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Natalia DANILEVSKA
PhD, Assistant Professor at the Department of Psychiatry, Psychotherapy, General and Medical Psychology, Narcology and Sexology, Zaporzhzhia State Medical University, 26 Maiakovskoho Ave., Zaporizhzhia, 69035, Ukraine (legennant@gmail.com)
ORCID: *https://orcid.org/0000-0002-7854-9007*

Наталя ДАНІЛЕВСЬКА
кандидат медичних наук, асистент кафедри психіатрії, психотерапії, загальної та медичної психології, наркології та сексології, Запорізький державний медичний університет, проспект Маяковського, 26, Запоріжжя, 69035, Україна (legennant@gmail.com)

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DIAGNOSTIC MARKERS CONTINUUM OF THE SOCIALLY-DISADAPTATIVE POST-COMBAT SYNDROME

Abstract. Background. *The increased need for the diagnosis of mental disorders associated with hostilities has arisen in Ukraine since 2014 in connection with Russia's unprovoked invasion. During the Anti-Terrorist Operation, and later – the Operation of the United Forces, the combatants of Ukraine encountered a wide range of the newest methods of war, which are capable of leaving an imprint on the human psyche. For more than 7 years, we have been able to observe a number of specific continuums of psychopathological phenomena, one of them being Socially-Disadaptive Post-Combat syndrome.*

Aim: *to investigate the diagnostic continuum of markers of Socially-Disadaptive Post-Combat syndrome in combatants of Ukraine.*

Material and methods. *382 combatants who were involved in the Anti-Terrorist Operation / Combined Forces Operation were examined at the Zaporizhzhia Military Hospital and Zaporizhzhia State Medical University between 2015 and 2021. We compared the identified markers of Socially-Disadaptive Post-Combat syndrome (SDPS) with ICD-10 markers of similar mental disorders: enduring personality change after catastrophic experience (F62.0), PTSD (F43.1), and adjustment disorders (F43.2).*

Results. *We established a continuum of symptoms and identified 23 markers of Socially-Disadaptive Post-Combat syndrome, of which 9 are significant in the context of differential diagnosis. The provoking factors and features of the debut of Socially-Disadaptive Post-Combat syndrome, as well as its consequences, were also described by us. We determined the differences between post-combat social maladjustment syndrome and similar disorders that combatants suffer from in order to improve timely diagnosis, prognosis and development of treatment methods.*

Conclusions. *Today, we report on the identification in combatants of Ukraine Socially-Disadaptive Post-Combat syndrome. This syndrome has clear differential differences from a related group of disorders and requires further clarification of the tactics of its treatment.*

Key words: *stress, combat mental trauma, mental disorders, military personnel, combatants, diagnostics.*

ДІАГНОСТИЧНИЙ КОНТИНУУМ МАРКЕРІВ СОЦІАЛЬНО-ДЕЗАДАПТАЦІЙНОГО ПІСЛЯБОЙОВОГО СИНДРОМУ

Анотація. Актуальність: *Підвищена потреба у діагностиці психічних розладів, асоційованих із бойовими діями виникла в Україні з 2014 року у зв'язку з російською неспровокованою агресією. Під час Антитерористичної операції, а згодом – Операції об'єднаних сил комбатанти України стикнулися із широким спектром новітніх методів війни, які здатні накладати відбиток на психіку людини. Протягом більше ніж 7 років ми мали змогу спостерігали ряд специфічних континуумів психопатологічних феноменів, один з них – соціально-дезадаптаційний післябойовий синдром.*

Мета роботи *– дослідити діагностичний континуум маркерів соціально дезадаптаційного післябойового синдрому у комбатантів України.*

***Матеріали та методи**: 382 комбатанти, які були залучені до Антитерористичної операції / Операції об'єднаних сил були обстежені на базі Запорізького військового госпіталю та Запорізького державного медичного університету у період з 2015 по 2021 роки. Ми порівняли виявлені маркери соціально-дезадаптаційного післябойового синдрому (СДПС) із МКБ-10-маркерами схожих психічних розладів: стійка зміна особистості після катастрофічного досвіду (F62.0), ПТСР (F43.1) та розлад адаптації (F43.2).*

***Результати:** Ми встановили континуум симптомів і виділили 23 маркери соціально-дезадаптаційного післябойового синдрому, з яких 9 є значущими в контексті диференційної діагностики. Провокуючі чинники та особливості дебюту соціально-дезадаптаційного післябойового синдрому, а також його наслідки також були нами описані. Ми визначили відмінності соціально-дезадаптаційного післябойового синдрому від подібних до нього розладів, на які хворіють комбатанти задля поліпшення своєчасної діагностики, прогнозу та розробки методів лікування.*

***Висновки:** Сьогодні ми звітуємо про ідентифікацію у комбатантів України чітко окресленого континууму симптомів – соціально-дезадаптаційного післябойового синдрому. Цей синдром має чіткі диференційні відмінності від спорідненої групи розладів та потребує подальшого уточнення тактики його лікування.*

***Ключові слова:** стрес, бойова психічна травма, психічні розлади, військовослужбовці, комбатанти, діагностика.*

Introduction. Since 2014, with the beginning of Russia's unprovoked invasion and anti-terrorist operation in Ukraine, there has been an increased need for the diagnostics of mental disorders associated with hostilities. The new realities of war that Ukraine faced – which, in addition to direct combat operations, include a widely developed component of information warfare, the demarcation of society's lifestyle and living arrangements by the marker of participation in hostilities, political and worldview heterogeneity, etc. – determined the specificity of the formation of psychopathological disorders precisely for this time and territorial continuum [1–3].

It should be noted that identifiable disorders related to the specifics of wars have already occurred in the history of medicine. Thus, Post Vietnam syndrome was diagnosed in American combatants after the Vietnam War, Persian Gulf syndrome in Gulf War veterans, War Sailor syndrome in survived World War II Norwegian sailors in the merchant navy, and Survivor syndrome in concentration camp survivors [4–7].

The peculiarity of the clinical picture of these disorders is determined by those specific impacting factors of both psychological and physical action, which were inherent in the area affected by hostilities and the nature of wars.

For more than 7 years – during the Anti-Terrorist Operation in Ukraine and later – the Operation of the United Forces – we observed a number of specific continuums of psychopathological phenomena that can be separated into separate disorders. First of all, these are Post-combat delayed response (tension) syndrome and Socially-Disadaptive Post-Combat syndrome (SDPS) [8].

In this work, we would like to investigate in detail the specifics of the second of them – Socially-Disadaptative Post-Combat syndrome.

Aim

To investigate the diagnostic continuum of markers of Socially-Disadaptive Post-Combat syndrome in combatants of Ukraine.

Material and methods. We conducted this clinical retrospective and prospective study at Zaporizhzhia State Medical University and Zaporizhzhia Military Hospital, Zaporizhzhia, Ukraine.

Ethical approval. The Medical Ethics Committee of Zaporizhzhia State Medical University (review document, No. 5, June 6, 2014) approved this study. All participants gave informed consent to participate in the study.

At the first stage of the study, in the period from 2015 to 2021, we examined 382 combatants who took part in the Anti-Terrorist Operation / Operation of the Joint Forces and selected those of them who were diagnosed with Socially-Disadaptative Post-Combat syndrome. In total, we selected 32 combatants from the Socially-Disadaptative Post-Combat syndrome for the research group (RG). We conducted a thorough anamnestic, clinical-psychopathological, and medical-psychological examination of the combatants who participated in the study. This allowed us to clarify the continuum of symptoms of Socially-Disadaptative Post-Combat syndrome and to investigate its dynamic features.

Later, at the second stage of the study, we compared the identified markers of Socially-Disadaptive Post-Combat syndrome with ICD-10 markers of other mental disorders similar to Socially-Disadaptive Post-Combat syndrome to identify diagnostically significant characteristics. To do this, we first identified those mental disorders similar to Socially-Disadaptive Post-Combat syndrome in clinical manifestations or features of the debut, dynamics, or provoking factors. We included enduring personality change after the catastrophic experience (F62.0) and PTSD (F43.1) as this cluster. Also, adjustment disorders (F43.2) can be similar to Socially-Disadaptive Post-Combat syndrome. We believe that differential diagnoses should be made between these disorders.

Data analysis

We used methods of analysis and synthesis combined with methods of descriptive statistics to process and interpret the results of the study.

Results. With the help of an anamnestic study, we found that the first symptoms of Socially-Disadaptive Post-Combat syndrome arose from the first days after returning from the zone of the Anti-Terrorist Operation /

Joint Forces Operation (after immersion in civilian or non-combat life) and gradually progressed during the following months, provoking work and family conflicts. The changes that occur with Socially-Disadaptive Post-Combat syndrome resemble acquired personality changes, but the speed of the onset of symptoms and their leveling against the background of treatment testifies against the deep involvement of the pathopersonal circle.

The main manifestation of Socially-Disadaptive Post-Combat syndrome is the emergence of personal and social maladaptation in the family, micro- and macro-social environment due to the introduction of maladaptive verbal and behavioral patterns of social interaction. The basis for these patterns is the arising emotional, worldview, and personal shifts, for example, the rejection of moral norms and modes of interaction existing in their civil social continuum.

They also include an increased sense of justice, egocentrism, increased offensiveness towards the actions of persons who do not belong to their social group, for example, civilians, military in a different rank, etc., non-conformity, an increased tendency, even hyperactivity, to assert one's rights, sometimes to the level of querulousness or physical or verbal conflict, intolerance to the thoughts or actions of other people, explosiveness, dysphoricism, conflict, tendency to impulsive actions and deeds, chronic emotional tension, lability of emotions and mood, which were not characteristic of combatants either before or during time spent in the Anti-Terrorist Operation / Joint Forces Operation zone. A wide range of background situations of interpersonal interaction, organizational, economic, and household problems, general social injustice provoke and aggravate the symptoms of Socially-Disadaptive Post-Combat syndrome.

Table 1

Comparative analysis of symptoms of mental disorders

Socially-Disadaptive Post-Combat syndrome, obligatory symptoms (according to RG)		**PTSD (according to ICD-10 F43.1 criteria)**	**Enduring personality change after catastrophic experience (according to ICD-10 F62.0 criteria)**	**Adjustment disorders (according to ICD-10 F43.2 criteria)**
– occurrence after life-threatening combat stress – occurrence after after participating in hostilities – a wide range of minor substressful social factors exacerbate symptoms – dysphoricity or anger in response to a wide range of social situations – stay in the combat zone for 3 months or more – maladaptive verbal and behavioral patterns of social interaction – feelings of subjective distress or disharmony – non-acceptance of civil, political, moral and ideological norms and patterns of interaction of other people – intolerance of other people's thoughts or actions – increased tendency to be offended, touchiness or hurt – increased sense of justice – increased tendency to defend their rights including to the level of querulant or conflicting behavior	– egocentrism – nonconformity – explosiveness – conflictedness – mood disorders (mood swings or anhedonia or hypothymia or minor degrees of depression or minor degrees of anxiety, lability of emotions) – tendency to impulsive actions and deeds – a chronic feeling of emotional tension – automatic comparison of individual components of social and interpersonal interaction in the civilian environment with those available in the combat zone, giving preference to the latter – yearning memories of certain components of social and interpersonal interaction in the combat zone – train to return to the combat environment as a zone of the most comfortable interpersonal interaction – a latency period of the disorder from a few days to one month after leaving the combat zone	– exposure to a stressful event of exceptionally threatening or catastrophic nature – "flashbacks" – episodes of repeated reliving of the trauma in intrusive memories, dreams or nightmares – a sense of "numbness" and emotional blunting – detachment from other people – unresponsiveness to surroundings – avoidance of activities and situations reminiscent of the trauma – an enhanced startle reaction – a state of autonomic hyperarousal – insomnia – hypervigilance – suicidal ideation – anxiety – depression – anhedonia – a latency period of the disorder from a few weeks to months after a traumatic event	– occurrence after catastrophic stress – a hostile or distrustful attitude toward the world – social withdrawal – feelings of emptiness or hopelessness – a chronic feeling of "being on edge" as if constantly threatened – estrangement – present for at least two years	– experience of an identifiable psycho-social stressor – occurrence within one month of the onset of a stressor – subjective distress – emotional disturbance (depressed mood, anxiety, worry) – tensions – anger – regressive behaviour – disturbance of conduct (aggressive or dissocial behaviour) – a feeling of inability to cope, plan ahead, or continue in the present situation – some degree of disability in the performance of daily routine

Note: Symptoms that coincide between different disorders are indicated in bold

But, unlike the causes of adjustment disorders, these situations are mostly not stressful in the commonly known sense. Therefore, we are inclined to believe that with social maladjustment post-combat syndrome, the main thing is not the stressful force of social situations, but hyperreactivity, excessive psychological response of combatants to these situations, and the change of worldviews under the influence of the combat situation.

At the same time, emotional stress both preceded the occurrence of this condition and was its consequence. It is characteristic that the combatants involuntarily compare certain components of everyday life and interpersonal interaction in the civilian environment with those available in the area of the Anti-Terrorist Operation / Joint Forces Operation, giving preference to the latter. The desire to return to the combat environment, as the last most subjectively prosperous period in the context of interpersonal interaction, was a consequence of personal maladaptation provoked by Socially-Disadaptive Post-Combat syndrome.

Socially-Disadaptive Post-Combat syndrome occurred only in combatants who had direct combat experience and combat stress. Socially-Disadaptive Post-Combat syndrome was not diagnosed in combatants who were in a combat zone but were not exposed to life-threatening combat stressors, such as shelling.

The existence of a life-threatening life experience as a trigger for the emergence of personality changes and psychopathological phenomena is also at the basis of enduring personality change after catastrophic experience. But, as can be seen from Table 1, there are no other noticeable related symptoms between Socially-Disadaptive Post-Combat syndrome and enduring personality change after catastrophic experience.

Despite the fact that the main symptoms of PTSD, such as "flashbacks", nightmares, and reminiscences, were absent in the clinical picture of RG combatants, we consider it appropriate to carry out a differential diagnosis of social maladjustment post-combat syndrome with PTSD, because all combatants faced large-scale life-threatening situations under the time of participation in the Anti-Terrorist Operation / Joint Forces Operation and other secondary symptoms, such as an enhanced startle reaction, a state of autonomic hyperarousal, hypervigilance, anxiety, depression, anhedonia were in their clinical picture. It is also rational to compare social maladjustment post-combat syndrome with adjustment disorders because certain social provoking factors destabilizing the mental state of RG combatants were similar to the etiology of adjustment disorders and other psychopathological symptoms, such as mood and behavior disorders, were also present.

After analyzing Table 1, we came to the understanding that disorders of the emotional sphere, such as depression, anhedonia, anxiety, emotional stress, and anger, are the most significant for diagnosing the fact of the presence of a mental disorder, but they have the least importance in the context of differential diagnosis between a group of mental disorders that we analyzed: combatants with Socially-Disadaptive Post-Combat syndrome, PTSD, Adjustment disorders, and Enduring personality change after catastrophic experience had almost the same problems with emotions, so this symptom will not help diagnose which mental disorder the patient has. The same is true of feelings of subjective distress. This symptom is characteristic of many mental disorders, not only Socially-Disadaptive Post-Combat syndrome.

Diagnostically insignificant related markers, which were detected in the examined contingent, also included "occurrence after a stressful event of exceptionally threatening or catastrophic nature". This was because all the servicemen examined had combat experience. This marker points us to the fact that combat experience is a risk factor for the development of various mental disorders, but cannot be a specific marker of a specific nosology. The presence of social stressors cannot be an unequivocal diagnostic marker either: this is most characteristic of adjustment disorders, but social stress can also cause the symptoms of Socially-Disadaptive Post-Combat syndrome.

Differentially significant markers for distinguishing Socially-Disadaptive Post-Combat syndrome from other mental disorders associated with combat actions were: maladaptive verbal and behavioral patterns of social interaction; non-acceptance of civil, political, moral and ideological norms and patterns of interaction of other people; intolerance of other people's thoughts or actions; increased tendency to be offended, touchiness or hurt; increased sense of justice; increased tendency to defend their rights including to the level of querulant or conflicting behavior; the emergence of such personal qualities as egocentrism, nonconformity, explosiveness, conflictedness, tendency to impulsive actions and deeds; automatic comparison of individual components of social and interpersonal interaction in the civilian environment with those available in the combat zone, giving preference to the latter; yearning and nostalgic memories of certain components of social and interpersonal interaction in the combat zone; desire to return to the combat environment as a zone of the most comfortable interpersonal interaction.

Discussion. Health disorders in psychiatry often have various overlaps that make differential diagnosis difficult. Not infrequently, these similarities include mood disorders, especially anxiety and depression. These symptoms are characteristic of a wide range of mental disorders: neurotic, endogenous or organic genesis [9].

Sometimes differential diagnosis is complicated not only by identical clinical manifestations, but also by

common provoking factors and genesis of occurrence. To a large extent, this applies to disorders from the group of combat mental trauma. Combat stress has many clinical masks and their timely recognition allows to improve the quality of prevention and therapy of these conditions [10-12].

Health disorders in psychiatry often have various overlaps that make differential diagnoses problematic. Not infrequently, these similarities include mood disorders, especially anxiety, and depression. These symptoms are characteristic of a wide range of mental disorders: neurotic, endogenous, or organic genesis. Often, differential diagnosis is complicated not only by identical clinical manifestations but also by common provoking factors and genesis of occurrence. To a large extent, this applies to disorders from the group of combat mental trauma. Combat stress has many clinical masks and their timely recognition improves the quality of prevention and therapy of these conditions.

In the middle of the 20th century, PTSD was identified, after, at the end of the 20th century – Persian Gulf syndrome [13; 14].

Today, we report on the identification of a clearly defined continuum of symptoms in combatants of Ukraine, which we named Socially-Disadaptive Post-Combat syndrome. This syndrome has clear differential differences from a related group of disorders and requires further clarification of the tactics of its treatment.

Conclusions. We have demonstrated the results of our diagnostic searches for delineating the continuum of the psychopathological content of Socially-Disadaptive Post-Combat syndrome. We prove that Socially-Disadaptive Post-Combat syndrome is a stable nosological unit with certain features of the debut and clinical picture, which has undeniable differential differences from other similar mental disorders in terms of etiology and manifestations.

Identified provoking factors and features of the debut of Socially-Disadaptive Post-Combat syndrome.

A comparison was made and differential differences were established between Socially-Disadaptive Post-Combat syndrome and conditions similar to it, such as PTSD, Enduring personality change after the catastrophic experience, and Adjustment disorders. The main and secondary symptoms of Socially-Disadaptive Post-Combat syndrome are established, which will help doctors in the clinical recognition of this pathological condition. A total of 39 markers were selected, of which 9 are significant in the context of differential diagnosis.

The consequences of Socially-Disadaptive Post-Combat syndrome are described, which include intrapersonal and social, service, and family maladaptation.

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