivity or the inability to perform tasks at the same level of efficiency as before their combat deployment. On average, individuals with PTSD lose between 9.7 and 33.1 workdays annually for treatment or rehabilitation, with a total estimated cost of $34.8 billion annually, $29.2 billion of which is for civilians and $5.6 billion for servicemen. Furthermore, it has been established that PTSD among servicemen positively correlates with the inability to work full-time and requires the development of special working conditions to support the stable employment of those affected by combat zone participation. The inability to work full-time and the need for additional accommodations at work increase the socioeconomic burden, making it a public health issue (Wizner, 2022).

In addition to the reduced ability to effectively perform professional activities, it has also been recorded that specific PTSD symptoms significantly complicate the educational process, often leading to poor academic results among students with combat experience. For instance, from 2016 to 2019, more than one million former servicemen enrolled in U.S. colleges and universities, of whom one-fourth were expelled due to PTSD, preventing them from obtaining a higher degree (Morissette, 2019). The most harmful symptoms of PTSD that significantly impair the ability to learn among student veterans are intrusion symptoms, avoidance symptoms, and symptoms of hyperarousal and reactivity. Intrusion symptoms negatively affect various types of memory in veterans and reduce their ability to focus on educational processes, forcing them to mentally return to traumatic events periodically. In addition to memory and concentration, intrusion symptoms also limit other cognitive resources, making it difficult for students to function fully in an educational environment (Vasterling, 2002).

Hyperarousal and reactivity symptoms cause persistent sleep disturbances in servicemen with PTSD and also reduce their concentration, negatively affecting learning and recovery processes. Furthermore, hyperarousal is a common factor in the affective changes observed in servicemen with PTSD, such as the emergence of aggressive and conflict-prone behavioral patterns. Poorly regulated and overly emotional behavior leads to strained relationships with instructors and fellow students, negatively impacting group dynamics during the learning process, lowering levels of psychosocial support, and consequently reducing the possibility of effective rehabilitation and reintegration of servicemen into society (Read, 2011).

There is also evidence of a connection between PTSD and the development of cognitive deficits and emotional dysregulation among servicemen. Cognitive impairments in the brain's neurocognitive system due to PTSD include reduced processing speed for incoming information, impaired attention and concentration, decreased ability to learn, memorize, and retrieve information, increased mental fatigue, and more. It is important to note that these impairments of the brain's executive functions in wounded servicemen can be complex, involving multiple cognitive dysfunctions simultaneously or specific deficits in individual components (Sumner, 2017). In addition to intrusive memories of traumatic events as a primary symptom, servicemen with PTSD report serious memory impairments and problems with remembering in daily life. For instance, veterans with PTSD report frequent and severe occurrences of undifferentiated forgetting of events from their lives and reduced ability to learn or perform professional duties due to impaired mechanical and mediated memory compared to veterans without PTSD. Memory impairments and weaknesses among servicemen with PTSD have biological causes, linked to dysfunction in such central nervous system regions as the amygdala, medial frontal cortex, and anterior cingulate cortex, as established through various neuroimaging techniques (Pitts, 2022).

In addition to neuroimaging methods, memory decline in servicemen with PTSD has been documented in a range of neuropsychological studies aimed at investigating cognitive abilities in this population group (Scott, 2015). Memory deficits in servicemen with PTSD exacerbate stress levels, reduce quality of life and adaptive capacity, and require additional resources for the treatment and rehabilitation of this condition (Samuelson, 2011). Persistent memory impairments among servicemen with PTSD are not only a problem of clinical psychology and psychiatry but also of the public health system. Memory impairments lower the quality of life, disorganize the lives of servicemen, and negatively affect their social interactions and functional abilities. Such memory impairments and difficulties in processing and recalling information lead to a significant reduction in the range of potential activities for servicemen, limiting their socioeconomic opportunities. Memory decline in those affected by PTSD occurs due to disruptions in key cognitive processes in the brain, particularly as thoughts, memories, and attention in servicemen are focused on the traumatic experience. This sharply reduces their ability to process new incoming information or recall unrelated information. The persistent fixation on the traumatic event is associated with the fact that the traumatic event and related emotions hold much greater subjective importance for individuals with PTSD than any other information, even when the potential utility of the latter is objectively higher. Memory impairments among servicemen with PTSD not only cause professional difficulties but also significantly restrict their ability to learn, further negatively impacting the public health system by complicating socioeconomic processes (Schweizer, 2011).

The inability to modulate and manage attention among servicemen after experiencing traumatic stress is also linked to the persistent fixation of all cognitive resources on the traumatic experience, a characteristic of PTSD even at early stages of the disorder (Krauzlis, 2023). It has been proven that this cognitive fixation on memories and thoughts of traumatic stress potentiates the development of other PTSD symptoms, including hyperarousal and reactivity, intrusion symptoms, and avoidance symptoms (Ely, 2023). It is worth noting that the dysfunction of brain neural networks responsible for attention modulation due to PTSD has a

significant, long-term negative impact on both the quality of life of servicemen and the public health system as a whole. Servicemen with persistent attention deficits inevitably face impairments in other cognitive functions, such as perception, assimilation, and processing of incoming information, as well as memory and thinking disruptions. They lose the ability to organize educational and work processes effectively and face interpersonal communication issues. Due to these factors, the quality of life of servicemen with PTSD significantly decreases, while emotional tension rises because of lowered self-esteem and excessive self-criticism related to their inability to meet social, professional, material, and personal needs (Louis, 2023).

Evidence that low attention levels can be a predictive factor for the development and a symptom of PTSD was identified through the use of go/no-go tests (Swick and Ashley 2020) and stop-signal-task tests (Harlé, 2020). For instance, servicemen who experienced traumatic stress were asked to complete go/no-go tasks (responding only to "go" prompts). Those with psychological trauma demonstrated statistically significantly poorer results compared to the control group. Similarly, during stop-signal-task tests (responding only to specific stop-signal stimuli), servicemen under stress also showed reduced attention compared to the control group (Esterman, 2019). Individuals with traumatic stress showed longer reaction times needed to respond to stimuli, impaired active attention-switching abilities, and deficits in self-control (Swick, 2020).

Conclusion: Post-traumatic stress disorder (PTSD) among servicemen is a significant factor in shaping public health, as this condition can negatively impact all spheres of the lives of those affected and reduce their quality of life. This impact manifests in the role of PTSD as a trigger for the development of other diseases (both somatic and mental), thereby increasing the burden on Ukraine's public health and healthcare systems. Additionally, the treatment and rehabilitation of PTSD and its comorbid conditions are long-term and costly, likely worsening the financial situation of affected servicemen, which will also have negative consequences for the national public health system. Moreover, PTSD significantly limits the functional abilities of servicemen, hindering their potential for self-realization in life, which manifests as an inability to engage fully in education and perform professional duties. This, in turn, exacerbates intrapersonal and societal tensions and negatively affects social processes within the state.

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ОЦІНКА РИЗИКІВ ВИНИКНЕННЯ ПОСТТРАВМАТИЧНОГО СТРЕСОВОГО РОЗЛАДУ СЕРЕД УКРАЇНСЬКИХ ВІЙСЬКОВОСЛУЖБОВЦІВ ЯК СКЛАДОВОЇ ЗБЕРЕЖЕННЯ ГРОМАДСЬКОГО ЗДОРОВ'Я

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Резюме. *Стаття присвячена дослідженню потенційного впливу посттравматичного стресового розладу (ПТСР) серед учасників бойових дій на національну систему громадського здоров'я. Для цього використовується наукова статистична інформація щодо поширеності симптомів ПТСР серед військовослужбовців, які брали участь у бойових діях упродовж збройних конфліктів на території різних країн протягом останніх 50 років. Для більш глибокого аналізу потенційного впливу ПТСР на систему громадського здоров'я України, досліджено*

наукову інформацію щодо основних захворювань соматичного та психічного профілю, що спровоковані наявністю ПТСР серед військовослужбовців. Так, згідно з опрацьованою в іноземних джерелах науковою інформацією, суттєвою проблемою для національної системи громадського здоров'я може стати потенційний зв'язок між наявністю ПТСР у військовослужбовців-учасників бойових дій та розвитком супутніх патологій, зокрема депресивного розладу, різних видів хімічної залежності, цукрового діабету, захворювань серцево-судинної системи. Виникнення цієї проблеми можливе за рахунок того, що саме ПТСР виступає в ролі пускового механізму розвитку вказаних захворювань, а отже є фактором ризику, що має бути врахованим упродовж планування лікарсько-профілактичних заходів для військовослужбовців Сил Оборони України. Окрім медично-реабілітаційних аспектів, у статті проаналізовано глобальні тенденції погіршення якості життя військовослужбовців за рахунок зниження їхньої матеріальної та функціональної спроможності. Так, встановлено кількість коштів, що залучаються для військовослужбовців із ПТСР на повноцінне лікування та реабілітаційні заходи даного захворювання з урахуванням прямих та непрямих витрат. Також в статті наведено статистичну інформацію щодо необхідних витрат для лікування супутньої патології для військовослужбовців з ПТСР. Крім того, в статті проаналізовано вплив симптомів ПТСР серед військовослужбовців на зниження здатності до різних видів самореалізації, зокрема до навчання, працевлаштування, збереження місця роботи, міжособистісної комунікації. Реалізується такий вплив за рахунок того, що ПТСР порушує функціонування усіх сфер життєдіяльності військовослужбовців, що неминуче призводить до негативних наслідків та різкого зниження якості життя постраждалих.

Ключові слова: громадське здоров'я, поширеність ПТСР, ментальне здоров'я, супутні захворювання, якість життя

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