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### PREVENTION AND TREATMENT OF POST-TRAUMATIC STRESS DISORDER (PTSD)

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# Prevention and Treatment of Post-Traumatic Stress Disorder (PTSD)

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## Abstract

Prevention and treatment of PTSD are carried out through the use of effective practices of modern medical rehabilitation centers and rational state policy aimed at overcoming this mass phenomenon. The article examines modern tools and means that help to overcome post-traumatic stress disorder and its negative consequences for the social environment and the population. The key aim of the article is to provide effective principles for the prevention and treatment of post-traumatic stress disorder based on international experience. The article presents the current state of development of this disease and characterizes the main trends that contribute to the spread of post-traumatic stress disorder. In particular, the analysis makes it possible to characterize the results of the study from the perspective of the exercise and realization of public power in the field of social protection and health care. Attention is paid to the issue of financing the prevention of post-traumatic stress disorder, as well as possible practices for overcoming this disease through the development of medical infrastructure. The article examines the main symptoms and root causes of post-traumatic stress disorder, as well as possible directions of its development. The analysis of treatment practices and possible prospects for overcoming post-traumatic stress disorder is characterized from the standpoint of ensuring the development of human capital and stabilization of

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the social environment as a result of the massive spread of post-traumatic stress disorder. The results of the study can be used by specialized institutions, private psychologists, and specialists who aim to treat post-traumatic stress disorder.

*Keywords:* post-traumatic stress disorder, Stress, Psychotherapy, Emotional state, Human capital, the psyche

## Introduction

Modern medical development provides opportunities to improve the quality of treatment for people with various psychological disorders. The proliferation of digital technologies and specialized infrastructure makes it possible to improve the diagnosis, testing, and prevention of post-traumatic stress disorder. The problem with this disorder is its global spread, as it is caused by the aggravation of military conflicts, the deterioration of the economic environment, and the need to use effective public policy to eliminate the negative consequences. Conducting analytical research on the prevention and treatment of post-traumatic stress disorder will be a priority to ensure a stable demographic policy and human capital development. One of the factors in overcoming the symptoms of post-traumatic stress disorder is the use of psychological therapy as a key tool used for special diagnosis and possible improvement of post-traumatic stress disorder treatment. Establishing rehabilitation centers and using the experience of medical centers is a popular practice in developed countries. The provision of effective medical care, which is mainly based on the use of psychological assistance, has real results. The problem also lies in the use of special tools aimed at psychological influence. This practice involves shifting the focus of attention from negative events to any other object that will have a positive effect on the person. Physical activities and changes in the social environment can help treat post-traumatic stress disorder. However, in the context of the current development of geopolitical challenges, for most developed countries, this issue is among the first level of social protection. Therefore, international organizations and the state apparatus of developed countries should work closely together to effectively treat people with post-traumatic stress disorder. Moreover, effective diagnostic, prevention, and treatment practices ensure the positive development of human capital and a functioning social environment.

The article aims to analyze the means of preventing and treating PTSD in the context of modern challenges and threats. An important area of research is to outline the key principles of state policy for the creation of special rehabilitation centers and medical institutions to improve the quality of PTSD treatment. The key objectives of the study are to analyze the symptoms, causes, and means of treatment of this disease.

## Literature review

Scientists pay due attention to the prevention and treatment of post-traumatic stress disorder (hereinafter PTSD). However, in the context of current geopolitical challenges, the spread of the coronavirus pandemic, and the war in Ukraine, the topic is becoming even more relevant for research. Understanding the complexities and challenges associated with PTSD in the context of these contemporary issues requires comprehensive research efforts (Olf *et al.*, 2019). Scientists dedicated to investigating effective preventive measures, innovative treatment approaches, and in-depth exploration of the underlying causes of PTSD (Naegeli *et al.*, 2018; Magruder *et al.*, 2017). By addressing these crucial aspects, researchers aim to develop comprehensive frameworks that can help mitigate the impact of traumatic events, improve mental health outcomes, and contribute to the well-being of affected individuals and communities in the face of current global challenges. Gilpin argues that the treatment of PTSD should be based on the psychological and emotional impact on a person (Albrechet-Souza & Gilpin, 2019). The implementation of such an impact should be based on the use of a special treatment methodology accepted in the scientific community that corrects social skills and abilities (Xiang *et al.*, 2019). Jonathan claims that a key factor in PTSD is the focus on negative events and the constant repetition of memories in everyday life (Bisson & Olf, 2021). To overcome this problem, Bisson *et al.* (2019) notes that it is necessary to use the technique of changing the focus of attention, which makes it possible to focus on other aspects of life and eliminate the root cause of PTSD. Identifying predictors of depression and anxiety using a quantitative cross-sectional study (Tsaras *et al.*, 2018), Psychological State teams using comparative analysis (Popovych *et al.*, 2021). Also, the COVID-19 pandemic had an impact on emergency distance education (Bakhov *et al.*, 2021). According to Coventry *et al.* (2020), the development of PTSD can lead to more severe psychological and physical illnesses. The point is that it can weaken a person's immune system and deteriorate their overall worldview (Règue *et al.*, 2019). Hoskins *et al.* (2020) in study described important factors in overcoming PTSD. They are timely diagnosis and the use of psychological therapy. The use of this therapy can improve the perception of the world by a person with this disorder, as well as improve their ability to function in a social environment. According to Kessler *et al.* (2017), overcoming PTSD is a priority in the state policy of social protection, as it directly affects the development and formation of human capital. The problem of overcoming PTSD at the state level should be addressed in countries where there is the greatest risk of exacerbation of this disease (Nasir *et al.*, 2021; . We are talking about countries that are involved in military conflicts or have a high level of crime. Olf *et al.* (2019) argue that the key aspects of public policy should be the creation of special rehabilitation centers, as well as the promotion of corporate sector participation in overcoming PTSD. According to Kitchiner *et al.* (2019), the development of PTSD is caused by negative events that a person has experienced.

Moreover, it can be caused by conditions of increased emotional sensitivity of a person (Wade & Halligan, 2017). Therefore, regardless of the peculiarities of the formation and development of post-traumatic stress disorder, an effective system of treatment and medicine should be implemented at the state level (Lewis *et al.*, 2020). Mu *et al.* (2022) noted that currently, most states pay insufficient attention to financing and lending to special investment projects aimed at overcoming the outlined problems. Roberts *et al.* (2020) believe that to effectively use the funding of such programs and promote the development of human capital, it is necessary to create a systematic programmatic development strategy to overcome PTSD. Thus, current research analyzes the problem from the perspective of its prevention, treatment, and identification of its root causes.

### **Methodology**

In writing this article, the author used scientific research methods to identify the theoretical aspects of PTSD and to characterize practical means of its treatment and prevention. Based on the analysis of analytical reports of international organizations, the current state of the spread of this disorder in the world was identified and the main principles for improving the quality of its overcoming were determined. A search method was applied to analyze the scientific literature and characterize the basic principles of prevention and treatment of this disorder. The implementation of such practices can improve the basic principles and ways of overcoming PTSD. The application of policies aimed at overcoming this disorder will stimulate the use of specialized methods and means of treatment. Based on the analytical method, the key symptoms and features of the development of post-traumatic stress disorder were analyzed. This method was chosen to analyze the current situation in Ukraine and the possibility of using public policy as a key tool for overcoming PTSD. Effective public policy is the main means of reducing the number of PTSD cases and preventing the root causes. Effective reform of healthcare institutions and involvement of the corporate sector in social protection policy will be of priority, as this will help to mitigate the effects of geopolitical threats on the social environment. The method of induction and deduction was employed to identify the key means of preventing PTSD, as well as the possibility of overcoming it through specialized psychological therapy. This therapy can be implemented through an individual approach or be of a mass nature. Based on the use of this methodology, it is possible to present the peculiarities of the prevention and treatment of PTSD, which are presented in the results of the study.

## Results

The issue of PTSD treatment plays an important role in the context of the spread of socially negative consequences caused by the war in Ukraine. According to the World Bank, approximately 5-10% of the world's population may experience this disorder in their lifetime. This indicates the spread of negative geopolitical phenomena. In addition, more than 60% of Ukraine's population has suffered from PTSD symptoms in the current environment, which is a global problem for restoring social stability and improving the functioning of society. Such negative trends are a factor that requires specialized research and analytical tools to offset the consequences of challenges for society.

Strengthening the presence of medical institutions and providing specialized psychological assistance to the population can be a qualitative means of preventing the development of post-traumatic stress disorder. An important factor is the involvement of international donor organizations to overcome the negative consequences of certain events or wars. The economic crisis, as well as the development of unfavorable conditions, also constitute a significant part of the root causes for the spread of PTSD, which harms public life in general. The policy of healthcare organizations should be aimed at creating and using special programs used to overcome PTSD. This issue has been a leading one in recent years. In addition, it should be noted that in 2019, as a result of the spread of the coronavirus pandemic, a significant number of people experienced mental health difficulties. Therefore, it is necessary to strengthen psychological assistance and use effective means to overcome the current negative consequences associated with PTSD.

The main factors in the development of PTSD are the proliferation of negative events that cause significant stress to the human psyche, as well as catastrophic situations that produce a significant dose of adrenaline, which later provokes disorders of the nervous system. In general, it is commonly accepted in science to identify key factors of PTSD, such as the death of a loved one, participation in extreme situations, life-threatening situations, as well as sexual aggression, or any other means of influencing the human psyche. Due to the negative socio-economic consequences, the number of crimes is also increasing in countries with low living standards. Due to this course of events, the number of people with PTSD is constantly growing. In particular, in African countries, about 30% of the population is depressed or has certain symptoms of PTSD, which negatively affects the further development of human capital. Furthermore, it should be noted that in 2019, due to the spread of the coronavirus pandemic, people's psyches suffered significantly and also require enhanced psychological assistance and the use of effective means to overcome the current negative features that arise with the onset of PTSD.

However, the most acute problem is the aggravation of the geopolitical situation caused by the war, which may extend to further military conflicts. Therefore, it

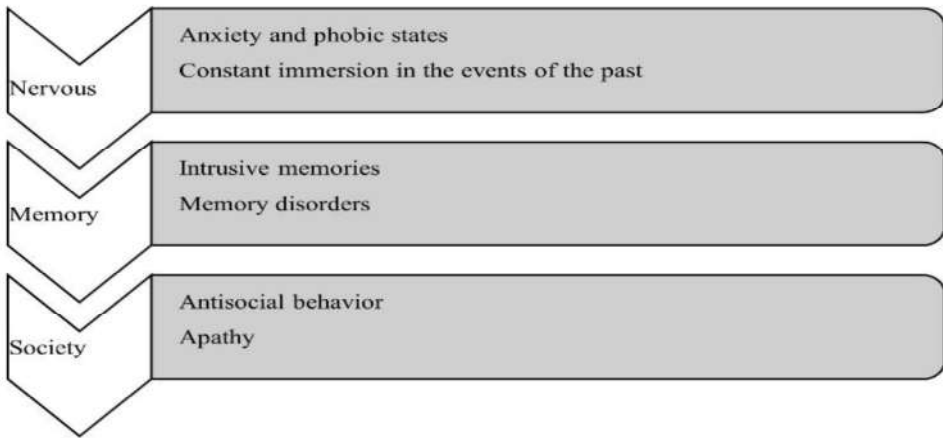
should be borne in mind that the number of people with PTSD will increase. To overcome such consequences, it is necessary to predict the approximate number of people with this disorder as a result of possible negative events. The analysis can be used to predict the specifics of the use of prevention measures and the improvement of the social climate for these people. This practice will be a factor in improving the quality of the social environment and help improve the functioning of the human psyche. Ukraine has established many institutions aimed at improving the psychological state of people and providing psychological assistance. Conducting information policy among the population is a key prerogative of the state. If the state uses a positive information policy, it will help improve the functioning of the social environment and can improve the socio-political situation in the country. Thus, the practice of state involvement in health care should be strengthened not only in countries facing massive negative challenges but also in any country for prevention purposes.

Strengthening rehabilitation programs should be a key tool for overcoming the negative effects of PTSD. The use of special strategic programs in society can improve the social climate and neutralize the negative factors of PTSD. The problem of its spread will harm human capital, undermine the demographic situation in the country and reduce the number of people able to work. A unified strategy for overcoming PTSD should be created in Ukraine, as most people have been amid hostilities or have suffered from rocket attacks. In general, the problem of the psychological state of the Ukrainian people is very acute for the current government, as it affects every Ukrainian. Therefore, finding and creating special programs to overcome the negative manifestations of PTSD should be a priority for the state. To do this, public authorities need to create internal programs to overcome this factor and be subordinated to a unified system aimed at combating the effects of PTSD.

One of the key elements of PTSD treatment should be special facilities for the rehabilitation of military personnel, as almost all of them have certain mental disorders that may be the result of combat operations. This problem is also experienced in the United States, where the creation of state rehabilitation programs for military personnel is a popular practice that reduces the risk of damage to human capital and facilitates their further successful integration into the social environment after the war. These programs can be created through international cooperation, as there is already a practice of overcoming PTSD, and it is worth implementing international experience. The key principles at the state level should be the creation of special institutions for rehabilitation and specialized assistance to victims. In particular, attention should be paid to developing the skills of medical personnel in such institutions and disseminating educational programs.

For the treatment and prevention of PTSD, it is most important to identify the symptoms in time, as early detection can prevent the development of other psychological illnesses and promote the physical and mental health of the victim. In general, the symptoms may include abnormalities in social behavior, as well as

psychological signals to others about how a person with symptoms of this disorder feels. Key symptoms by form and setting can be seen in Figure 1.



*Source: compiled by the authors.*

*Figure 1. PTSD symptoms*

The symptoms depicted in Figure 1 indicate the onset of PTSD and can provoke the development of further psychological problems and diseases in a person. Therefore, identifying PTSD through symptoms is very important. Timely diagnosis of the negative manifestations of the disorder is very important, as it helps to prevent the development of further diseases and improve the patient's social situation. Effective diagnosis requires careful observation of the social environment of a person with PTSD. The role of the social environment is key, as it affects the person's future life and the ability to access specialized services to improve their situation. The majority of people with PTSD symptoms do not seek medical attention or specialized help and continue to live with this disorder. Most referrals come from family and friends. To facilitate this process, it is necessary to conduct educational programs on PTSD and encourage people with similar problems to seek professional help, as this can solve this problem.

However, even taking into account the social responsibility of relatives and others, people do not always seek professional help promptly. Therefore, to solve this problem, it would be most appropriate to strengthen the role of the state and create special mandatory examinations for people whose profession is most at risk of developing PTSD. For example, every military serviceman will be offered mandatory testing and a rehabilitation center aimed at improving their psychological well-being. Furthermore, the creation and development of such centers will help improve the overall social situation and reduce the incidence of PTSD. In the current environment, public policy should promote the development of private institutions that perform important social protection functions. In



particular, projects to develop investment projects in this corporate sector, as well as additional financing and lending on preferential terms, will serve as a means to overcome the manifestations of PTSD. Funding can be provided through grant programs and the involvement of international donor organizations that finance such institutions and can improve their role in stabilizing the social environment.

State medical reforms can be one of the ways to improve the treatment of PTSD symptoms. A key area of reform should be the introduction of mandatory diagnosis and testing for this disease. Given the scale of the problem, treatment methods should be aimed at overcoming disorders through group therapy and other approaches. Furthermore, reforming the medical system should start with the work of medical institutions and doctors. The use of such policies will help improve the social situation and social protection policies. It is important to use modern methods and tools for the prevention of PTSD, as rational prevention can help prevent the development of this disease at home.

Prevention of PTSD should be based on the use of special means of psychological influence that can be provided by relatives or other people around the affected person to stabilize the overall emotional and psychological state. To achieve this goal, the means of a positive team climate, stress reduction, physical exercises, and a change of focus are used. Particular attention is paid to the problem of attention, as a key feature of PTSD is concentration on negative events that haunt a person. Therefore, using the technique of changing attention to anything can be an effective tool for overcoming and preventing this disorder. An important factor is a physical activity, which helps to improve the emotional and psychological state, as well as provide a high level of well-being. In addition, PTSD can be prevented through visits to a psychologist or other specialists who provide psychological help or support. This practice can be an effective means of preventing PTSD. Additionally, a change in the social environment, such as migration or temporary relocation, can have a positive impact on a person and provide an opportunity to reduce the concentration on the negative events that caused the symptoms of the disorder.

The development of modern digital technologies and the emergence of innovative drugs significantly increase the possibilities of medicine and diagnosis of PTSD. Their use can help in a wider and more timely diagnosis of this disorder. In such conditions, the need to use digital technologies can be directed to conducting analytical research, grouping test results, conducting brain diagnostics, and using them for effective treatment. The issue of digital infrastructure should be addressed at the state level through funding and procurement of special equipment designed for the diagnosis and possible treatment of PTSD. The use of this practice can help overcome the massive spread of this disorder. The use of digital infrastructure makes it possible not only to provide treatment and diagnosis but also to conduct mass psychological therapy remotely. The advantage of the efficiency of this practice is related to the use of digital platforms and special tools aimed at overcoming the negative consequences of PTSD.

Modern methods of treating and preventing PTSD are aimed at overcoming the root causes and possibly eliminating the negative consequences of its manifestation. As a rule, the development of apathy and social tension occurs due to the increased concentration of this disorder, so it is worth paying attention to modern treatments. The key elements of which are the use of medical practices aimed at improving the emotional and psychological state and cognitive influence. The main means is to overcome emotional dependence on the traumatic event and the constant work of psychologists with the victim. As a rule, the use of such a methodology for treating the disease is called therapy, which is based on a preliminary diagnosis of the disease. In general, the key elements of PTSD treatment are the use of special practices, which are shown in Table 1, where their detailed characteristics are given.

Table 1. Characteristics of PTSD treatment practices

Methodology	Characteristics
Psychotherapy	Analyzing the situation, searching for the root causes of PTSD, and eliminating them
Cognitive behavioral therapy	Correction of human behavior in society and the physical component, formation of the movement
Group psychotherapy	Formation of a group with a similar disorder and treatment through the psychological influence
EMDR-therapy	Using eye movements to treat damaged areas of the brain, helps improve overall perception
Desensitization	Aimed at reducing the manifestation of emotions and acute feelings of stress
Changes in the social environment	Partial change of social environment, distraction

Source: compiled by the authors

Based on the data in Table 1, we can conclude that the main tools for overcoming PTSD are the use of psychological interventions and specialized therapy, which can be carried out both on an individual and mass level. In addition, the use of modern techniques aimed at stabilizing brain function is a useful tool in the fight against PTSD.

Thus, it can be concluded that the modern practice of preventing and treating PTSD should be implemented at the state level. In addition, it is necessary to create strategic programs aimed at involving international organizations and medical institutions. The use of digital technologies can improve the social situation and be introduced into the practice of mass psychological therapy. Timely prevention of PTSD will contribute to the stability of the social environment.

## Discussion

The study shows the development of PTSD in the world due to the spread of negative geopolitical challenges, as well as the aggravation of emotional and psychological problems in people. A key aspect of the manifestation and spread was the spread of the coronavirus pandemic, and the war in Ukraine in 2022 was the next factor in its development (Popovych *et. al.*, 2022). The pandemic, characterized by its widespread infection rates, overwhelmed healthcare systems, and associated socioeconomic disruptions, has had a profound influence on mental health worldwide (Ushakov *et.al.*, 2019; Shyshkina *et.al.*,2023 ). The fear of contracting the virus, the loss of loved ones, prolonged isolation measures, and the economic consequences have all contributed to increased levels of stress, anxiety, and depression among individuals (Smokova *et. al.*, 2023; ). However, given the level of escalation of military conflicts in the world, the number of people with PTSD is constantly growing, which leads to increased attention to this topic (Ushakov *et. al.*, 2019; Zhylin, *et.al.*, 2022). Not only geopolitical challenges but also domestic situations and crimes harm the social situation in general (Zayed *et.al.*, 2022; Koliadenko *et. at.*, 2022). Therefore, conducting analytical studies to determine the approximate number of people who became victims of catastrophic events allows us to qualitatively analyze the peculiarities of the development of this issue in the social environment and predict further actions and measures to overcome the negative consequences. In such circumstances, there is a need for the prevention and treatment of PTSD.

Given the current geopolitical situation and the proliferation of wars and other socio-political crises, it is important to conduct additional research on the state's involvement in social policy and the possibility of taking effective measures to overcome the consequences of post-traumatic stress disorder (PTSD). The use of effective practices will stimulate the use of high-quality public policy instruments aimed at leveling certain circumstances and will be able to improve the quality of human capital and ensure high-level social protection within the country. Conducting such analytical studies will contribute to the development of a positive social policy of the state and can help to overcome the massive problem of PTSD. Researching the implementation of special investment projects to overcome the development of PTSD, as well as financing medical institutions, can be a priority area for analysis. In particular, the participation of the corporate sector in this social issue remains an important issue, as well as the search for effective mechanisms for its cooperation with special medical institutions and authorities aimed at overcoming PTSD.

## Conclusion

Thus, it can be concluded that PTSD is a complex disorder aimed at affecting the human psyche, suppressing social functions, and making it difficult for people to interact with the social environment, as well as increasing the risk of deterioration of the psychological state and concentration on negative experiences. According to the World Bank and the World Health Organization, a significant portion of the population has or has experienced problems with the development and symptoms of PTSD. The availability of such data negatively affects the overall development of human capital and can pose a real threat to the country's further demographic development. Moreover, the popularization of this problem is due to the war in Ukraine, where more than 60% of the population has this disorder. Overcoming this problem will be of key strategic importance, as it will ensure the effective further functioning of the socio-political space and the possibility of improving the state's social protection policy. In modern conditions, the problem of PTSD is also caused by the spread of military conflicts in the world, which is the basis for strengthening the activities of specialized rehabilitation centers. The use of specialized tools and technologies aimed at overcoming both the symptoms and the causes of PTSD should be an important means of developing human capital and implementing social protection policies. Group psychological therapy can be a tool for overcoming PTSD. However, its use should be carried out only after preliminary diagnosis and the use of special tests to detect the disease. The most effective solution would be preventive measures initiated at the state level. The experience of the United States shows that mandatory rehabilitation programs are conducted for people whose professions are most likely to be affected by PTSD. Therefore, the use of state involvement in the prevention of this disorder will be a priority. Effective implementation of these measures will ensure the development of human capital and help overcome this massive problem. Thus, overcoming PTSD should be based on the use of modern technologies, effective financing, and allocation of resources between investment projects and medical institutions that address this social problem. In addition, the use of the state strategy to overcome this problem can contribute to the successful functioning of the social environment.

## References

- Albrechet-Souza, L. & Gilpin, N.W. (2019). The predator odor avoidance model of post-traumatic stress disorder in rats. *Behav.* 105–114.
- Bakhov, I., Opolska, N., Bogus, M., Anishchenko, V., & Biryukova, Y. (2021). Emergency distance education in the conditions of COVID-19 pandemic: Experience of ukrainian universities. *Education Sciences*, 11 (7) doi:10.3390/educsci11070364.
- Bisson, J.I., Berliner, L., Cloitre, M., Forbes, D., Jensen, T. K., Lewis, C. & Shapiro, F. (2019). The international society for traumatic stress studies. New guidelines for the prevention and treatment of PTSD: Methodology and development process. *Journal of Traumatic Stress*, 32 (4), 471-473.
- Bisson; J.I. & Olf M. (2021) Prevention and treatment of PTSD: the current evidence base, *European Journal of Psychotraumatology*, 12(1), 824381; DOI: 10.1080/20008198.2020.1824381.
- Coventry, P.A., Meader, N., Melton, H., Temple, M., Dale, H., Wright, K., Cloitre, M., Karatzias, T., Bisson, J. & Roberts, N.P. (2020). Psychological and pharmacological interventions for posttraumatic stress disorder and comorbid mental health problems following complex traumatic events: Systematic review and component network meta-analysis. *Plos Medicine*. e1003262.
- Hoskins, M. D., Bridges, J., Sinnerton, R., Nakamura, A., Underwood, J. F. G., Slater, A. & Bisson, J. I. (2020). Pharmacological therapy for post-traumatic stress disorder: A systematic review and meta-analysis of monotherapy, augmentation, and head-to-head approaches. *European Journal of Psychotraumatology*, 12(1), 1802920; DOI: 10.1080/20008198.2020.1802920.
- Kessler, R.C., Aguilar-Gaxiola, S., Alonso, J., Benjet, C., Bromet, E. J., Cardoso, G. & Survey, W. W. M. H. (2017). Trauma and PTSD in the WHO world mental health surveys. *European Journal of Psychotraumatology*, 8(1), 1353383. DOI: 10.1080/20008198.2017.1353383.
- Kitchiner, N.J., Lewis, C., Roberts, N. P. & Bisson, J.I. (2019). Active duty and ex-serving military personnel with post-traumatic stress disorder treated with psychological therapies: Systematic review and meta-analysis. *European Journal of Psychotraumatology*, 10(1), 1684226; DOI: 10.1080/20008198.2019.1684226.
- Koliadenko, N. V., Zhyvago, K. S., & Bursa, A. I. (2022). Provision of medical-psychological and psychiatric care to patients with post-covid syndrome in telemedicine conditions. *Bangladesh Journal of Medical Science*, 21(4), 719-730, DOI: 10.3329/bjms.v21i4.60256.
- Lewis, C., Roberts, N., Andrew, M., Starling, E. & Bisson, J. (2020). Psychological therapies for post-traumatic stress disorder in adults: Systematic review and meta-analysis. *European Journal of Psychotraumatology*, 11(1), 1729633; DOI: 10.1080/20008198.2020.1729633.
- Magruder, K. M., McLaughlin, K. A. & Elmore Borbon, D. L. (2017). Trauma is a public health issue. *European Journal of Psychotraumatology*, 8 (1), 1375338; DOI: 10.1080/20008198.2017.1375338.
- Mu, E., Thomas, E. H. X. & Kulkarni, J. (2022). Menstrual Cycle in Trauma-Related Disorders: A Mini-Review. *Front. Glob. Womens Health* 3:910220.

- Naegeli, C., Zeffiro, T., Piccirelli, M., Jaillard, A., Weilenmann, A., Hassanpour, K., Schick, M., Rufer, M., Orr, S. P. & Mueller-Pfeiffer, C. Locus Coeruleus. (2018). Activity Mediates Hyperresponsiveness in Posttraumatic Stress Disorder. *Biol. Psychiatry*. 254-262.
- Nasir, B.F., Black, E., Toombs, M., Kisely, S., Gill, N., Beccaria, G., Kondalsamy-Chennakesavan, S. & Nicholson, G. (2021). Traumatic life events and risk of post-traumatic stress disorder among the Indigenous population of regional, remote and metropolitan Central-Eastern Australia: A cross-sectional study. *BMJ Open*, 11 (4): e040875.
- Olf, M., Amstadter, A., Armour, C., Birkeland, M. S., Bui, E., Cloitre, M. & Thoresen, S. (2019). A decennial review of psychotraumatology: What did we learn and where are we going? DOI: 10.1080/20008198.2019.1672948.
- Popovych, I., Pavliuk, M., Hrys, A., Sydorenko, O., Fedorenko, A., & Khanetska, T. (2021). Pre-game expected mental states in men's mini-football teams: A comparative analysis. *Journal of Physical Education and Sport*, 21(2), 772-782; DOI: 10.7752/jpes.2021.02096.
- Popovych, I., Semenov, O., Hrys, A., Aleksieieva, M., Pavliuk, M., & Semenova, N. (2022). Research on mental states of weightlifters' self-regulation readiness for competitions. *Journal of Physical Education and Sport*, 22(5), 1134-1144; DOI: 10.7752/jpes.2022.05143.
- Règue, M., Poilbout, C., Martin, V., Franc, B., Lanfumey, L. & Mongeau, R. (2019). Increased 5-HT<sub>2C</sub> receptor editing predisposes PTSD-like behaviors and alters BDNF and cytokines signaling. *Transl. Psychiatry*; DOI: 0.1038/s41398-019-0431-8.
- Roberts, N. P., Kitchiner, N. J., Kenardy, J., Lewis, C. E. & Bisson, J. I. (2020). Early psychological intervention following recent systematic review and meta-analysis. *European Journal of Psychotraumatology Supplement*, 10 (1), 1695486. DOI: 10.1080/ 20008198.2019.1695486.
- Shyshkina, O., Beyhul, I., Moskalenko, N., Hladoshchuk, O., Tolchieva, H., & Saienko, V. (2023). Subjective psychophysiological satisfaction of women from fitness training on an individual program. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 14(4), 387-404; DOI: 10.18662/brain/14.1/426.
- Smokova, L., Zhylin, M., Mendelo, V., Kyrlyshyna, M., Danilova, O. (2023). Socio-Psychological Factors in the Development of Emotional Intelligence of Drug Addicts. *International Journal of Statistics in Medical Research*, 12, 33-42
- Tsaras, K., Papathanasiou, I. V., Vus, V., Panagiotopoulou, A., Katsou, M. A., Kelesi, M., & Fradelos, E. C. (2018). Predicting factors of depression and anxiety in mental health nurses: A quantitative cross-sectional study. *Medical Archives*, 72 (1), 62-67; DOI: 10.5455/medarh.2017.72.62-67.
- Ushakov, D. S., Yushkevych, O. O., Ovander, N. L., Tkachuk, H. Y., & Vyhovskyi, V. H. (2019). The strategy of thai medical services promotion at foreign markets and development of medical tourism. *Geojournal of Tourism and Geosites*, 27(4), 1429-1438; DOI: 10.30892/gtg.27426-445.

- Ushakov, D. S., Yushkevych, O. O., Ovander, N. L., Tkachuk, H. Y., & Vyhovskyi, V. H. (2019). The strategy of thai medical services promotion at foreign markets and development of medical tourism. *Geojournal of Tourism and Geosites*, 27(4), 1429-1438; DOI: 10.30892/gtg.27426-445.
- Wade, D.T. & Halligan, P.W. (2017). The biopsychosocial model of illness: A model whose time has come. *Clin. Rehabil*; DOI:10.1177/0269215517709890.
- Xiang, M., Jiang, Y., Hu, Z., Yang, Y., Du, X., Botchway, B.O. & Fang, M. (2019). Serotonin receptors 2A and 1A modulate anxiety-like behavior in post-traumatic stress-disordered mice. *Am. J. Transl. Res.* 11, 2288-2303.
- Zayed, N. M., Edeh, F. O., Darwish, S., Islam, K. M. A., Kryshstal, H., Nitsenko, V., & Stanislavyk, O. (2022). Human resource skill adjustment in service sector: Predicting dynamic capability in post COVID-19 work environment. *Journal of Risk and Financial Management*, 15(9); DOI: 10.3390/jrfm15090402.
- Zhylin, M., Makarenko, S., Kolohryvova, N., Bursa, A., Tsekhmister, Y. (2022). Risk Factors for Depressive Disorders after Coming through COVID-19 and Emotional Intelligence of the Individual. *Journal of Intellectual Disability - Diagnosis and Treatment*, 10(5), 248-258.