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Ivan R. Romash, Vasyl Ye. Neyko, Iryna B. Romash, Kateryna V. Dzivak, Petro R. Gerych, Mykhaylo V. Panchyshyn, Olesya M. Gerych, Mykhaylo M. Pustovoyt.
Ivano-Frankivsk National Medical University (Ivano-Frankivsk, Ukraine)
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POST-TRAUMATIC STRESS DISORDER AS A NOSOLOGICAL UNIT: DIFFICULTIES OF THE PAST AND CHALLENGES OF THE FUTURE



ABSTRACT

Introduction. The impact of traumatic experiences has always been a part of human life. According to Judith Herman, an American psychotherapist, and professor at Harvard Medical School, "traumatic events overload a person's usual strategies for adapting to life, his usual security systems that give a sense of control, connection, and meaning." Also, traumatic events, for the most part, contain close personal contact with violence and death and pose a threat to life or physical integrity. For almost one year of the war, Ukrainian society faced a large number of negative phenomena capable of causing severe psychological trauma: disruption of the usual lifestyle, loss of family friends, and property, lack of many vital needs for a person, forced migration, uncertainty, a constant threat for health and life, etc.

The purpose of the study was to analysis of scientific and literary data reflecting the history of the formation of the concept of "post-traumatic stress disorder" as a nosological unit, as well as the peculiarities of its manifestation and prevalence, diagnostic criteria.

Materials and methods: A systematic search was conducted in the main electronic medical databases, such as PubMed, Scopus, Web of Science, Google Scholar, and processed publications that studied the history of the formation of "post-traumatic stress disorder" as a nosological unit, the features of its manifestation and prevalence. diagnostic criteria. Eligible studies were identified using keywords: post-traumatic stress disorder, psychotraumatology, trauma, physioneurosis, history of medicine. All types of articles were reviewed, including original studies, systematic reviews, and meta-analyses.

Review and discussion: For a long time, there was a stigmatization of combat-related disorders in society. The path to the development of PTSD as a psychiatric diagnosis is long and thorny. After the World War II, there was an urgent need to introduce a standard unified nomenclature that would enable doctors from all over the world to have a common language for discussing the psychopathology of this disorder, establishing a diagnosis and determining disability. Over 60 years, starting in 1952, when the American Psychiatric Association (APA) introduced the concept of "brutal stress reaction" in its first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-I) and up to 2013 (DSM-5) formation of post-traumatic stress disorder as a nosological unit was taking place.

Conclusions: Despite the non-acceptance, stigmatization, indifference and other difficulties, PTSD finally achieved official status in the recognized list of diagnoses.



KEYWORDS

traumatic stress, post-traumatic stress disorder, psychotraumatology, physioneurosis, history of medicine.



CORRESPONDING AUTHOR INFORMATION

Ivan R. Romash

MD, Ph.D., Associate professor of The Department of Psychiatry, Narcology and Medical Psychology.

Ivano-Frankivsk National Medical University, Ukraine.

st. Pylyp Orlyk 5/7. 76010. Ivano-Frankivsk. Ukraine.

<https://orcid.org/0000-0002-6591-6613>

e-mail: iromashr@gmail.com

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INTRODUCTION

The impact of traumatic experiences has always been a part of human life. According to Judith Herman, an American psychotherapist, and professor at Harvard Medical School, "traumatic events overload a person's usual strategies for adapting to life, his usual security systems that give a sense of control, connection, and meaning." Also, traumatic events, for the most part, contain close personal contact with violence and death and pose a threat to life or physical integrity. (Herman, 2022).

For almost one year of the war, Ukrainian society faced a large number of negative phenomena capable of causing severe psychological trauma: disruption of the usual lifestyle, loss of family friends, and property, lack of many vital needs for a person, forced migration, uncertainty, a constant threat for health and life, etc. (Perrotta, 2019; Rosen, Ayers, 2020).

It is known that the behavior of people in war conditions is determined by two groups of behavioral patterns: some become soldiers, volunteers, defenders in the broadest sense of the word, and others become refugees, evacuees. Both are at risk of developing post-traumatic stress disorder (PTSD), so they need

psychological support and help (Prydybailo, Murza, Sadova, 2022).

Currently, traumatic and stress disorders have become separate nosologies, different from anxiety disorders. This is because many such patients do not have anxiety but instead suffer from anhedonia, dysphoria, anger, aggression, or dissociation. Also, in the field of diagnosis of stress disorders, in particular, PTSD, they stopped focusing exclusively on the concept of fear, as it was before. It has been scientifically proven that many patients with PTSD, in addition to fear, show many other emotional reactions unrelated to it.

Two well-known types of PTSD are acute stress disorder (ASD) and PTSD. ASD usually begins immediately after experiencing a devastating traumatic event, characterized by a short period of intrusive memories that occur, on average, within 4 weeks (from 3 days to 1 month). In turn, PTSD is a recurring, unwanted, debilitating recollection of a devastating traumatic event that occurs as a continuation of PTSD or as an independent disorder that develops over time up to 6 months after experiencing the last one and lasts for more than a month. Common causes of PTSD include combat, sexual and other physical or mental violence, natural disasters, man-made disasters, pandemics, etc. Traumatic events can cause changes in physiological tone, emotions, perception, and memory (Herman, 2022).

The main syndromes of this disorder include: intrusion (involuntary, obsessive, repetitive, and depressing disturbing memories, dreams, flashbacks), avoidance (avoidance of thoughts, feelings, actions, places, and memories

associated with the event), negative changes in cognitive functions and moods (dissociative amnesia, self-blame, detachment, alienation, emotional "dullness") and changes in excitability and reactivity (mood instability and self-destructive behavior, alertness, confusion, sleep problems).

Thus, the many symptoms of PTSD fall into three main categories: hyperarousal, intrusion, and constriction. At the same time, hyperarousal reflects a constant expectation of danger, the intrusion is an indelible imprint of a traumatic moment, and constriction is a reaction of numbness and surrender. It is obvious that such syndromes and their symptoms significantly worsen the social and professional functioning, and therefore the quality of life of the victim. It should be noted here that the International Classification of Functioning, Disability, and Health (ICF) recognizes functioning as the most important component of health and well-being. In particular, the ICF emphasizes the importance of ensuring adequate social functioning for all people, regardless of mental or physical condition (WHO, 2001; Romash, Vynnyk, 2019).

The main factors, the combination of which leads to the occurrence of PTSD can be divided into three groups: the intensity of the traumatic event, its duration, unexpectedness, and uncontrollability; the strength of the individual's protective mechanisms and the presence of social support; personal risk factors: age at the time of traumatic events, presence of traumatic events and mental disorders in previous periods of a person's life (Al Jowf, Ahmed, An, Reijnders, Ambrosino, Rutten, de Nijs, 2022).

Unfortunately, the pathophysiology of this disorder is currently not fully understood. A body of evidence accumulated over several decades supports the neurobiological nature of PTSD. Separate scientific data help to understand the pathophysiology of PTSD, as well as the biological vulnerability of certain population groups to the development of PTSD. (Sherin, Nemeroff, 2011).



PURPOSE

The purpose of the study was to analysis of scientific and literary data reflecting the history of the formation of the concept of "post-traumatic stress disorder" as a nosological unit, as well as the peculiarities of its manifestation and prevalence, diagnostic criteria.



METHODOLOGY

A systematic search was conducted in the main electronic medical databases, such as PubMed, Scopus, Web of Science, Google Scholar, and processed publications that studied the history of the formation of "post-traumatic stress disorder" as a nosological unit, the features of its manifestation and prevalence. diagnostic criteria. Eligible studies were identified using keywords: post-traumatic stress disorder, psychotraumatology, trauma, physioneurosis, history of medicine. All types of articles were reviewed, including original studies, systematic reviews, and meta-analyses.



REVIEW and DISCUSSION

For a long time, there was a stigmatization of combat-related disorders in society. The path to the development of PTSD as a psychiatric diagnosis is long and thorny. After the World War II, there was an urgent need to introduce a standard unified nomenclature that would enable doctors from all over the world to have a common language for discussing the psychopathology of this disorder, establishing a diagnosis and determining disability. Over 60 years, starting in 1952, when the American Psychiatric Association (APA) introduced the concept of "brutal stress reaction" in its first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-I) and up to 2013 (DSM-5) formation of post-traumatic stress disorder as a nosological unit was taking place. But despite the non-acceptance, stigmatization, indifference and other difficulties, PTSD finally achieved official status in the recognized list of diagnoses.

The impact of traumatic experiences has always been a part of human life. According to Judith Herman, an American psychotherapist, and professor at Harvard Medical School, "traumatic events overload a person's usual strategies for adapting to life, his usual security systems that give a sense of control, connection, and meaning." Also, traumatic events, for the most part, contain close personal contact with violence and death and pose a threat to life or physical integrity. (Herman, 2022).

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continuation of PTSD or as an independent disorder that develops over time up to 6 months after experiencing the last one and lasts for more than a month. Common causes of PTSD include combat, sexual and other physical or mental violence, natural disasters, man-made disasters, pandemics, etc. Traumatic events can cause changes in physiological tone, emotions, perception, and memory (Herman, 2022).

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Features of the prevalence of post-traumatic stress disorder.

According to statistics, 90% of people are exposed to one or another traumatic event during their lifetime, but only about 5-10% of the general population suffers from PTSD (Banerjee, 2017). In particular, recent data suggest that about 4% of American men and 10% of American women will be diagnosed with PTSD during their lifetime. It is important to note that while this condition affects approximately 10% of the American civilian population during their lifetime, it is approximately 14-16%

among military personnel (Hipes, Gemoets, 2019).

The National Vietnam Veterans Readjustment Study found that the prevalence of PTSD was 15.2% among male veterans and 8.5% among female veterans. According to data from another large-scale study, the lifetime prevalence of PTSD was 30.9% among male veterans and 26.9% among female veterans. One more population-based study of Vietnam veterans reported a prevalence of PTSD of 2.5% among male veterans and 1.1% among female veterans.

Shalev AY and other members of the International Consortium for the Prediction of PTSD analyzed data from ten longitudinal studies involving 2,473 civilians from six countries who experienced traumatic events and were hospitalized in emergency centers. Therefore, the prevalence of PTSD among the examined varied within 11.8% (9.2% for men and 16.4% for women) (Shalev, Gevonden, Ratanatharathorn, Laska, Van Der Mei, Qi, 2019).

Until 2015, Ukraine had no official data on the state of mental health of servicemen. According to the data of Bogomolets OV and co-authors, the share of PTSD among military personnel who served in the anti-terrorist operation (ATO) in 2016 was more than 27% (Bogomolets, Pinchuk, Ladyk-Bryzgalova, 2016). As a result of research carried out by Blinov OA, 19% of soldiers who took part in military operations, but did not suffer physical trauma, suffered from PTSD. Subthreshold symptoms of PTSD were also diagnosed in 11% of cases. Incomplete clinical manifestations of this disorder were found in 8% of the examined. At the same time, PTSD was

found in 46% of their wounded brothers. Another 13% of combatants required additional examination for PTSD. The same researchers established a positive correlation between age and the level of combat stress. The length of stay in the combat zone is also of great importance. Scientists have established that the highest level of the potential of psychological resources in combatants is present for up to 3 months. If servicemen stay on the battlefield longer, it contributes to emotional and professional burnout. The critical level is the limit of 24 months, after which professional deformation of the personality is likely, and the risk of developing stress disorders and psychosomatic diseases increases (Blinov, 2018). According to Pascal Brillon, psychological trauma causes the development of PTSD in about 25%-35% of cases. The population of Ukraine as of January 1, 2022, was 34.5 million. Of them Zaporizhzhia region. 1.6 million, Kherson 1 million., Donetsk 4 million, Luhansk 2.1 million. These are the regions where the most active hostilities are taking place and the approximate number of people with PTSD, including military personnel, will be about 2.1-3 million people.

The data presented are very different from each other. Numerous scientific studies show that individual vulnerability and resilience are key factors to consider in the pathology of PTSD. There are also scientific data that show that from 30 to 72% of the susceptibility to PTSD is due to heredity, in particular, certain features in the metabolism of certain neurotransmitters and hormones. It is important to note that under conditions of genetic predisposition, stress experienced in childhood caused by one or

another traumatic event is also a risk factor for the development of depression and PTSD in older age (Banerjee, Morrison, Ressler, 2017).

In addition, recent data on the central nervous system (CNS) regulation indicate that the peptidergic system of the brain is a highly integrated complex whose neurons almost always express more than one neuropeptide, while each of them exerts pleiotropic effects on the CNS.

The history of the formation of the concept of post-traumatic stress disorder as a nosological unit.

The history of what is now called PTSD is often linked to combat. Stories about psychological symptoms after military trauma date back to ancient times. For the first time, the description of the symptoms of PTSD is presented in one of the oldest literary works of mankind, in the poem "About the One Who Saw Everything." The work itself, its second name "The Epic of Gilgamesh", was created over fifteen thousand years, based on Sumerian stories. This is a kind of anthem of friendship. According to scientific data, the sources date back to the 7th century BC. and were written in cuneiform on 12 six-column clay tablets, and some stories are dated to the end of the first half of the 3rd millennium BC. e. After the main character Gilgamesh loses his best friend Enkidu, he feels boundless despair, symptoms of grief, longing. This encounter with death changed his personality. The main character wants to return his friend by all possible means and understand what death is. He begins to realize his helplessness and that death inevitably happens to everyone.

The first descriptions of the guest response to stress were described by the Greek historian Herodotus in 440 BC in Book VI "History", talking about the behavior caused by the sudden fright of the Persian army on the battlefield during the Battle of Marathon (Crocq, 2000).

Homer also wrote about traumatic experiences and the symptoms that followed them in his works "Iliad" and "Odyssey", William Shakespeare - "Henry IV", Charles Dickens - "A Tale of Two Cities", etc. The first official medical attempts to help solve the problems of military veterans who experienced combat began to appear during the American Civil War (1861-1865) and the Franco-Prussian War (1870-1871). In particular, during the Civil War in the USA, surgeon Mendos Da Costa (J.M. DaCosta) observed cardiac disorders in veterans characterized by chest pains, tachycardia, difficulty breathing in combination with breathing disorders, irritability, unpleasant dreams, calling this condition "Da Costa syndrome" or "soldier's heart", a syndrome that arose from the hardships of military service. Later, in 1971, the scientist clearly described the clinical picture of this syndrome, and later it received the name somatoform autonomic dysfunction (F45.3 according to ICD-10.). Combat stress itself was also known by the names "melancholia without delirium", "neurasthenic psychosis", "nervous exhaustion", "mental wounds received in battle", "armed shock", "military neurosis", "combat fatigue", etc (Blinov, 2018). For the first time, the attention of mental health specialists, in particular psychologists and psychiatrists, was drawn to a specific mental disorder among soldiers during the First World War. At that time, some of the

symptoms of modern PTSD, such as panic and sleep problems, were considered a reaction to the explosions of artillery shells and were called the terms "armed shock", and "military neurosis". For a long time, it was believed that the main cause of such symptoms is hidden damage to the brain due to contusion caused by the blast wave. The fallacy of such an opinion was confirmed when more and more soldiers, far from the explosions, had similar symptoms.

Clinical and theoretical attempts to describe the nature of combat mental trauma.

German psychiatrist Emil Kraepelin discovered that mental traumas leave behind stable disorders that progress over time. The main manifestations of these disorders were noted by Kegle, and later clarified by R. Grinker, A. Kardiner, and other researchers during and after the Second World War. American psychiatrist and psychoanalyst Abram Cardiner introduced the term "chronic military neurosis", emphasizing its psychophysiological nature. It was A. Kardiner who first managed to convey the essence of traumatic stress, presenting it as an inseparable combination of psychological and biological patterns and calling it "physioneurosis". This scientist was the first to carry out a comprehensive description of symptoms: excessive excitability and irritability; intense reaction to sudden stimuli, trauma fixation; avoidance of reality, and tendency to uncontrolled aggressive reactions. Kardiner regarded these symptoms as the consequences of chronic excitation of the autonomic nervous system. Roy Grinker and John Spiegel believed that injured

soldiers "suffer from chronic stimulation of the sympathetic nervous system." In the monograph "Man under stress" R. Grinker and J. Spiegel (1945) listed the symptoms of "acute combat reaction" in American soldiers and "military neurosis" in prisoners of war. They also studied the factors of hereditary predisposition to mental disorders and described the psychosomatics of combating mental trauma. Her symptoms included fatigue, aggression, depression, memory impairment, sympathetic nervous system hyperactivity, impaired concentration, alcoholism, nightmares, phobias, and suspiciousness. In 1941, Abram Kardiner published the data of a clinical and theoretical study in his scientific work "Traumatic neuroses of wartime". The main concept of A. Kardiner was that the psychological problems of veterans caused by the war "... are caused by a decrease in internal resources, so they begin to perceive the outside world as hostile" (Blinov, 2018). At one time, A. Kardiner notes that the topic of neurotic disorders caused by the consequences of military actions is episodic, and depends on the whims of society and psychiatric fashion. And he was also outraged by the fact that there was no consistency and continuity among scientists in the study of this issue. Every researcher interested in this topic tried to start its study from scratch, and not go further, "standing on the shoulders of titans." Thus, episodicity rather than continuity has been inherent in the field of PTSD studies.

Stages of formation of the diagnostic concept of PTSD.

For a long time, the Department of Veterans Affairs did not recognize PTSD

as a diagnosable disorder. A systematic, large-scale study of the long-term impact of the combat environment on the psychological and mental state of soldiers began only after the Vietnam War, and PTSD as a nosological unit was described only ten years after it. Following the end of the above hostilities, the US Department of Veterans Affairs commissioned a scientific study designed to examine the impact of wartime experiences on the lives of veterans. The results of the research were presented in a five-volume work, which described in detail the symptoms of the mental disorder, which later received the name - PTSD. The data obtained during the study demonstrated a direct correlation between PTSD and combat trauma. This greatly influenced the creation of the diagnostic concept of PTSD.

The path to the development of PTSD as a psychiatric diagnosis is long and thorny. After the Second World War, there was an urgent need to introduce a standard unified nomenclature that would enable doctors around the world to have a common language for discussing psychopathology, establishing diagnoses, and defining disability (Andreasen, 2011). In its first edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-I), dated 1952, the American Psychiatric Association (APA) cites the concept of "brutal stress response." Her description emphasized that the disorder is a reaction to a strong or unusual stressor that has caused overwhelming fear in a healthy individual. It emphasized that the disorder was temporary and reversible; if the symptoms persisted, "delayed" for longer than six months, a differential diagnosis was made and a diagnosis was

sought. And even 16 years later, DSM-II (1968) did not have a diagnosis that was linked to a traumatic event. At the time, the concept was thought to be inextricably linked to war, and so apparently it was dropped entirely from DSM-II, published 23 years after the last Great War and during a period of relative peace. Thus, the concept of "reaction to gross stress" disappeared, and "reaction of adaptation to adult life" appeared. At the time, this diagnosis was limited to rather diverse examples of trauma: unwanted pregnancy with suicidal ideation, fear associated with military combat, and Hanser syndrome in prisoners facing the death sentence.

Just in 1980, according to the National Institute of Mental Health, the term PTSD became a household name when it first appeared in the third edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-III), published by the APA. This became possible thanks to large-scale scientific research with the participation of Vietnam War veterans. Based on the obtained data, scientists were able to prove the connection between war trauma and post-war civilian life. Thus, the diagnosis of PTSD filled an important gap in psychiatry, and its main cause was the result of traumatic events experienced by the person and not a personal weakness. In 1987, a group of researchers led by M. Horovyts developed diagnostic criteria for PTSD (APA, 1980). The DSM-III criteria for PTSD were revised in DSM-III-R (1987), DSM-IV (1994), DSM-IV-TR (2000), and DSM-5 (2013), indicating ongoing research in this area. In particular, DSM-III-R added information about traumatic reactions observed in veterans of the Second World War and the Korean War (Moon Yong Chung, 2005). And after

the publication in 1993 of data from nationwide studies of postwar adaptation of Vietnam War veterans (Kulka R. A. et al., 1990), the diagnostic criteria for acute stress disorder (ASD) and PTSD were clarified and reflected in the new edition of the "Diagnostic and Statistical Manual of Mental Disorders" (DSM-IV). This was the path of study and development of psychotraumatology: from traumatic shock and military neurosis to post-traumatic stress disorder:

In 1995, the diagnostic criteria of ASD and PTSD were included in the tenth edition of the International Classification of Diseases (ICD-10) - the main diagnostic standard of European countries - under the rubric F4, which unites mental disorders, the main cause of which is mental trauma (conflict, psychological stress).

An important change in DSM-5 is that PTSD is no longer an anxiety disorder. PTSD is sometimes associated with other mood conditions (such as depression) and with anger or reckless behavior rather than anxiety. Thus, PTSD now falls under a new category, Trauma and Stress Disorders. This disorder includes four different types of symptoms: re-experiencing the traumatic event (also called re-experiencing or intrusion); avoiding situations that remind of the event; negative changes in beliefs and feelings; and feeling tense (also called hyperarousal or overreacting to situations). Most people experience some of these symptoms after a traumatic event, so PTSD is not diagnosed unless all four types of symptoms last for at least a month and cause significant distress or problems with daily functioning.

Also, such a new concept as complex PTSD appears in ICD-11. The

main diagnostic criteria for this disorder are the mandatory presence of the main symptoms of simple PTSD plus subjective feelings of impaired self-identification, emotional regulation, and constant difficulties in relationships. According to scientific evidence, this condition is most often seen in individuals who have experienced severe trauma, such as torture, or experienced long-term childhood trauma, such as prolonged abuse. In such persons, the memory of the experienced fear caused by a traumatic event, under the influence of consolidation, acquires a qualitatively new state, under such conditions memories are characterized by sensitization and generalization. In contrast to PTSD, the stressors associated with PTSD are typical interpersonal factors that result from human maltreatment rather than natural disasters (Banerjee, Morrison, Ressler, 2017; Bisson, 2019). In addition to the typical symptoms of PTSD, PTSD is characterized by more persistent, long-term problems in affective functioning, self-functioning, and relationships. (Bisson, 2019).



CONCLUSIONS

Therefore, there are currently two main documents that guide professionals to diagnose PTSD: DSM-5 (APA) and ICD-11 (APA, 2013; World Health Organization, 2018). It should be noted that, more than ever before, scientists from the US National Institute of Mental Health and experts from the World Health Organization tried to maintain or even strengthen the consistency of the methodology of both classifications.

Significant changes in DSM-5 were driven by new research in psychiatry and neuroscience. The authors of DSM-5 tried to group mental disorders taking into account not only the data on psychopathology, but also the achievements of neuroscience. According to the requirements of the DSM-5, a prerequisite for the diagnosis of PTSD is the presence of a patient's history of a severe traumatic life-threatening event (Criterion A) and at least one recurrent experience (Criterion B), three symptoms of avoidance/numbing (Criterion C), and two symptoms of hyperarousal (criterion D). To minimize the pathologizing of normal stress responses, victims should exhibit these symptoms for more than one month after exposure to the trauma.

It should be noted that the ICD approach to making psychiatric diagnoses is simpler, taking into account the limited time and resources of clinicians. The newly approved ICD-11 guidelines strategically narrowly focus on fear schema symptoms, including re-experiencing the traumatic event, avoiding reminders, and perceiving heightened current threats (represented by various forms of arousal). Central to this definition is the assumption that a core component of PTSD is re-experiencing memories of a past traumatic event.

According to scientific data, ICD-11 improved the quality of diagnosis of PTSD compared to DSM-5, although to date few studies are comparing the diagnostic capabilities of DSM-5 and ICD-11. Most early studies indicated higher rates of PTSD using DSM-5 criteria, except for a large epidemiological survey that found no significant difference in prevalence estimates calculated using both

systems (Al Jowf, Ahmed, An, Reijnders, Ambrosino, Rutten, de Nijs, 2022).

Thus, despite the lack of acceptance, stigmatization, indifference and other difficulties, PTSD has finally achieved official status in the recognized list of diagnoses.



CONFLICT OF INTEREST

The Authors declare no conflict of interest.



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Ромаш Іван Романович,

Нейко Василь Євгенович,
Ромаш Ірина Богданівна,
Дзівак Катерина Володимирівна,
Герич Петро Романович,
Панчишин Михайло Володимирович,
Герич Олеся Михайлівна,
Пустовойт Михайло Михайлович

Івано-Франківський національний медичний університет. Івано-Франківськ, Україна.

ORCID ID 0000-0002-6591-6613 iromashr@gmail.com
ORCID ID 0000-0002-6033-2387 neikovasy11959@ukr.net
ORCID ID 0000-0002-9749-778 romash_ira@ukr.net
ORCID ID 0000-0002-3481-9482 katydzivak@ukr.net
ORCID ID 0000-0002-7708-2150 pgerych@ifnmu.edu.ua
ORCID ID 0009-0000-8727-1177 panchyshyn_my@ifnmu.edu.ua
ORCID ID 0000-0001-6224-2345 Olesya-ff@ukr.net
ORCID ID 0000-0001-8689-6220 pmm2109@gmail.com



ПОСТТРАВМАТИЧНИЙ СТРЕСОВИЙ РОЗЛАД ЯК НОЗОЛОГІЧНА ОДИНИЦЯ: ТРУДНОЩІ МИНУЛОГО ТА ВИКЛИКИ МАЙБУТЬОГО

Метою статті було здійснення аналізу наукових та літературних даних, що відображають історію становлення поняття «посттравматичний стресовий розлад» як нозологічної одиниці, а також особливості його прояву та поширеності, критерії діагностики.

Матеріали та методи: Був проведений систематичний пошук по основних електронних медичних базах даних, таких як PubMed, Scopus, Web of Science, Google Scholar та опрацьовані публікації, які вивчали історію становлення «посттравматичного стресового розладу» як нозологічної одиниці, особливості його прояву та поширеність, критерії діагностики. Відповідні дослідження були визначені за ключовими словами: посттравматичний стресовий розлад, психотравматологія, травма, фізіоневроз, історія медицини. Опрацьовували усі типи статей, включаючи оригінальні дослідження, систематичні огляди та мета-аналізи.

Результати та обговорення: Довгий час у суспільстві існувала стигматизація розладів, спричинених бойовими діями. Шлях становлення ПТСР, як психіатричного діагнозу, тривалий та тернистий. Після Другої Світової Війни назріла гостро потреба запровадження стандартної уніфікованої номенклатури, яка б дала можливість лікарям усього світу вести спільну мову для обговорення психопатології даного розладу,

встановлення діагнозу і визначення інвалідності. Понад 60 років, починаючи із 1952, коли у своєму першому випуску Діагностичного і статистичного посібника із психічних розладів (DSM-I) Американська психіатрична асоціація (APA) наводить поняття «реакція на грубий стрес» і аж до 2013 року (DSM-5) відбувалося становлення посттравматичного стресового розладу як нозологічної одиниці.

Висновки: Не зважаючи на несприйняття, стигматизацію, байдужість та інші труднощі, ПТСР нарешті домігся офіційного статусу в визнаному переліку діагнозів.



КЛЮЧОВІ

с , травматичний стрес, посттравматичний стресовий розлад, психотравматологія, фізіоневроз, історія медицини.



ІНФОРМАЦІЯ ПРО ГОЛОВНОГО АВТОРА

Ромаш Іван Романович
к.мед.н., доцент кафедри психіатрії, наркології та медичної психології. «Івано-Франківський національний медичний університет», Україна.
вул. Пилипа Орлика 5/7. 76010. Івано-Франківськ. Україна.
<https://orcid.org/0000-0002-6591-6613>
e-mail: iromashr@gmail.com

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Olena Ronzhes

master of psychology, master of economics,

graduate student at the Faculty of Psychology,

Kharkiv National University named after V. N. Karazin, Kharkiv, Ukraine

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THE ROLE OF DIGITAL TECHNOLOGIES IN THE ADAPTATION OF CITIZENS OF UKRAINE TO MILITARY AGGRESSION BY THE RUSSIAN FEDERATION



ABSTRACT

Introduction. During the period of military aggression and military terrorism on the part of the Russian Federation on the territory of Ukraine, digital technologies play a very important role in the timely receipt of operational information for physical survival, notifications about actual changes in the infrastructure, and communication between the state and citizens. New services have been created or existing ones adapted to military needs, which are filled with official up-to-date information, providing users with opportunities to save lives and adapt to the ever-changing military conditions. The article examines digital solutions created by the state and its representatives, which can be effective tools that complement adaptive coping strategies in the conditions of hybrid warfare.

Purpose of the article is to identify examples of applications, channels, chats and other digital solutions suitable as auxiliary tools for the application of various categories of adaptive coping strategies.

Methodology. A scientific analysis of the stress level of Ukrainian citizens during the period of military aggression by the Russian Federation and the coping strategies used by them to reduce the stress level was conducted. It is shown that for the effective use of digital solutions that save the lives of citizens during the war, a basic or average level of digital literacy is required in accordance with the digital competence testing of Digigrams, especially in the indicator "information literacy, ability to work with data". The transformation of the city's digital service during the war was considered using the Kyiv Digital application as an example.

Results. The presence of digital services available for installation on mobile devices, which are suitable for use in coping strategies focused on problem solving, and the insufficiency of the number of digital services that could become tools for supplementing coping strategies focused on emotional states were revealed. It was determined that the creation of digital services aimed at solving basic needs during the hybrid war became a forced incentive to increase the average level of digital literacy of Ukrainians. It has been found that a sufficient number of digital solutions have been developed to help citizens survive in wartime, but digital services are lacking as tools for coping strategies to balance

emotional states. The uniqueness of the Ukrainian experience of the use of digital technologies by the state in the period of hybrid warfare compared to the experience of other countries and recognition of the value of this experience at the Smart City 2022 World Congress is determined. An example of the introduction of digital solutions for the security and warning of citizens is given - the German national Cell Broadcast notification system.

Conclusions. Based on the obtained results, the need for digital services and technologies aimed at reducing the stress level of Ukrainian citizens, for their mental health and psychological assistance after psychological trauma from military operations in the country, is theoretically substantiated.



KEY WORDS

digital competence; media literacy; coping strategies; adaptation; digital technologies at war; stress; hybrid warfare



CORRESPONDING AUTHOR INFORMATION

Olena Ronzhes, Kharkiv National University, named after V. N. Karazi, Kharkiv, Ukraine
Email olena.ronzhes@gmail.com ORCID ID: 0000-0003-3260-8996

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INTRODUCTION

During the period of military aggression and military terrorism on the part of the Russian Federation on the territory of Ukraine, starting from February 24, 2022, digital technologies play a very important role

in the timely receipt of operational information for physical survival, notifications about current changes in the infrastructure and communication of the state and citizens. New services have been created or existing ones adapted to military needs, which are filled with official up-to-date information, providing users with opportunities to save lives and adapt to the ever-changing military conditions.

The population of Ukraine and citizens who went abroad for evacuation are in a state of chronic stress. To reduce it, it is possible to apply coping strategies, auxiliary tools for which can be useful digital technologies that are currently being created taking into account adaptation to military conditions.

This bitter experience is unique and valuable, important for the whole world, because the confrontation of military aggression in the form of a large-scale hybrid war in the digital age is experienced by humanity for the first time. Ukraine fought back and fought for its statehood and freedom from the invaders, and was not captured by the invaders for a few days as predicted by military experts, impressing the world community with its courage, unity and determination (Why Vladimir Putin has already lost this war, 2022). During the following months of the war, national identity was strengthened among citizens, according to sociological studies of the National Institute for Strategic Studies (How the war changed the public consciousness of Ukrainians: sociological studies, 2022).

Digital technologies, official, public and private, became the communication and information tool for this.

The article examines the latest works of Ukrainian scientists on the level of stress of Ukrainian citizens during the war and the coping strategies they choose to adapt to the situation. A. Kabantseva reports on the medical and psychological problems of Ukrainians during the hybrid war. Z. Borisova analyzes the impact of military operations on the psyche and possible ways to overcome them. To analyze the occurrence of stress in the conditions of military aggression, the transactional model of stress and its overcoming by Richard Lazarus was considered. The categories of adaptive coping strategies provided by K. Stanislavsky were considered. When analyzing citizens' digital competence, we rely on our previous research and official information from the Ministry of

Digital Transformation. Google Play and AppStore, as well as sources from municipal and national digital services, were explored to list digital solutions created by official sources as useful adaptation aids and tools in coping strategies. The details of the transformation of the Kyiv Digital municipal application were obtained from the deputy information director of the Kyiv City Council, Victoria Itskovich, during an interview at the Smart City World Congress, where the application received a special award from the expert jury.



PURPOSE

In this work, it is planned to consider how state digital technologies contribute to the survival and adaptation of Ukrainian citizens during the period of military aggression of the Russian Federation, as well as how these technologies can be used as tools for coping strategies.



METHODOLOGY

The theoretical basis of this work became the well-known psychological studies of R. Lazarus ("Psychological Stress and Coping Process") and A. Maslow ("Motivation and Personality" and "A Theory of Human Motivation"). The digital literacy framework is based on the DigComp digital competence framework (Digital Competence Framework for Citizens from the Euro Commission). To research digital solutions, the Google Play and AppStore application stores were studied, as well as state websites and the Ministry of Digital Transformation Telegram channel. An in-depth interview was also conducted with the deputy information director of the Kyiv Council.



REVIEW and DISCUSSION

1. Digital literacy of Ukrainians in the conditions of hybrid war

However, the large number of digital environments aimed at users during a large-scale hybrid war also leads to negative consequences. They are led not only by a multitude of information flows of varying quality, but also by hostile information and psychological operations, fakes, propaganda, manipulation, unverified and unconfirmed data, as well as emotional emissions of a high level of stress and tension of ordinary Internet users. Protection of the individual and society from informational pressure can be expressed in a high indicator of "information literacy, the ability to work with data", which includes such skills as viewing, searching and filtering content, critically evaluating information and checking the reliability of sources and facts (National Digital Literacy Test <https://osvita.diia.gov.ua/digigram>, 2022).

For those who have a low level of digital literacy in this area, it is necessary to rely on those official verified data that contribute to the direct protection of human life and relate to its basic need for survival: the notification of the start and cancellation of an air alarm, the functioning of the infrastructure and the power system, about the supply of products and medicines, etc.

Other aspects of the situation will be dealt with when the stress level is reduced. Otherwise, excessive informational pressure can lead to medical and psychological problems. According to the research of A. Kabantseva (Kabantseva, 2021), with a large amount of information, citizens have a sense of lack of real data, which causes many people to be uncertain about the future and fear. The results of the study showed that the majority of respondents (78%) have low awareness of

copied with acute and chronic stress, and the perception of their own physiological and spiritual needs is secondary or absent at all. As a result, symptomatic manifestations of post-traumatic stress disorder (37.4%), asthenia (27%), autonomic disorders (27%) and neurotic depression (26%) develop.

Official digital environments created by government structures, academic institutions, or officials are optimal for obtaining basic, important information to meet basic needs. Thus, consideration of other sources of information and technology, unofficial or private, is beyond the scope of this article, although it is also of interest within the scope of this topic.

2. Transactional model of stress and its overcoming by Richard Lazarus in conditions of military aggression.

Citizens of Ukraine have been in a state of acute stress for many months. This can have long-term consequences, including at the neurobiological level, since chronic stress increases the number of processes in neurons of the amygdala (stress center) and decreases the number of processes in the prefrontal cortex, which is responsible for awareness and making healthy decisions (Arnsten AFT, 2017). Therefore, reducing the level of stress with the help of adaptive techniques acquires special importance.

Richard Lazarus' Transactional Model of Stress and Coping is one of the best-known models about the nature of stress and coping. His theory is based on the fact that the individual himself, with his assessment of what is happening, often unconsciously, gives meaning and importance to the event that concerns him or what he cares about. And after that, on the basis of this assessment, emotions arise, which are not just rational, but also a necessary aspect for survival.

Let's consider the transactional model of R. Lazarus through the prism of martial law in Ukraine. Environmental stimuli are the most stressful. In conditions of direct threat to life, the perceptual filter selects these stimuli for

the primary evaluation of the interpretation of the stressors as dangerous and life-threatening. A secondary assessment of the available resources to neutralize the threatening situation determines the lack of resources of the individual, since the cause lies outside the zone of his direct influence. This leads to stressful situations, which the person seeks to overcome with the help of coping strategies that are best for him. They can be aimed at solving the problem and changing the situation, as well as at emotional balancing to change the reaction to the situation. One of the most accessible tools for such changes can be digital technologies that can be installed on any smartphone or tablet.

As a result, the situation is reassessed, adjusted to it and trained.

Discussion.

1. A direct threat to physical existence as a forced incentive to improve the digital competence of the population

An important role in the possibility of using technological solutions in difficult life situations is played by the digital competence of citizens, both for those who are in Ukraine during the war and for those evacuated to other countries. In previous years, the state actively digitized many services and documents. The forced increase in digital competence also occurred during the period of the spread of the coronavirus in 2020-2021, when most social processes went online to continue social activities during lockdowns or quarantines.

The Ministry of Digital Transformation, created in 2019, provided great support for digitization. You can also test your own level of digital literacy and get the appropriate certificate on the Diya.Tsifrova Osvita website. National online platform for the development of digital literacy (<https://osvita.diia.gov.ua/digigram>).

Tasks of the Digigrams test are systematized according to the areas of knowledge of the European structure of digital competences DigComp 2.1. Based on the results of the test, it is possible to determine

which competencies, which are part of general digital literacy, need to be developed. Also on the platform there is the possibility of training in the form of educational series, podcasts and other formats. In 2021, the digital literacy of Ukrainians of some strata of the population was at a level that requires development (including for reasons of access to the necessary technologies), and active members of society and young people already had a high level (Ronges, 2021).

During the military aggression on the territory of Ukraine, the Ministry of Digital Transformation not only created vital services (for example, the "Airborne Alert" application), but also actively worked to improve the digital literacy of citizens. For example, on November 21-27, 2022, on the initiative of the national project Action. Digital Education, a week of digital education was held on the basis of social networks and information channels (Join the Week of Digital Education from the Ministry of Digital Education, 2022). Russia's military aggression, despite the attacks on critical infrastructure, did not stop the development of digitalization in Ukraine. Applying a creative approach to solving problems, state and public figures achieve even the opposite results, which provide the country with world innovations. Examples of this are the stable and fast Starlink satellite Internet of SpaceX, provided by Elon Musk after the Minister of Digital Transformation Ivan Fedorov appealed to him in February 2022. (What's going on with Elon Musk, SpaceX's Starlink and Ukraine? Here's what we know, 2022), a satellite of the ICEYE company, purchased for the army by the Serhiy Prytula Foundation with donations from Ukrainians (Reznikov told how the "people's satellite" has already helped on the battlefield, 2022). According to the website of the Ministry of Digital, the following goals have been set by 2024: to ensure that 100% of public services are available to citizens and businesses online, 95% of the population, social facilities and main highways have high-

speed Internet coverage, 6 million Ukrainians are involved in the digital skills development program and 10 % share of IT in the country's GDP (Ministry and Committee of Digital Transformation of Ukraine, 2022).

Thus, before the beginning of the military invasion, the population of Ukraine was prepared at the basic and intermediate levels in terms of digital competence in the areas of "Basics of computer literacy", "Communication and interaction in a digital society" and "Problem solving in a digital environment and lifelong learning" (according to the generalized structure of the framework of digital competences for citizens of Ukraine (Details on the methodology for creating the Digigram, 2022). In the conditions of increased stress of the martial law, many of those who, until February 2022, did not feel the need or desire to use digital capabilities in their goals.

2. Coping strategies, which are most pronounced among Ukrainians during the war.

Ways of adapting to stress and behavioral strategies in difficult life situations aimed at achieving emotional balance are called coping strategies (Stress: Coping With Life's Stressors, 2022). R. Lazarus in the book "Psychological stress and the process of coping with it" in 1966 described conscious strategies for coping with stress and anxiety description of conscious strategies for coping with stress and with other events that cause anxiety (Frydenberg E. Beyond Coping. Meeting goals, visions and challenges, 2002). According to his definition, stress is the discomfort experienced by a person in order to effectively respond to the challenges of the environment, given his individual perception of the insufficiency of available and available resources (Lazarus, 1991).

Coping was also studied by L. Murphy, S. Folkman, N. Haan, B. Biron and others. In 1987, R. Lazarus and S. Folkman developed a classification of coping strategies according to two main functions. The first category is

cognitive coping, focused on the problem and aimed at eliminating the stressful connection between the individual and the environment. The second category is coping, focused on emotions and aimed at managing emotional stress (Lazarus, 1987).

Currently, more than 400 different strategies are distinguished (Freire, 2020).

Each individual applies a certain set of different strategies characteristic of stressful situations.

According to studies of the impact of military operations on the psychological state of Ukrainians, indicators of their anxiety and prevailing coping strategies conducted by Z. Dubovyna and her colleagues using the Lazarus method, the majority of respondents are characterized by an excessively expressed state of anxiety. 68% of respondents showed a high level of situational anxiety, excessively worrying about the war situation and having pronounced signs of anxiety and stress. 22% of the subjects showed an average level of anxiety, having a sufficiently pronounced psychological resource for normalizing the emotional state. 10% have reduced levels of anxiety and are engaged in their usual activities. Confrontation, distancing, seeking social support, escape-avoidance, and positive reappraisal turned out to be the predominant coping strategies. The strategy of seeking social support proved to be the most pronounced among Ukrainian citizens during the war. Increased activation of social contacts, including with unfamiliar people, and social cohesion proved to be an effective and productive coping strategy for reducing the level of social and psychological tension, information exchange, emotional exchange, and talking about what is happening to them (Dubrovina, 2022).

In the period of hybrid warfare, tools for applying coping strategies can be digital technologies available on any mobile device.

3. Digital technologies as additional adaptation resources for citizens of Ukraine during the war period

Consider various official digital solutions and environments as additional resources for adaptive coping strategies. To classify strategies, we will take the integrative model of the structure of overcoming stress, dividing them into several categories (Stanisławski, 2019). Categories of coping strategies and examples of possible digital resources are given in Table 1 "Overview of coping theories and their reflection in the digital activity of the state and citizens during the period of military aggression on the territory of Ukraine".

It should also be noted that the knowledge of the population about global digital measures for the development of Ukraine in conditions of war acts as an additional resource for supporting adaptive coping strategies of citizens (Overview of measures for digital transformation and restoration of economic development of Ukraine in conditions of war, 2022).

Global digital measures for the development of Ukraine in war conditions:

- Ukraine's approach to the EU's Single Digital Market as a component of digital visa-free travel with the EU;

- The deepening of digital reforms in Ukraine as a process of society's transition to digital technologies, which concerns all spheres of social life;
- Development and growth of the IT sector;
- Creation of conditions for the attractiveness of the domestic Internet infrastructure, as well as the involvement of European projects in the support of telecom companies;
- increasing the intercontinental exchange of Internet traffic;
- Implementation of the initiative to register electronic residents through mobile applications;
- Building a Made with Bravery marketplace platform and more.

In the framework of this article, we will not consider non-adaptive popular coping strategies (splashing negativity, lack of involvement in actions, lack of involvement in thoughts, use of chemicals, social care) as dangerous for the individual and unfavorable for survival in the wartime period.

Table 1. "Overview of coping theories and their reflection in the digital activity of the state and citizens during the period of military aggression on the territory of Ukraine"

<u>Coping strategies focused on problem solving.</u> They are used to change the situation itself		
№	Category of coping strategies	Examples of possible digital solutions from official sources
1	<u>Active coping</u> : specific actions to overcome a stressor or reduce its impact	<ul style="list-style-type: none"> • App "Air Alarm" • Chatbot "isEnemy" • Application "Bachu.info" • TiKhto application • Appendices "Map of alarms of Ukraine" and "Map of alarms" • Helping the sick and injured: applications "Helsi", "TacticMedAid", "Mobile first aid" • MineFree App
2	<u>Planning</u> : thinking specifically about how to deal with stress, thinking about steps to overcome the problem	<ul style="list-style-type: none"> • "Action" application and portal • "EasyWay" application

		<ul style="list-style-type: none"> • Kyiv Digital application, Kharkiv Mayor Terekhov's telegram channel and other municipal services • "Tabletki.ua" application • Chatbot for volunteer assistance: "SaveUA" • Applications with the possibility of donations: "Diya", "United24", "Privat24" and others, for example, for the benefit of the Armed Forces or for general global goals such as "people's satellite" • Retraining or advanced training, for example, the "IT generation" project or the "Info Science Bot" chatbot, educational series of the "Diya" portal • Marketplaces "Made with bravery" and "Action. Business"
3	<u>Refusal of a competing activity:</u> Refusal of another activity to resolve a stressful situation	<ul style="list-style-type: none"> • Online volunteering, such as the IT army, teachers, professionals in the helping professions, • Chatbot for volunteer assistance: "SaveUA"
4	<u>Rest:</u> waiting for a suitable opportunity to act	<ul style="list-style-type: none"> • Applications for help and entertainment for children: "Hearty app", "Bebo" • "yeBayraktar" game • Applications for digital creativity
5	<u>Seeking social support:</u> for example, advice, financial assistance or useful information	<ul style="list-style-type: none"> • Applications "Diya.Radio" and "Diya.TV" • Lepta app • Channels and chatbots of officials or specialists in messengers or social networks

Coping strategies focused on emotion regulation.

They help to cope with the emotional response to problems

№	Category of coping strategies	Examples of possible digital solutions from official sources
1	<u>Seeking social support for emotions:</u> turning to loved ones for moral support	<ul style="list-style-type: none"> • Free help of psychologists in the conditions of war Call center #VARTOJHYTY • communication with relatives and friends by cell phone, online and in messages, also thanks to the Internet Starlink
2	<u>Positive reappraisal:</u> the ability to turn the situation around so that stressful events can be interpreted as beneficial	<ul style="list-style-type: none"> • Comments on the situation by specialists, experts and officials who have the ability to make a positive reassessment (such as military expert O. Zhdanov, adviser to the Office of the President of Ukraine O. Arestovych, etc.)
3	<u>Radical acceptance:</u> the ability to perceive the reality of a stressful situation without closing from it and without deceiving yourself	<ul style="list-style-type: none"> • Educational series "Operational help for PTSD" on the "Diya" portal • National professional line for mental health support "Lifeline Ukraine"
4	<u>Self-control:</u> Trying to monitor and control your emotions in response to stress	<ul style="list-style-type: none"> • Educational series "Working with emotional burnout" on the Diya portal
5	<u>Turning to Religion:</u> Trying to Find Comfort in Religious Practices	<ul style="list-style-type: none"> • Hotline of UOC Nadiya. Spiritual support service
6	<u>Humor:</u> trying to cope with negative emotions through laughter	<ul style="list-style-type: none"> • "Memoment" app • Entertainment channel @FunICTV

4. An example of municipal application with military experience: Kyiv Digital

The necessary solutions in the conditions of hybrid warfare are created and transformed with great speed, oriented to real problems and threats. Even a year ago, in 2021, the orientation of the global IT industry did not have military priorities. Today, the experience of Ukrainian developers and officials and their creative approach to the application of digitalization and communication is of great value to other countries.

4.1. Kyiv Digital application as a continuation of the Kyiv Smart City project.

The need for digital solutions in many spheres of people's lives, settlements and the country in general became more acute after the beginning of the military aggression of the Russian Federation in Ukraine. State-level issues are largely resolved by the Ministry of Digital Transformation (for example, with the Action. State in your pocket application). However, municipal processes are digitized in many ways thanks to local authorities. Big cities are being transformed according to the concept of a "smart city", a complex and multi-level process. Launched in peaceful conditions, after the attack on Ukraine on February 24, 2022, it acquired new, previously unplanned directions for the survival of the population.

Let's consider the role of the Kyiv Digital program in helping adaptation strategies to military reality. In 2015, the transformation of the capital of Ukraine into a "smart city" began, which involves three key changes: the creation of an effective platform for managing urban infrastructure; changes in city management - increasing transparency of administration, development of a transparent and constructive model of public-private partnership; public - first of all, the involvement of citizens in decision-making and influencing the creation of city policy (Comprehensive city target program

"Electronic capital" for 2015-2018: approved by the decision of the Kyiv City Council of July 2, 2015 No. 654/1518).

Kyiv Digital is the successor to the city initiative Kyiv Smart City (which existed in 2015-2020), a mobile application under the motto "City in your pocket", created in January 2021 and providing administrative and information services on the territory of Kyiv.

Reviews of program users, left under program accounts in various digital environments, show the positive attitude of citizens. There are also reports that some functions of the program have not yet been sufficiently developed, in particular, the payment of travel tickets for city transport (Kyiv Digital, customer feedback, 2022).

However, the development team's responses and reactions to feedback show that issues are being taken into account and corrected where possible. According to estimates left by users in the Google Play application store, the average score out of 49.2 thousand user reviews is 4.4 out of 5, which indicates a good attitude of customers to the Kyiv Digital application (Kyiv Digital Municipal Main Information and Computing Center, 2022). Also, in the App Store, the average rating was a commendable 4.7 out of 5 points (Kyiv Digital, 2022). According to reports in the official Telegram channel of Kyiv Digital, in November 2022, the application was used by more than two million users.

4.2. Special award for Kyiv Digital application at the Smart City World Congress.

The evaluation of the program at the level of world standards can be found out at professional international events. On November 15-17, 2022 in Barcelona, Kyiv Digital was presented at the Smart City Expo World Congress and nominated for the annual World Smart City Awards, which is a prestigious international competition to recognize innovative projects, ideas and strategies that make cities around the world more livable for life, sustainable and

economically viable. Among the 337 selected applications, six nominees were chosen, including this Kyiv application as part of the "smart city" concept. The honorary jury decided to award Kyiv City with a special award for strengthening sustainability and continuity of services to citizens (World Smart City Awards - 2022).

According to the description on the website of the Congress, the Kyiv administration, against the background of the Russian invasion, the city administration used flexible and sustainable digital tools to meet the needs of its citizens, providing them with vital digital solutions. Kyiv Digital, the city's smartphone application, has turned from a mobile app into a life-saving tool for citizens, and the city's Wi-Fi network has expanded its coverage area. The jury announced that, withstanding the growing pressure of the Russian siege, the Kyiv city administration is demonstrating how digital technologies are helping cities to remain resilient. And also pays special attention to public safety and a sustainable multimodal mobility system, while striving to provide 100% of administrative services online by 2030 (World Smart City Awards - 2022 Winners, 2022).

According to Ms. Victoria, until February 2022, the Kyiv Digital application was mainly for transport: buying tickets, paying for parking, and others. With the beginning of the war, there was a need for citizens to have a trusted resource that informs about what is happening in the city.

- During the war, the following features were added:
- the functionality of the alarm message, because until that moment Kyiv was not sufficiently covered with sirens. The team has developed a special interface through which the emergency service, which sets off physical sirens as an alarm, simultaneously informs citizens about it through Kyiv Digital;
- alarm cancellation functionality,

immediate threat reduction notification is required (which is especially important on days when there are multiple alarms). The information comes through the same interface as about the start of the siren;

- important life support maps with up-to-date data: pharmacies, gas stations, service stations, grocery stores, the possibility of obtaining drinking water. Small and medium-sized businesses mostly closed, but there were also those who were ready to provide their services and wanted to inform the townspeople about it. Information about this was sent by entrepreneurs themselves in response to the invitation of the development team, and this additionally stimulated the opening of points in Kyiv (even at the level of private garages).
- Air quality service, thanks to the Internet of Things network operating in the city, based on the LoRaWan protocol, which also contains information on environmental indicators
- e-democracy services: surveys, petitions,
- useful messages, for example, about the beginning and end of curfew
- We are currently working on new features, such as:
- by adding high-quality messages about the time of addressable electricity shutdown. This is a difficult task, as there are planned, unplanned, and emergency shutdowns;
- document sharing is a function of transferring copies of digital documents from the "Kyiv Digital" application for various services;
- map of heating points in conditions of winter cold and destroyed critical infrastructure.
- For infrastructural and digital services (for example, data centers and some

technological solutions) in accordance with the law during the war were taken abroad of Ukraine. This allows you to use data recovery (back up) in critical cases. Services work on the basis of cloud technologies, which guarantees their reliability even in the most dangerous military situations.

Personal data, as well as some services that cannot be transferred to the cloud, are stored on the territory of Ukraine. To ensure their reliability, various scenarios have been thought out, up to a complete blackout.

The first thing that distinguishes the Kyiv Digital application from other city applications is its versatility ("an application about everything and at once" according to Ms. Victoria, under the motto "the city in your pocket"): transport, documents, useful maps, digital democracy, etc.

4.3. An example of the emergence of adaptive digital mechanisms in other countries: Germany's national public service Cell Broadcast

The main uniqueness of the program compared to other smart city solutions presented at the Smart City Expo Congress is the bitter experience of military reality in the digital age. Ukraine was the first country to face the world's largest war since World War II, and the country is gaining unique experience in using digital technologies to serve its citizens on the path to victory and peace.

It should be noted that other countries in 2022 also began to develop and test digital solutions in case of military actions on their territory.

An example of this is the national warning service of Germany Cell Broadcast Cell Broadcast – der nationale Warnservice, 2022).

A nationwide alert test day was at 8th of December 2022, which also include cellular broadcasting (the public alert service that German mobile operators have installed on

their networks). The service will be launched in 2023.

The Cell Broadcast service works without installing an additional program and is also an addition to already available warning programs (NINA or Katwarn). Unlike SMS, an alert sent via broadcast reaches every device in the radio cell that is ready to receive it.

When receiving a warning message, the mobile device emits a loud warning signal. At the same time, it displays a text message, for example, a warning about a fire, an accident or a natural disaster. The text contains instructions on how to behave, as well as tips for obtaining information. The specific competent body or ministry is responsible for the content of the warning.

Scientific value / practical value. The study emphasises the urgent need, reinforced by the consequences of the long-term war in Ukraine, to create state digital services that will become useful tools for coping strategies of emotional regulation of Ukrainians. Digital services should be convenient and quickly available for use, and be based on modern psychological research and methods of coping with stress. It is planned to establish contact with the Ministry of Digital Transformation of Ukraine in order to discuss the possibility of creating such services.

Limitation of the research. The study examines digital technologies created by official sources in terms of useful functions for survival and communication. In Maslow's pyramid, these topics can be attributed to the first, second and third levels: physiological needs, safety, social connections. Issues of the credibility of ideological information or political preferences are not addressed within the scope of this article.

Another limitation of the study is that we only looked at technologies created by government agencies or officials, or commissioned by third-party firms. However, there are many applications, services and chatbots used in military settings. However, their content requires separate consideration

depending on who is conducting them and for what purpose. In some cases, the effect of interacting with them can be the opposite of reducing stress and is not suitable as an additional tool for adaptive coping strategies.



CONCLUSIONS

Many state or municipal digital solutions have been created, which are useful tools for coping strategies aimed at solving the problem and changing the situation itself.

No targeted digital solutions created by official sources were found for emotional regulation coping strategies. However, the citizens found a high level of stress and low awareness of how to deal with it. In order to reduce it with the help of digital technologies as the most accessible tool, users seek to solve the problem themselves or turn to services that are technologically convenient, but do not guarantee the support of a coping strategy. On the contrary, spontaneous communication on social networks or watching traumatic videos can increase stressful situations and lead to long-term destructive consequences. We can come to the disappointing conclusion that the creation of digital services aimed at regulating the emotions of citizens traumatized by military aggression was very useful and appropriate for the establishment of the nation's psychological homeostasis (maintaining balance and a healthy mental state).



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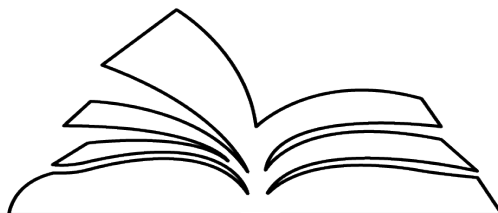
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Ронжес Олена Євгеніївна

аспірантка факультет психології,
Харківський національний університет імені В. Н. Каразіна, м. Харків,
Україна

ORCID ID: 0000-0003-3260-8996 olena.ronzhes@gmail.com



РОЛЬ ЦИФРОВИХ ТЕХНОЛОГІЙ У АДАПТАЦІЇ ГРОМАДЯН УКРАЇНИ ДО ВІЙСЬКОВОЇ АГРЕСІЇ З БОКУ РОСІЙСЬКОЇ ФЕДЕРАЦІЇ

У період військової агресії з боку Російської Федерації на території України цифрові технології відіграють дуже важливу роль у своєчасному отриманні оперативної інформації для фізичного виживання, повідомлень про актуальні зміни в інфраструктурі та комунікації держави і громадян. Були створені нові або адаптовані наявні сервіси, які наповнюються офіційною актуальною інформацією, надаючи користувачам можливості адаптації до військових умов, що постійно змінюються.

Метою статті є визначення прикладів додатків, каналів, чатів та інших дигітальних рішень, що підходять як допоміжні інструменти для застосування різних категорій адаптивних копінг- стратегій.

Методологія. Проведено науковий аналіз рівня стресу громадян України у період військової агресії з боку Російської Федерації та копінг-стратегій, що застосовуються ними для зниження рівня стресу. Показано, що для ефективного використання цифрових рішень, які рятують громадянам життя у період війни, необхідний базовий чи середній рівень цифрової грамотності відповідно до тестування цифрової компетенції Цифрограм, особливо у показнику „інформаційна грамотність, вміння працювати з даними“. Розглянуто трансформацію міського цифрового сервісу в період війни на прикладі додатка Київ Цифровий.

Результати. Виявлено наявність дигітальних сервісів, доступних для встановлення на мобільних пристроях, які підходять для застосування в копінг-стратегіях, орієнтованих на вирішення проблеми, та недостатність кількості цифрових сервісів, які могли б стати інструментами для доповнення копінг-стратегій, орієнтованих на емоційні стани. Визначено, що створення цифрових сервісів, орієнтованих на вирішення базових потреб під час гібридної війни стало вимушеним стимулом до підвищення середнього рівня цифрової грамотності українців. Визначено унікальність українського досвіду застосування цифрових технологій державою в період гібридної війни порівняно з досвідом інших країн та визнання цінності цього досвіду на Світовому Конгресі Smart City 2022. Наведено приклад запровадження цифрових рішень для безпеки та попередження громадян – німецька національна система оповіщення Cell Broadcast.

Перспективи подальших досліджень. На основі отриманих результатів теоретично обґрунтована необхідність цифрових сервісів та технологій, орієнтованих на зниження рівня стресу громадян України, для ментального здоров'я та психологічної допомоги їм після психологічної травми від воєнних дій у країні.

Keywords:

цифрова компетентність; медіаграмотність; копінг-стратегії; адаптація; цифрові технології на війні; стрес; гібридна війна

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UDC 159.922.8

Svitlana Chunikhina

Ph.D., Vice-director at the Institute for Social and Political Psychology of the National Academy of Sciences of Ukraine

Caroline Dodson

MSc Global Health Vrije University, Amsterdam

Ellen Önen

MSc Global Health Vrije University, Amsterdam

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SUICIDE SCREENING AMONG PUPILS IN ONLINE LEARNING CONDITIONS: A SCOPING REVIEW



ABSTRACT

Introduction. The risk of child and youth suicides has increased in Ukraine since the Russian-Ukrainian war began. There is a high probability of increasing suicides among all ages, genders, and social groups after the end of active hostilities and the commencement of peace. Thus, Ukrainian students and pupils require regular screening for suicidal and self-harm tendencies to receive timely preventive or therapeutic interventions. However, due to distance learning conditions, most have limited access to diagnostics and help.

Purpose. The article **aims** to observe the available screening techniques suitable/applicable for detecting suicidal tendencies and/or self-harm in school-aged children in online learning conditions.

Methodology. A scoping review was chosen as a method of identifying available literature. Inclusion criteria were defined in that all articles must have been published within the last five years, written or translated into English, and dealt with pupils aged 5-19. Search engine databases included Scopus and Web of Science. The “Pearl growing” method was also applied by reviewing the references of included articles.

Results. Ultimately 18 out of 996 identified articles were included in scoping review. Most of the studies utilized long-established, reliable and evidence based mental health diagnostic screening tools, or a combination of several. The two most widely used diagnostic screening tools were the Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder Questionnaire (GAD-7). We have identified three settings of digital tools developed on this basis: for school, for clinical, for remote-only usage.

Conclusions. Emerging technologies can augment traditional approaches during virtual suicide assessment. This research can offer promising direction into the facilitation of screening adolescents electronically in distance learning conditions. With careful planning and research, it is possible to effectively accomplish screenings for Ukrainian pupils and students and ensure they receive the appropriate mental health care as soon as possible.



KEY WORDS

youth suicide, screening tools, distance learning, Ukraine, war, scoping review



CORRESPONDING AUTHOR INFORMATION

Svitlana Chunikhina, Ph.D. Vice-director at the Institute for Social and Political Psychology of the National Academy of Sciences of Ukraine, Kyiv, Ukraine
Email s.chunikhina@ispp.org.ua ORCID ID: 0000-0002-0813-67415

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INTRODUCTION

The risk of child and youth suicides has increased in Ukraine lately due to kids' involvement in dangerous online activities and their broader media coverage (Naydyonova & Zarytska, 2019; Sliusarevskyi & Chunikhina, 2021). Since 2014, when the Russian-Ukrainian war started, so-called "death groups" (online communities that involve children and teenagers in games with a self-harming or suicidal orientation) have increased their activities following escalation on the battlefields. With the beginning of the full-scale Russian invasion, the number of requests for psychological help for suicidal and self-harm behavior among children, adolescents,

and young people increased significantly (Kryvulyak & Legenka, 2022). As the results of international studies on the dynamics of suicides in pre-war, war, and post-war times show, there is a high probability of an increase in the number of suicides among all age, gender, and social groups of the population after the end of active hostilities and the commencement of peace (Lester, 1994; 2021). Risk factors include

- the genocidal nature of the war;
- the consequences of the traumatic experience of violence, occupation, and losses;
- psychological challenges of refugees and migration;
- availability of firearms (Kryvulyak, & Legenka, 2022; Amiri, 2021; Selakovic-Bursic, Haramic, & Leenaars, 2006).

The ongoing war in Ukraine puts an estimated 7.5 million children at extreme risk for mental health problems (Elvevåg & Delisi, 2022). While distance learning has become increasingly common among youth due to the impact of the COVID-19 pandemic, many children worldwide are now returning to a traditional school environment. However, the learning process for many children in Ukraine continues to be remote due to the current full-scale war. Bürgin et al. (2022) describes the devastating duplexity of both the pandemic and the war and the impact they have had on the mental health of these children.

Increased distance learning screen time and internet use can contribute to feelings of isolation and may increase youths' exposure to violent online games that feature suicide, which is a risk factor for self-harm (Ming et al., 2016). Disturbing online self-harm challenges, such as the "Blue Whale Game," have been linked to outbreaks of two recorded suicide epidemics in Ukraine (Adeane, 2019).

Thus, Ukrainian students and pupils require regular screening for suicidal and self-harm tendencies to receive timely preventive or therapeutic interventions. However, due to distance learning conditions, most have limited access to diagnostics and help.

Adolescent mental health in the specific cultural context of school aged children in Ukraine has not been prioritized enough in research to fully tailor interventions. There is an urgency to address this research aim and lessen the research gap in order to meet the mental health needs of youth affected by this crisis. The research topic that we will be investigating is the assessment of suicidal tendencies among pupils in online learning conditions worldwide. We hope to provide evidence-based strategies to reduce harm in children by offering screening tool guidance for parents, teachers, and other responsible adults. This screening should be based on specific indicators that may differ from offline screening. Proper screening and treatment have the potential to save lives and reduce


war-associated morbidity. Hence, developing an online-based screening instrument that could be implementable for teachers, parents, or psychologists would be of great value.

Therefore, the article's **aim** is to answer the research question: what are the available screening techniques suitable/applicable for detecting suicidal tendencies and/or self-harm in school-aged children in online learning conditions?



METHODOLOGY

A scoping review was chosen as a rigorous but also an efficient method of understanding the volume of available literature. The review was guided by a PRISMA checklist (Tricco et al., 2018). The SPIDER framework was also used to structure the research question by identifying the setting, population, intervention, comparison, and evaluation. A log book was used as a primary documentation source throughout the search to minimize the risk of error.



REVIEW and DISCUSSION

As for inclusion criteria and scope of the review were concluded that all articles must have been published within the last five years and written or translated into English. This scope included school-aged pupils aged 5-19. The justification for this age group is that it includes children of school age, and intentional self-harm has been reported in children as young as five in Ukraine (National Academy of Educational Sciences of Ukraine, 2021). The justification of the five year time period is that the topic is related to the development of online technology and its integration into schools during the COVID-19 pandemic and on-going war in Ukraine.

Nevertheless, articles are not limited to Ukraine because self-harm is a global issue.

Search engine databases included Scopus and Web of Science due to the nature of the subject. These databases were accessed through the Vrije University library to increase access to a diversity of full text articles. The “Pearl growing” method (Hadfield, 2020) was also applied by reviewing the references of included articles to ensure all relevant literature was identified outside our database search. The database search in combination with the pearl growing strategy, offered sufficient results. Search engine expansion was not necessary or possible due to time constraints. Search syntax was customized for each database to offer the most precise results (see Appendix A: Search Strategy Template). All yielded articles were imported directly into the EndNote X9 citation program for the organization. Rayyan Intelligent Systematic Review software was then used to screen and select the relevant articles. The collection of articles was screened together to ensure consistency. Any articles that were unclear in meeting inclusion criteria were further discussed by the research team. There were no breaches of inclusion and exclusion criteria to include essential cases. There were several gray literature articles discovered which were given consideration. They were found to be of importance to the topic but were excluded because they were not peer-reviewed. Ultimately 18 articles were included in this scoping review. A PRISMA flow diagram was used to summarize the screening process (see Figure 1) visually. Most of the articles were excluded based on irrelevant populations and inapplicable settings.

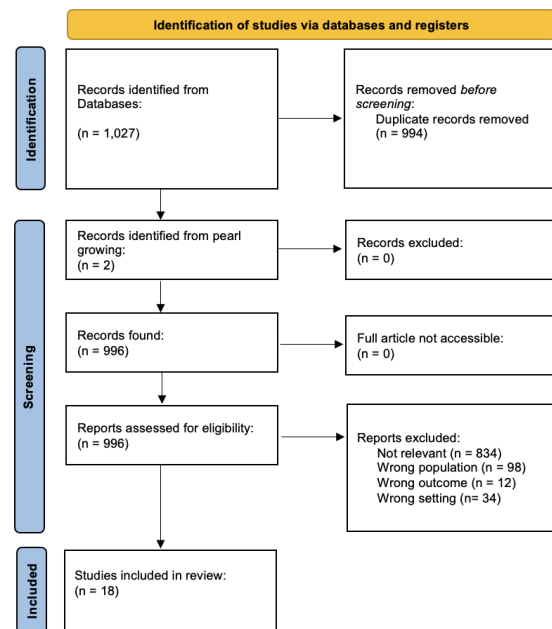


Figure 1: PRISMA flow diagram

Data Extraction and Critical Appraisal. A data extraction process was subsequently conducted on the included articles. Articles were read in their entirety and key information was identified and charted to offer a comprehensive and descriptive summary (see Appendix B). A collaborative excel spreadsheet was used for this process for both study authors to contribute equally. Details such as the aim of the study, name of the screening tool, methodology, sample population and size, authors’ stated study limitations, results, discussion, and conclusion synopses were included. It was also important to distinguish exactly which mental illness(es) were being screened for as these varied by each tool.

A critical appraisal of the articles was done using the Mixed Methods Appraisal Tool (MMAT) Version 2018 to determine the quality and relevance of each article. Close attention was paid to the publishing journal to avoid the inclusion of predatory journals. This scoping review included studies that were qualitative, quantitative and mixed methods, therefore, 4 out of the 5 question sets were utilized from the tool. Study quality was assessed on factors such as sample size and data collection methods. Strengths and limitations of each article were taken into

consideration and excluded if we decided it was not of benefit to include. It was determined that each article included was relevant to the research question, sufficient in its methodology, and credible. After the critical appraisal was completed, an open coding process was performed on each article in the data extraction sheet (Appendix B) to offer insight into key themes in the findings.

Results. Ultimately 18 out of 996 identified articles were included in our scoping review (see Table 1: Summary of Included Papers). While further research is certainly needed in this area, our results offer substantial evidence to answer our research question. Traditionally, screening for suicide and mental illness has been done face-to-face in a clinical setting by a healthcare provider. However, it appears new technology and methods are allowing for the screenings to be completed electronically and sometimes without the need for a licensed professional. Studies showed there are several evidence-based tools that could effectively screen students in an online distance learning environment.

Of the 18 total articles included in our review, 9 of them were conducted specifically in a school setting. This usually involved the students self-administering the tool online in a classroom during regular school hours. The other settings were either clinical or completely remote. The studies in a clinical environment such as an outpatient center also involved the adolescents electronically self-administering the screening, usually on a tablet, before an appointment with their healthcare professional. The entirely remote interventions were typically pilot studies testing the use of a new smartphone application to screen youth, or a software algorithm. The countries that the studies were completed in varied across several continents, however, none were located in Ukraine.

Table 1: Summary of Included Papers

First author and Year	Country	Setting	Sample Size	Study Design	Tool
Martinez-Nicolás, 2022	Mexico	High schools	n= 2,835	Representative cross sectional study	Columbia-Suicide Severity Rating Scale (C-SSRS), Patient Health Questionnaire-9 (PHQ-9), abbreviated version of the Generalized Anxiety Disorder-7 (GAD-7), the World Health Organization Well-being Index (WHO-5)
Thabrew, 2018	New Zealand	Specialist outpatient paediatric clinics	n= 30	Mixed Methods	YouthCHAT
Thabrew, 2019	New Zealand	A low-decile high school	n= 129	Counterbalanced randomized trial	YouthCHAT
Sekhar, 2022	United States	High schools	n= 12,909	Randomized control trial	Patient Health Questionnaire-9 (PHQ-9)
Malalagama, 2018	Sri Lanka	Tertiary care hospitals	n= 100	Mixed methods validation study	Adolescent Suicide Assessment Protocol (ASAP-20) translated and culturally validated to Sri Lanka
Kim, 2022	South Korea	Elementary and middle schools	n= 514	Mixed methods	Self-Harm Screening Inventory (SHS) culturally validated to Korea
Jang, 2017	South Korea	School	n= 208,603	Quantitative cross sectional study	Center for Epidemiologic Study for Depression (CES-D) and Suicide Behaviors Questionnaire-Revised (SBO-R)
Iorlino, 2017	Australia	Clinics	n= 232	Cross-sectional study	Kessler-10 (K10) questionnaire, Altman self-rating scale, Community Assessment of Psychotic Experiences-Positive Symptoms scale, Suicide Ideation Attributes Scale (SIDAS), Brief Disability Questionnaire (BDQ)
Hetrick, 2017	Australia	Primary and tertiary care	n= 101	Mixed methods naturalistic longitudinal cohort study	Patient Health Questionnaire 9-item scale (PHQ-9) and Suicidal Ideation Questionnaire (SIQ)
Albritton, 2021	United States (Ohio)	Remote	n= 65	Descriptive Pilot Study	Rosenberg Self-Esteem Scale and the Community Attitudes Toward Mental Illness questionnaire
Parker, 2020	New South Wales, Australia	GP offices	n= 36	Single arm uncontrolled pilot study	Patient Health Questionnaire-9 (PHQ-9) for depressive symptoms and the Generalized Anxiety Disorder Questionnaire (GAD-7) for anxiety symptoms.
Stewart, 2020	Canada	Clinics	n= 25,104	Large mixed methods cross-sectional study	ChYMHS Screener and full ChYMHS assessment tool (used in assessing, triaging and prioritizing children and youth seeking mental health service)
Dobias, 2021	United States (nationwide)	Clinics	n= 565	Clinical Trial: Empirical Study, Quantitative Control Trial	Children's Depression Inventory-2 (CDI-2) and two, single-item questions adapted from the Self-Injurious Thoughts and Behaviors Interview-Revised (SITBI-R), and Self-Hate scale (SHS)
Luijten, 2019	Netherlands	Secondary schools	n= 1,175	Empirical quantitative study	Mental Health Continuum-Short Form (MHC-SF), the Positive and Negative Affect Scale for Children (PANAS-C), the Kidscreen-27, the Social Production Function Instrument for the Level of well-being-short (SPF-ILs), and Cantril's ladder.
Vawda, 2017	South Africa	Low socio-economic middle school	n= 221	Quantitative empirical study	Self-report psychometric instruments: the Beck Depression Inventory (BDI), The Beck Hopelessness Scale (BHS), the Perceived Stress Scale, the Anger Scale, the Mastery Scale, a 7-item scale employed to determine personal control or mastery, the Self-Esteem Scale, and the Perceived Social Support Scales
O'dea, 2019	Australia	School	n= 59	A single-arm, pre-post, 6-week uncontrolled pilot trial	Smooth Sailing
Lee, 2019	South Korea	School	n= 247,222	Cross-sectional design	Korea Youth Risk Behaviour Web-based Survey (KYRBS)
O'dea, 2021	Australia	Secondary schools	n= 1,802	Cluster RCT	GAD-7, PHQ-9, Actual Health Seeking Questionnaire (AHSQ), Centre for Epidemiologic Studies Depression Scale - Child version (CES-DC), Distress Questionnaire-6 (DQ6), Barriers to Adolescents Seeking Help - Brief (BASH-Brief), Mental Health Literacy Scale (MHLIS)

The sample sizes varied from as low as 30 to 247,222. The study designs were assorted and many had mixed methods elements. The demographics of the study populations were diverse among adolescents; many were inclusive of individuals with and without histories of mental health illness. One study applied a tool to students with long-term physical disabilities and another was specific to students with low socio-economic standing.

Most of the studies utilized long-established, reliable and evidence based mental health diagnostic screening tools, or a combination of several. The two most widely used diagnostic screening tools were the Patient Health Questionnaire (PHQ-9) and the Generalized Anxiety Disorder Questionnaire (GAD-7). They were then often customized to the specific population, which oftentimes required cultural and/or electronic adaptation. This sometimes required language translation or omitting certain questions within the tool that were not deemed appropriate for the population. Some tools even selected just one or two questions from the scales. A few studies

even used these two instruments integrated with a tool the researchers developed.

The studies varied in terms of which specific mental illness was being assessed. Some of the studies were broad in their objectives and aimed to detect psychosocial and lifestyle issues in addition to suicide risk. Other studies clearly stated they aimed to screen exclusively for acute risk of suicide.

There were common themes in the authors' stated limitations. Many of the remotely conducted studies expressed concern about participants not having a smartphone and to what degree of attrition that would affect the sample. A few studies noted difficulties with WiFi access and low participation rates. A study conducted in South Korea discussed mental health stigma and considered that participants could have lied about past psychiatric history, affecting screening results (Jang et al., 2017). However, there were generally positive results in sensitivity, validity, feasibility, and acceptability in the majority of the tools.

The setting of Test: School “MeMind”

Martínez-Nicolás et al. (2022) performed a representative cross-sectional study on the mental health of adolescents in Mexico City. “MeMind” is a smartphone-based mental health screening intended to target high school students. Using the PHQ-9, Columbia-Suicide Severity Rating Scale (C-SSRS), World Health Organization Well-being Index (WHO-5) and a shortened version of GAD-7, students were screened for anxiety, depression, suicidal ideation along with their perceived well-being. With almost 3,000 participants they successfully administered the screening. They found that females had higher rates of anxiety, depression, and suicidal ideation than males. It was concluded that this large-scale mental health screening using an online tool proved feasible with high response rates.

“Use of a smartphone application to screen for depression and suicide in South Korea”

This 2017 study used a smartphone application to screen for depressive symptoms and suicidal ideation with a large sample size (n=208,603) in South Korea. While the test was held at a school facility, the screening was exclusively on the smartphone application and could be taken at any location if necessary. Additionally, the researchers wanted to examine factors that contribute to depression and suicidal ideation (Jang et al., 2017). Demographic data including past psychiatric history, were collected in the questionnaire to classify the results. If the scores for depression or suicide were high, the participant received recommendations to seek out professional help and were sent a credible source for more information on depression and suicide. The study concluded that the smartphone application is easy and quick to use as a tool for screening for depression and suicide. These study results are similar to the results of previous research studies, which support the validity of a smartphone application tool to screen for depression and suicide.

“Self-Harm Screening Inventory (SHSI) Screening Tool Validation”

A mixed-methods study was conducted with the aim of developing and validating a screening tool to measure various forms of self-harm behaviors among South Korean youth (Kim et al., 2022). This study assessed the psychometric properties of the tool itself. Prior to this study, researchers noticed a significant lack of culturally appropriate resources to measure the mental health of adolescents in Asian countries. They recruited 514 adolescents aged 12 to 16 from all over South Korea and asked them to complete an online questionnaire. This questionnaire measured their self-reported levels of NSSI, self-esteem, anxiety and depression. After analyzing the results, researchers eliminated 10 of the 20 items on the questionnaire. A final version of the SHSI

was then created and included 10 questions on self-harm behaviors within the past year. Statistical analyses were completed and it was shown that the SHSI tool was a valid and reliable measurement for NSSI screening in South Korea adolescents.

“Smooth Sailing”

Smooth Sailing is another online, school-based mental health service for depression and anxiety that has been tested for use in Australia (O’dea, 2019). The self-report mental health screener contains two validated measures: the PHQ-9 and GAD-7. The service was created with young people and psychologists as stakeholders. It was validated through a randomized control trial and found to be successful in identifying new cases of mental health problems (O’Dea et al., 2021). Authors recommended “modifying consent procedures, ensuring school counselor availability, improving completion of modules, and removing service barriers related to accessibility” to improve the quality and effectiveness of the service. Participants found the service easy to use and understand. Results showed a statistical difference that favored the intervention group, suggesting that students’ intentions to seek help for mental health problems may be improved through Smooth Sailing.

Additional Studies in a School Setting

Several other tools were notably relevant that took place in a school setting. A cross sectional study tested the “Korea Youth Risk Behavior Web-based survey,” an online self-reported questionnaire of more than 100 questions for pupils to complete in a school computer room (Lee et al., 2019). It was determined to be a practical risk calculation tool.

The SHIELD Project was a large-scale randomized control trial in 14 high schools in the United States (Sekhar et al., 2022) which aimed to detect suicide risk and increase initiation of mental health services. The tool used the PHQ-9 scale and resulted in a 9.6%

identification rate through universal screening and a 4.0-fold greater chance of initiating treatment.

Luijten et al. (2019) quantitatively tested the psychometric properties of the Mental Health-Continuum-Short Form among Dutch adolescents to screen for mental health issues. This proved to have good internal consistency and validity.

Vawda et al. (2017) reported on a screening tool for teachers to identify suicide in South African Students. The tool used several established instruments such as the Beck Depression Inventory, the Perceived Stress Scale, the Anger Scale and the Mastery Scale. The sensitivity of the results was low and the tool may require refinement, but can be a useful starting point for teachers to refer students for mental health treatment.

The setting of Test: Clinical “YouthCHAT”

YouthCHAT is an electronic and tablet-based self-administered multi-item screening tool for mental health concerns in young people (Thabrew et al., 2019; Thabrew & Good, 2019). Originally developed in 2016, it has been validated in both clinical and non-clinical settings, and found to be user-friendly, time efficient, and culturally safe. Studies support its use for early identification of common psychosocial problems in young people, including possible use as a school-based health check. The program is in the process of wider-scale implementation across further settings. A randomized control trial compared the technology to a traditional in person assessment, and YouthChat was found to be quick, reliable, and acceptable to both students and staff in a high school setting.

“Adolescent Suicide Protocol Assessment (ASAP-20)”

The purpose of this study was to validate and culturally translate the ASAP-20 instrument to the youth population in Sri Lanka (Malalagama et al., 2018). Originally developed in the United States, the tool contained questions that were centered around

U.S. culture and were not transferable to other countries. The tool screened for mental health but also included questions that assessed the risk of violence and “access to firearms.” The researchers of this study found that this was not culturally relevant to Sri Lanka so they followed the process of translation which was then followed by a cultural adaptation. A panel of psychiatrists then examined the new product; they assessed the content, concepts, semantics and construct validity. The adapted version was then given to 100 children aged 10-19, who were fluent in Sinhalese, with suicidal ideation or a suicide attempt. After statistical testing, the Sinhalese adapted version of the ASAP-20 demonstrated satisfactory content, construct validity and operational equivalence to the original ASAP-20 instrument. In conclusion, the Sinhalese ASAP-20 is a successful screening instrument that can be used in clinical as well as nonclinical settings.

“Comprehensive Online Self-monitoring”

In a 2017 Australian mixed methods longitudinal cohort study, a comprehensive online self-monitoring tool was studied (Hetrick et al., 2017). The tool was comprised of the PHQ-9 questionnaire and the Suicidal Ideation Questionnaire (SIQ) to measure the severity of depression and suicidal ideations and wanted to determine if a shorter tool could be implemented. 101 participants, aged 12-25, utilized the online tool prior to a consultation with a clinician. Study participants found the tool acceptable and useful. Results however could not justify use of the shortened version of the tool.

Additional Studies in a Clinical Setting

Stewart et al. (2020) tested an algorithm developed from the Child and Youth Mental Health (ChYMH) assessment tool to identify the most high-risk suicide cases in children who were already seeking mental health services. Screeners ranging in disciplines were provided a full day training

course. The screening involved a semi-structured interview either in person or online. The software also takes into account information from family members and clinical observations. It was ultimately validated in 59 agencies and found to be a psychometrically sound decision support tool.

“Project Save” is a novel online intervention to reduce and test for NSSI and suicidal ideation in adolescents (Dobias et al., 2021). The tool used the Children’s Depression Inventory-2, the Self-Hate Scale, and two questions from the Self-Injurious Thoughts and Behaviors Interview. 80% of participants completed the intervention and results indicated improvements in self-hatred and desire to stop future NSSI.

Iorfino et al. (2017) used a variety of long-existing tests including the Kessler-10 questionnaire (K10), Suicide Ideation Attributes Scale (SIDAS), and the Altman self-rating scale to screen for general psychological distress in youth before having a visit with their provider. Patients were recruited from their primary care mental health provider or through the community. 66% of participants reported varying degrees of suicidality and were given a real-time online alert before seeing their mental health care provider.

The setting of Test: Remote “Be Present”

An innovative digital mental health program “Be Present” aims to identify high-risk youth in the early phases of prevention (Albritton et al., 2019; Parker et al., 2020). The intervention primarily focused on peer support and advocacy, with the evidence based rationale that youth are more likely to talk to each other regarding suicidality than to adults. The online digital campaign involves training modules and surveys. The program has been successful in its implementation and results found an increase in self-report of referrals for mental health services as well as in perceptions that youth had of experiencing social support.

In 2020 Parker et al. applied the Be Present tool in the clinical setting; they named

it the Youth StepCare service (Parker et al., 2020). It was found that the tool can be easily integrated into clinical practice and it proved useful for identifying symptoms of mental illness.

Discussion. The results of this study have given insight into the available tools for screening mental health, self-harm, and suicidal ideations in adolescents. With the research question being, what are the available screening techniques suitable/applicable for detecting suicidal tendencies and/or self-harm in school aged children in online learning conditions, this scoping review was able to effectively answer that question.

Research demonstrates substantial strategies for detecting suicidal tendencies and/or self-harm in school-aged children in online learning conditions. Many of the studies creatively used already established health system resources and standardized instruments. This scoping review illustrates that it is possible to adapt these tools for implementation even in low-resource settings successfully.

The most common themes discussed in the literature were questions regarding acceptability, feasibility, internet privacy, and safety planning. These themes were consistent with findings from several other scoping reviews related to the topic.

Feasibility and Acceptability of the Screening Tools

A common outcome tested was the feasibility and acceptability of the proposed tool. Eleven out of the eighteen included articles were focused on feasibility and perceived acceptability or included as a part of the evaluation. This was not an expected result. Most articles did not define feasibility or acceptability but after reviewing each one of them it can be assumed that these definitions from outside literature sources will be appropriate. Eldridge et al. (2016) described feasibility as “A [feasibility] study asks whether something can be done, should we proceed with it and if so, how.” Ayala & Elder

(2011) describes acceptability as “Acceptability refers to determining how well an intervention will be received by the target population and the extent to which the new intervention or its components might meet the needs of the target population and organizational setting.”

Feasibility and acceptability were typically measured by a questionnaire after the screening tool had been used. The most common barrier to this was that some students did not have internet access to utilize the tool, which created complexities in each study. It was reported in articles of the scoping review that students often sought out the assurance that their answers would be confidential. Again, not all studies measured feasibility and acceptability, but the ones that did generally showed a majority positive response among participants in the included studies.

One of the tools seen frequently during this scoping review was Youth CHAT. Youth CHAT was used in the clinical and school setting to screen for psychosocial and lifestyle issues (Thabrew et al., 2019; Thabrew & Good, 2019). After completing the scoping review an additional study was found that specifically looked at the feasibility and acceptability of Youth CHAT. Clare et al. (2022) found that all participants agreed Youth CHAT was acceptable across five domains: “time efficiency, the value of information, its effect on student engagement, ease of use, and perceived acceptability to students.”

It seems that an important component in the development of a new screening tool is that it is feasible and accepted before the effectiveness can be tested. Only a few articles in the scoping review looked at the effectiveness of tools, so with this logic it is possible that these concepts were never tested, were not published, or we were unable to find their feasibility and acceptability results. As this analysis emerged from the results, it is important to discuss the implications briefly. Additional research has also supported the idea that feasibility and acceptability are vital in the

initial stages of new instrument development. As stated by (Ambagtsheer et al., 2020), “Assessing feasibility is a critical preliminary step in assessing the efficacy of interventions such as screening.” Most studies that looked at feasibility and acceptability were pilot studies. Looking further into supplementary research, we found that “conducting a pilot before the main study can enhance the likelihood of success of the main study and potentially help to avoid doomed main studies” (Thabane et al., 2010). Therefore, in the future development of online tools that screen for mental health, self-harm, and suicidal ideations, the testing of feasibility and acceptability needs to be prioritized before the implementation.

Implications for future research, policy and/or practice

Acceptability is a critical concept when evaluating and selecting an instrument and can also be described in relation to “youth engagement.” This could involve asking the youth what they would need and feel comfortable with during a virtual screening. It is essential to find ways to meet their preferences and ensure they feel comfortable. Exner-Cortens et al. (2021) suggested reassuring the youth that they can be informal, use emojis, screen share, and play games. Listening to their experiences can build rapport, increase willingness and improve participation. It is important to note that acceptability should be considered for both the adolescent and the educators, screeners, and other individuals involved in the intervention.

Feasibility was repeatedly mentioned in the majority of analyzed studies as authors hypothesized the practicality of implementation. More specifically, the authors described questions and concerns regarding: time, the skill required to implement, ease of scoring and the capacity of school counselors to manage the follow-ups. This was often assessed through a battery of survey questions. Feasibility should be considered when selecting an appropriate tool for a specific community. For example, smartphone

applications hold great potential for scalability; however, may not be feasible if technology and financial resources are not sufficient. Workforce capacity resources should be assessed before preparing for any positive screens.

Internet privacy is also of key importance when working with vulnerable minors. Many of our included studies reported respondents’ feeling distrustful towards the services and were concerned for their privacy and anonymity. In many studies, it was surprising to learn that privacy protection was not mentioned or regulated enough. Exner-Cortens et al. (2021) offer suggestions for this matter: encouraging youth to be in a quiet part of their house, using a codeword if someone is in the room listening, and storing information in an encrypted system.

Safety planning is crucial and plans for emergency situations need to be thoroughly discussed. Several studies did not have a clear escalation plan prior to intervention. Authors from the National Association of School Psychologists (Brock et al., 2021) offered guidance for this: identifying local resources that are immediately available to respond to a student’s location, maintain regularly updated contact information, educating teachers on what to do in an imminent situation, reaching agreements on how sensitive disclosures will be handled, and consulting with the school district legal counsel. Brenna et al. (2021) recommends screeners verify the youth’s identity at the start of the online session and confirm their physical location.

Findings have potential for applicability in web-based school environments, conducting screenings for populations in rural and remote settings, and telehealth. Future studies should expand on the current literature by continuing to modify the existing tools and improve their sensitivity. More research is needed to investigate the impact of screenings on school counselors, parents, and adults involved to better understand their needs, experiences, and the

implications of how such a program would affect the community. There is also a need for research performing these screenings in areas of conflict to indicate the barriers or additional challenges that arise from that.

It is worth noting that there is currently ongoing research into evaluating online social media activity for suicide screening (Chatterjee et al., 2022). This technology has advanced and can even detect risk based on factors such as tweet length, posting time, and emoticon usage. We did not include any of these studies in our review due to their controversy and need for additional research in a school setting. Collins et al. (2021) notes issues with these monitoring systems: privacy concerns (i.e. disclosure of personal information such as sexual orientation or citizenship status), and students being mistakenly flagged (Collins et al., 2021).

Prospects for adapting tools to the Ukrainian context

There are feasible and acceptable tools available for screening mental illness in adolescents, but it is inconclusive whether any of these tools will be effective in Ukraine due to the circumstances. Ukrainian school districts should proceed cautiously and thoroughly review the feasibility and acceptability research before implementing a screening tool.

Digital technologies and apps meet active implementation in the activities of the government, the educational process, public life, and military affairs in Ukraine. However, the tools for distance diagnosis of mental health risk factors are developing slowly in Ukraine.

As we said above, implementing such tools in the system of suicide prevention in an educational institution is essential.

At the same time, to solve this problem, there are significant obstacles that must be overcome. First of all, there is a limited number of original or adapted for the Ukrainian sample methods of diagnosing suicidal tendencies among school children.

Transferring poorly adapted techniques to an online format may pose the threat of creating an inaccurate or even dangerous diagnostic tool.

It is also worth noting the Ukrainian population's low level of digital literacy by European standards. According to UNDP data, 53% of Ukrainians (aged 17 to 70) have digital skills at the "below average" level, and 15% have no such skills (Udovyk, Moskalenko, & Kylymnyk, 2020).

However, the expressed reservations do not negate the need to develop and implement remote diagnostic tools in Ukraine, given their urgency.

The first step of this work can be the digitization or adaptation to online use of methods that have proven themselves well in the practice of the psychological service of the education system, for example, the Suicidal Intent Detection Test by N. Shavrovska, O. Goncharenko, I. Melnikova (Panok, 2018).



CONCLUSIONS

Emerging technologies can augment traditional approaches during virtual suicide assessment. This research can offer promising direction into the facilitation of screening adolescents electronically in distance learning conditions. While our results were encouraging in terms of delivering effective screenings in many different settings, none of the studies took place in the current context of Ukraine. While these innovative tools can certainly help overcome many of the challenges associated with screening youth remotely, the tools in their current form cannot substitute for psychological and mental health support. With careful planning and research, it is possible to effectively accomplish screenings for these students and ensure they receive the appropriate mental health care as soon as possible.



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Світлана Чуніхіна¹, Керолайн Додсон², Елен Онен²

¹ Інститут соціальної та політичної психології НАПН України, м. Київ, Україна

² MSc Global Health в Університеті Вріс, Амстердам, Нідерланди

ORCID ID: 0000-0002-0813-67415 s.chunikhina@ispp.org.ua



СКРИНІНГ СУЇЦИДУ СЕРЕД УЧНІВ В УМОВАХ ОНЛАЙН-НАВЧАННЯ: АНАЛІТИЧНИЙ ОГЛЯД

Ризик дитячих та юнацьких самогубств в Україні зріс після початку російсько-української війни. Також існує висока ймовірність зростання самогубств серед усіх вікових, гендерних і соціальних груп після закінчення активних бойових дій і настання миру. Таким чином, українські студенти та учні потребують регулярного скринінгу на схильність до суїциду та самоушкодження, щоб отримати своєчасне профілактичне чи терапевтичне втручання. Однак через умови дистанційного навчання більшість з них має обмежений доступ до діагностики та допомоги.

Метою статті є огляд доступних методів виявлення (скринінгу) суїцидальних тенденцій та/або самоушкоджувальної поведінки у дітей шкільного віку, придатних до застосовування в умовах онлайн-навчання.

Методологія. Для ідентифікації та аналізу доступної літератури було обрано метод scoping review. До огляду включено статті, опубліковані англійською мовою протягом останніх п'яти років, присвячені виявленню суїцидальних тенденцій в учнів віком 5-19

років. Бази даних пошукових систем включали Scopus і Web of Science. Застосовувався також метод «Вирощування перлів».

Результати. Зрештою 18 із 996 ідентифікованих статей було включено до огляду. Більшість досліджень використовували давні, надійні та доказові інструменти скринінгу або їхню комбінацію. Двома найбільш широко використовуваними інструментами скринінгу були Анкета здоров'я пацієнта (PHQ-9) і Анкета генералізованого тривожного розладу (GAD-7). Ми визначили три групи цифрових інструментів, розроблених на цій основі: для шкільного, клінічного та дистанційного використання.

Висновки. Нові технології можуть розширити традиційні підходи під час віртуальної оцінки самогубства. Це дослідження може запропонувати перспективний напрямок розвитку технологій електронного скринінгу дітей шкільного віку в умовах дистанційного навчання. Завдяки ретельному плануванню та додатковим дослідженням можна ефективно проводити скринінги для українських учнів і студентів, і гарантувати, що вони отримають відповідну психологічну допомогу якнайшвидше.

Keywords:

самогубства дітей шкільного віку, інструменти скринінгу, дистанційне навчання,
Україна, війна, огляд літератури

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Yurii I. Dudnyk

National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine

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STRESS RESISTANCE AS A FEATURE OF CHARACTER OF THE UKRAINIANS



ABSTRACT

The article discloses the peculiarities of stress resistance of the Ukrainian ethnicity. Has been analyzed the importance of the national character of Ukrainians as an important determinant of stress resistance. Also, the main features of the Ukrainian national character, which are related to stress resistance have been highlighted. The significance of the collective traumatic experience as a factor in increasing vulnerability to stress has been considered. The author includes sensitivity, cordocentrism, individualism, freedom-loving, intolerance to coercion and violence, hard work, antaeuism, and optimism to the features of the national character that are associated with stress resistance. Emphasis is placed on the positive or ambiguous relationship of selected features with stress resistance. A positive or ambiguous relationship of the selected features with stress resistance was noted. The propensity of Ukrainians to provide social support in crisis situations has been disclosed, which has a significant positive effect on the psychological well-being of large groups. In the opinion of the author, taking into account the previous and past historical experience of the Ukrainian ethnicity, collective trauma appears to be a growing problem, which has a long-term negative impact on psychological well-being and stress resistance



KEY WORDS

stress, stress resistance, psychological stress, national character, coping strategies, social support, collective trauma, early negative experience



CORRESPONDING AUTHOR INFORMATION

Yurii I. Dudnyk, National University of Life and Environmental Sciences of Ukraine, Kyiv, Ukraine
Email yurii.dudnyk0@gmail.com ORCID 0000-0002-2040-7575

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Наук України

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INTRODUCTION

Life in the conditions of war and other global crises requires consideration of stress resistance not only as a quality of an individual with their individual life path, but also of the people as a whole. This is especially true of Ukrainians, who are currently victims of genocide by the Russian Federation and are at the very epicentre of the largest-scale events of the 21st century.

Formulation of the problem. The phenomenon of psychological resistance to stress was studied mainly in the context of the adaptation potential of an individual and was practically not amenable to study at the level of large social groups and nations. The full-scale phase of the war launched by the Russian Federation against Ukraine on February 24, 2022 once again makes us think about the stress resistance of Ukrainians, which characterizes not only psychological endurance in wartime, but also significantly affects psychological health in the post-war years.

This issue concerns not only the present, but also the past and future of the Ukrainian ethnic group, as the bearer of the national character. This determines its unique ways of responding, living and understanding the collective traumatic experience. Only in the last century are the years of the First World War, the struggle for independence of 1917-1921, the Holodomor (Terror-Famine) of

1932-1933, the years of the Second World War, the Soviet regime, the Chernobyl disaster of 1986, the revolutions of 1990, 2004 and 2013, the Russian-Ukrainian war of 2014, and its full-scale phase in 2022, etc. Unfortunately, the history of Ukraine is full of stressful events; nevertheless, the Ukrainian ethnic group over the centuries has shown extremely high adaptive capabilities and has preserved its identity.

Analysis of recent research and publications, emphasizing of unresolved parts of the general problem. Studying the sources related to our work, we encountered the problem of the practical absence of studies that would directly study the stress resistance of the Ukrainian ethnic group. In our case, this necessitated the analysis of numerous works not only from psychology, but also from other humanities, social and interdisciplinary fields. It is worth mentioning some of the works that are closely related to the phenomenon under study. The study of stress and stress resistance (Lazarus, & Folkman, 1986; Uchino, 2011; Nes, & Segerstrom, 2006), the study of the national character of Ukrainians (Potapchuk, 2013; Snizhko, 2010; Khamitov, Harmash, & Krylova, 2016), the study of the phenomenon of collective trauma (Hornostaii, 2021; Figley, 1999;), studies of early negative experiences (Liu et al., 2017; Kaplan & Gangestad, 2005; Dinkler et al., 2017).

Psychological research devoted to the study of the properties of ethnic groups requires strict adherence to scientific principles and ethics. Otherwise, they can easily become a means of disinformation.

We start from the assumption that all members of the genus *Homo Sapiens* have common mental predispositions. As follows, we consider all the psychological features of representatives of different ethnic groups to be determined by historical and cultural factors of development, which, in the end, are personified in the national character.



PURPOSE

The purpose of the article is to study the stress resistance of the Ukrainian ethnic group in the context of its cultural and historical development and national character



METHODOLOGY

The original theoretical and methodological basis of the research was the proposition that stress resistance is a multi-level formation, the specificity of which at the level of large social groups and ethnic groups is determined by their cultural and historical development.



REVIEW and DISCUSSION

The essence of concepts “stress” and “stress resistance”. We consider stress and stress resistance as multi-level formations that have both a biological and a psychological component. So, according to the founder of the theory of stress – H. Selye, *stress* is a non-specific reaction (increased activity of the adrenal glands) in response to any infection (Selye, 1986, p. 692).

Speaking about *psychological stress*, R. Lazarus and S. Folkman (Lazarus, & Folkman, 1986, p. 63), define it as “a special relationship between a person and their environment, which, in their opinion, threatens

or suppresses their resources and, which endangers their well-being.”

As defined by the American Psychological Association (APA), *stress resilience* – is the process and outcome of successfully adapting to difficult or challenging life circumstances, especially through mental, emotional, and behavioural flexibility and adaptation to external and internal demands.

To the problem of national character. Often, researchers reduce the concept of “national character” to a simple collection of various features and properties that are characteristic of a certain national community (Bahramov, 1973; Piren, 1996).

According to P. Hnatenko, *national character* is a collection of “social-psychological features (national-psychological guidelines, stereotypes) that are characteristic of the national community at a certain stage of development and are manifested in value attitudes towards the surrounding world, as well as in culture, traditions, customs, rituals” (Hnatenko, 1997, p. 6).

Nevertheless, we share the opinion of T. Potapchuk (Potapchuk, 2013) that such an understanding is simplified, because the national character is an integral system that forms an integrated unity, which, in turn, reflects the cultural and historical specifics of the development of the people. Moreover, the features themselves are universal for all peoples. Therefore, when it comes to the national character, one cannot talk about different “collections” of features, one must talk about the degree of expression, structure and specificity of their manifestation.

Some authors use the non-scientific term “national temperament”, indicating the genetic (in the biological sense) determination of ethnopsychological differences (Dashdamyrov, 1983), although as early as 1983, O. Leontiev questioned the feasibility of using such a quasi-scientific category, believing that such the concept is, most likely, a metaphor (Leontiev, 1983), as is the concept

of “national needs”. After all, the properties of higher nervous activity cannot be characteristics of the community (Potapchuk, 2013).

Numerous studies show that the national character is manifested not only in the activities of various social subjects, but also through the distinctiveness of the group picture of the world, dominant social attitudes, social norms, systems of moral requirements, instructions, forms of socialization, basic values, principles of education, peculiarities of communication, connection with the environment, through forms of organization of life, leisure, response to problem situations, recreation, etc. (Hrymych, 1991; Piren, 1996; Ponomarov, 1994; Stefanenko, 1999).

Specialties of the Ukrainian national character. Speaking about the specialties of the national character of Ukrainians, a small number of scientific psychological studies in this field draw attention to themselves. Most modern works mainly appeal to previously developed concepts (M. Kostomarov, O. Kulchytskyi, D. Chyzhevskyi, V. Yaniv, etc.), which do not meet the scientific requirements of today and de facto are in the field of cultural studies and philosophy. This, at a minimum, requires their critical reinterpretation and conducting an appropriate psychological study taking into account modern scientific standards.

Nevertheless, based on the analysis of available works in the psychological (Potapchuk, 2013; Kulchytskyi, 1949; Kyrychuk, 1994), philosophical (Chyzhevskyi, 1991; Kulchytskyi, 1995; Snizhko, 2010; Khamitov, 2016), cultural (Malaniuk, 1962; Donchenko, 2001; Polishchuk, 2002; Nelha, 1996; Burkovska, 2007), and religious studies (Kononenko, 2005; Lozko, 2009; Vashchenko, 1976; Richynskyi, 2000) traditions, we identified the main features of the Ukrainian national character, which, in our opinion, have a close connection with stress resistance. They include: sensitivity, emotionality, cordocentrism, individualism, freedom-loving,

intolerance to compulsion and violence, hard work, atheism, optimism. Below we will analyse the connection of these features with stress resistance.

Sensitivity and emotionality. Establishing a connection between emotionality and stress resistance is actually more difficult than it might seem. It is necessary to clearly know what is meant by this concept: whether it is the external manifestation of emotions, which is obviously more correlated with the culture of communication than stress resistance, or whether it is an objectively higher level of neuropsychological tension, which brings us back to the false concept of national temperament.

Therefore, in our opinion, it is more appropriate to talk about sensitivity, which reflects the specialties of perception, that is, greater attention to the social environment and empathy. This is seen as one of the indicators of a high level of emotional intelligence development (Mayer, & Salovey, 1997), which has been shown to be positively correlated with stress resistance (Yamani, Shahabi, & Haghani, 2014; Forushani, & Besharat, 2011; Ciarrochi, & Dean, 2002). However, it is clear that when talking about emotional intelligence, we have to take into account a complex of properties, and not just one.

Cordocentricity. This feature partially resonates with sensitivity, but it also emphasizes that existence is known, first of all, with the help of feelings and emotions, and not with thinking (Hnatiuk, 2010). This suggests more use of emotion-oriented coping, as opposed to problem-oriented coping.

Individualism, love of freedom, intolerance to coercion and violence. These features are combined into one group because, in our opinion, they reflect the values of a free person who strives to build his life independently. Researchers emphasize that these features are ambiguous: on the one hand, they have obvious advantages, and on the other hand, Ukrainian individualism has a

tendency to lead to self-centeredness, anarchy, disorganization, too much diversity of aspirations, which objectively hinders the formation of a strong state (Kulchytskyi, 1949; Malaniuk, 1962; Kyrychuk, 1994). The described features are not directly related to the stress resistance of an individual, but indirectly can make the Ukrainian nation as completely more vulnerable to internal and external stressors.

At the same time, it also indicates the predominance of the internal locus of control, which, however, acquires certain characteristics, namely the predominance of the internal locus of control at the level of private life with a gradual transition to the external locus of control at the collective level, including, if we talk about the state (Donchenko, 2001).

Diligence and persistence. It is often difficult for a Ukrainian to decide. However, having set something as a goal, considerable persistence is shown, which can even resemble stubbornness (Potapchuk, 2013). These features correspond to active coping strategies of behaviour.

Antheism. *Antheism* is understood as a wide range of attitudes and feelings: the cult of Mother Earth, the nurturing land; sacralization of the land on which the ancestors lived from time immemorial; falling in love with the nature of the native land (Great Ukrainian Encyclopaedia).

In our opinion, this phenomenon is closely related to the theory of child attachment (Bowlby, 1969; Verhage et al., 2016), according to which a child with a secure type of attachment is calmer and more confident when his mother is around, as well as in the case of experiencing distress perceives the mother as a source of security (Cassidy, & Shaver, 2016).

Therefore, it can be metaphorically said that the Ukrainian land is a great and kind mother for all its people. This, on the one hand, can lead to the fact that native lands are perceived as safe and comfortable, protect

from distress, but on the other hand, encroachment on these lands by the aggressor causes strong psychological pain, consolidation of society and self-sacrifice.

Optimism. In addition to the obvious benefits of optimism, such as improved mood and confidence, research shows its significant relationship with coping strategies (Ness, & Segerstrom, 2006). Optimism was found to be positively correlated with productive problem-solving strategies as well as managing one's own emotions; on the other hand, there is an inverse correlation with avoidance and ignoring coping strategies.

In addition, an optimistic mood increases the general resistance of the body in a stressful situation, speed up psychological and physical recovery (Brydon et al., 2009; Hulbert, & Morrison 2006).

Buffering of collective traumatic experience. Speaking about the stress resistance of the whole people, a special role should be given to the coping strategy, which is manifested in the search and provision of social support, which directly depends on the qualities of the social environment. These qualities include social integration, social resources, social adjustment, and others (Laireiter, & Baumann, 1988).

According to M. Argyle (Argyle, 1990), social support reduces the impact of difficult situations on a person's mental health, contributing to the growth of self-esteem and self-confidence, preventing depression and anxiety, giving hope associated with expectations of such support in the future, and making a person less susceptible to stressful influences.

The relationship between social support and mortality from cardiovascular disease is well-studied (Hemingway, & Marmot, 1999; Holt-Lunstad, Smith, & Layton, 2010).

The content of social support, as a rule, is determined by the objective causes of a difficult life situation. For example, when developing social support measures for

migrants, they rely on the hypothesis of a positive impact of interpersonal relationships on the mental health and successful adaptation of migrants. Within of this “buffer”, as it is called, hypothesis (Cohen, & McKay, 1984; Uchino et al., 2011), it is argued that the availability of interpersonal relationships, the variety and increase in the number of positive contacts, as well as the intensity of relationships are directly related to associated with an increase in psychological well-being and a decrease in the probability of somatic and mental diseases. The buffer hypothesis necessarily assumes the positivity of social support. In our opinion, these provisions are also valid for internally displaced and injured persons.

However, there is ample research that suggests the benefits and stress reduction of those who provide social support as well (Erturgut, & Erturgut, 2010; Poulin et al., 2013; Inagaki, & Orehek, 2017; Preston, 2017).

In this context, it is worth paying attention to the features of Ukrainians described above, because today’s realities have proven that Ukrainian individualism (or even egocentrism) is an adaptive phenomenon and very quickly public interests can become higher than individual ones, and not at the formal level, but at the personal level. It is enough to mention at least the number of volunteers during the attacks of the Russian Federation in 2013 and 2022, the activity and consolidation of the Ukrainian people on the territory of Ukraine and beyond, the number of internally displaced persons who were provided with housing and various support by the same ordinary citizens, charity, and of course, professional support from psychologists and social workers.

Considering the above, we believe that Ukrainians have great potential in providing social support and, accordingly, buffering stress. However, unfortunately, large-scale crisis events are often the catalyst for social

support and the abandoning of excessive individualism.

Collective traumas of the Ukrainian ethnic group. The problem of the collective trauma of the Ukrainian ethnic group requires separate consideration, since, as noted at the beginning, the history of Ukraine is full of traumatic events, which, as will be shown below, creates long-term negative consequences for stress resistance.

This problem has only recently come to the attention of scientists (Gagné, 1998; Kestenberg, 1980).

P. Hornostaii defines *collective trauma* as mental trauma received by a group of people of any number, up to an entire society, because of a social, person-caused or ecological disaster or criminal actions of political or other social subjects (Hornostaii, 2021, p. 104).

A characteristic feature of collective trauma is that post-traumatic stress disorder (PTSD) also occurs in those individuals who were not directly victims of traumatic events (Bjornsson, 2020).

This is explained by the mechanism of secondary traumatization. *Secondary trauma* refers to “natural behaviours and emotions that arise as a result of learning about a traumatic event experienced by another person. It is the stress that occurs as a result of helping or wanting to help an injured person” (Figley, 1999, p.10).

Nowadays, the collective trauma of Ukrainians can become a much bigger problem than it was before, and it is not only about the scale of the war or the brutality of the Russian army, but also about the fact that this war is actually the first in history that has received such large-scale coverage and publicity. The increasing number of literatures suggests that 24-hour news cycles on various platforms about shocking events, inadvertently, significantly increase the effect of secondary traumatization (Holman et al., 2014; Hopwood & Schutte, 2017; Yeung, Lu, Wong, & Huynh, 2016).

Collective trauma is considered primarily as a social rather than a clinical phenomenon. Nevertheless, a number of studies confirm that traumatic events of various genesis can lead to long-term biological and mental changes. This especially applies to the early periods of the development of the human individual.

Thus, researching the effects of the Hunger Winter in the Netherlands revealed a double risk of developing schizophrenia, an increased frequency of developing schizotypal disorder, as well as defects of the nervous system in children born during this period (Walker, & Cicchetti, 2003; Brown, & Susser, 2008).

It has also been proven that as a result of abuse and lack of care in early childhood, a number of neurobiological changes occur that lead to disturbances in the regulation of stress response, emotions, learning, and higher cognitive functions (Hinduja, & Patchin, 2017).

A study of electrical potentials of the brain in children with psychotraumatic experiences shows patterns of neural activation during tasks that require executive functions, similar to those observed in children with attention deficit hyperactivity disorder (Dinkler et al., 2017).

A traumatic experience in childhood leads to psychological disorders in adult life as well: anxiety, depression, suicidal behaviour, PTSD, drug addiction diseases, difficulties in intimate relationships, dissociative (traumatic) amnesia, somatization, etc. (Liu et al., 2017).

According to the Life History Theory (Del Giudice, Kaplan, & Gangestad, 2014; Kaplan, & Gangestad, 2005), a significant part of the listed disorders is actually an adaptive response of the organism.

The basic idea is that early life events, such as the sufficiency or insufficiency of biological and emotional resources, can form long-term changes in the body's adaptive reactions, that is, a kind of adjustment to life in specific conditions takes place. Accordingly,

the psyche, which develops in conditions of war or in other crisis situations, prepares for the fact that it will have to be in such conditions for the rest of its life, and therefore an intense and inadequate, from the point of view of the usual norm, stress reaction becomes its own norm for a specific individual life.

Thus, large-scale traumatic events create a number of factors that increase stress reactivity, as well as cause various psychological disorders at the level of both society as a whole and an individual in the long term. This obviously has a negative effect on stress resistance in general.



CONCLUSIONS

The high level of stress resistance of Ukrainians is evidenced by the presence of such features as the use of productive coping strategies, the predominance of the internal locus of control, a sufficient level of emotional intelligence development, a favourable psychological connection with the native land, and optimism.

One of the most effective coping strategies of Ukrainians is the tendency to provide social support, which creates a large-scale buffer effect for negative experiences. However, due to other features, such as excessive individualism and marginalization in national affairs, favourable conditions are created for the emergence of large-scale both internal and external stressors, as well as vulnerability to them. In other words, such stress resistance helps to deal with stressors that have already arisen more quickly than to see them in advance, which makes this strategy not quite effective in the emerging historical reality.

In addition, the influence of the collective traumatic experience, which has the property of far-reaching destructive effects, including increased vulnerability to stress, remains not fully understood. Given the events

of the present and the past, it is clear that the scale of this problem is not diminishing.

In our opinion, it is perspective to study the specialties of Ukrainians' experience of stressful events and ways of their successful adaptation.



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Юрій Дудник

Національний Університет Біоресурсів та Природокористування України, Київ,
Україна

ORCID ID 0000-0002-2040-7575 yurii.dudnyk0@gmail.com



СТРЕСОСТІЙКІСТЬ ЯК МЕНТАЛЬНА ХАРАКТЕРИСТИКА УКРАЇНЦІВ

У статті розкрито особливості стресостійкості українського етносу. Проаналізовано значення національного характеру українців як важливої детермінанти стресостійкості. Також висвітлено основні риси українського національного характеру, які пов'язані зі стресостійкістю. Розглянуто значення колективного травматичного досвіду як чинника підвищення вразливості до стресу. До особливостей національного характеру, які пов'язані зі стресостійкістю, автор відносить чутливість, кордоцентризм, індивідуалізм, волелюбність, нетерпимість до примусу і насильства, працьовитість, антаєвизм, оптимізм до рис національного характеру, які пов'язані зі стресостійкістю. Акцент робиться на позитивному або неоднозначному взаємозв'язку обраних ознак зі стресостійкістю. Відзначено позитивне або неоднозначне співвідношення обраних ознак зі стресостійкістю. Розкрито схильність українців до надання соціальної підтримки в кризових ситуаціях, що суттєво позитивно позначається на психологічному благополуччі великих груп. На думку автора, з урахуванням попереднього та минулого історичного досвіду української етнічної приналежності колективна травма постає наростаючою проблемою, яка має довгостроковий негативний вплив на психологічне благополуччя та стресостійкість

Keywords:

стресостійкість, стресостійкість, психологічний стрес, національний характер, копінг-стратегії, соціальна підтримка, колективна травма, ранній негативний досвід

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Olha L. Korobanova

PhD in psychology, senior researcher at Department of small groups and intergroup relations
Institute of Social and Political Psychology of the National Academy of Educational Sciences
of Ukraine, Kyiv, Ukraine

ORCID ID: <https://orcid.org/0000-0003-3539-871X>

Neonila M. Schulzhenko

Psychologist online

Bratislava, Slovak Republic

ORCID ID: <https://orcid.org/0000-0003-3189-4177>

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PSYCHOLOGY OF HOME AND UKRAINIAN MIGRANTS' SOCIO-PSYCHOLOGICAL ADAPTATION ABROAD



ABSTRACT

Study goal and methods. Study of the course of socio-psychological adaptation of Ukrainian refugees abroad, their perceptions of home and host country, as well as intergroup interaction between Ukrainian refugees and the autochthonous population.

The research was conducted within the framework of the scientific approach to intergroup interaction as the dynamics of conscious and unconscious. Case study of narratives of Ukrainian migrants as a form of representation of individual meanings and thematic construction of experience was conducted.

Conclusions. A structured life world that integrates the experience associated with the evacuation of refugees from Ukraine and the new stage of life abroad, based on the construction of personal experience into meaningful event blocks, is a prerequisite for successful socio-psychological adaptation and acculturation in the host country. During integration into the host society migrants learn new relevant communicative and social roles. Group support provided to refugees by other Ukrainians in a similar situation as well as by representatives of the host country and volunteers is of great importance.

The limitations of the study are related to the situational nature of narrative interviews, the variability of events and meanings that are significant for the individual at the moment.

Prospects for further research include the study of age-specific features of socio-psychological adaptation abroad and the temporal dynamics of this process.

Practical Importance. Data from the original descriptive study of the socio-psychological processes of acculturation indicate the importance of group support and experience construction in overcoming stress and can be used in the provision of psychosocial support to Ukrainian military migrants.

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KEY WORDS

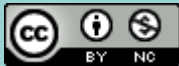
psychology of home; socio-psychological adaptation abroad; acculturation; construction of experience; narrative; migrants; refugees from Ukraine.



CORRESPONDING AUTHOR INFORMATION

Olha L. Korobanova, Institute of Social and Political Psychology of the National Academy of Educational Sciences of Ukraine, Kyiv, Ukraine
E-mail: Olga.Korobanova@ispp.org.ua
ORCID ID: <https://orcid.org/0000-0003-3539-871X>

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INTRODUCTION

With the beginning of the full-scale Russian invasion of Ukraine, many Ukrainians, mostly women with children, moved to safe places, which include Western Europe. According to the latest data of UNHCR (United

Nations Refugee Agency) Refugees from Ukraine recorded across Europe 7,863,339 people (on 20th of December 2022). Refugees from Ukraine registered for Temporary Protection or similar national program schemes in Europe - 4,862,561 people (data from <http://web.archive.org/web/20221228020746/https://data.unhcr.org/en/situations/ukraine>). The above data allow us to imagine the scale of the problem of migration from Ukraine at the moment. In this article we will focus on the practices of social and psychological adaptation

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of refugees/migrants from Ukraine in Slovakia and Poland as well as their narratives of home and related issues.

It has been noted that migration is an extremely complex stressful life event in which people leave their existing social situation and adapt to a different way of life, thus changing patterns of behavior (Suko, Holter, Stolz, Greimel, Freidl, 2022; Andronic, Constantin, 2022). The importance of understanding how migrants respond to the stresses and challenges of migration and acculturation, and how their coping and adaptation strategies affect health and well-being, is emphasized. Acculturation-related stressors were found to be pre-migration stressors that caused displacement or accompanied the process of departure, and post-migration stressors related to relocation, acculturation stress, loss of social status and contacts, and possible oppression by the host society (Kuo, 2014). At the same time, migrants who feel accepted and have positive attitudes towards the host country, are ready to learn a new culture, are psychologically and socioculturally well adapted.

Four models of acculturation and socio-psychological adaptation of migrants were highlighted when summarizing previous studies (Kuo, 2014): 1) the multidimensional stress-mediation-result model (Cervantes and Castro, 1985); 2) the acculturation strategy framework (Berry, 1997), which consists of migrants coming into social contact with locals and facing different perceptions that model their behavior and views of the host country and their perceived experiences; (3) the resilience-based stress-assessment model proposed by (Castro and Murray, 2010); (4) stress coping theory for recent immigrants (Yakushko, 2010).

Economic problems and uncertainty about the length of stay lead to slower psychological and sociocultural adaptation. A positive perception of the host country residents' expectations/attitudes towards migrants contributes to the search for social support, which contributes to well-being and life satisfaction (Şafak-Ayvazoğlu, Kunuroglu,

F., Yağmur, 2021). A positive relationship between sociocultural adaptation and psychological well-being has been noted (Martinet, Damácio, 2021).

Acculturation refers to the changes that people undergo in intercultural contacts and its long-term result is adaptation. Considering loneliness as one of the indicators of negative psychological adaptation, it was found that national identity had a positive relationship with loneliness, while ethnic identity, self-esteem and in-group acceptance negatively influenced loneliness (J.Neto, Oliveira, F.Neto, 2017).

Perceptions of local residents' expectations and attitudes have a strong influence on the psychological and sociocultural adaptation of migrants. Migrants with different acculturation experiences may differ in their typical patterns of stress reactions and coping (Noh and Kaspar, 2003; Yoshihama, 2002), possibly changing their status, role or class affiliation (Andronic, Constantin, 2022). Perceptions of cultural distance and orientation to native culture were associated with low rates of psychological and sociocultural adjustment, while orientation to the host culture contributed to better psychological and sociocultural adjustment for migrants (Lusiena, Hoersting, Modesto, 2020).

The inevitable processes of adaptation, acculturation, and ultimately integration into the host community, as well as many other factors, lead to changes in migrants' identities (Cormos, 2022).

Long-term residents of the host country experience changes in their identity space; for many, their "home" is in the country of migration (Cormos, 2022). There are anthropomorphized notions of territories, such as "Syria is our mother, UK is like an aunt to us" (Asmal-Lee, Liebling, Goodman, 2022), "our home is where our heart is" (Chopik, 2020), which indicates deeply personal, intimate, meaningful notions of home.

Homemaking, aspirations and the ability of migrants to feel at home can be seen as a set of practices and the emotional potential of

integrating migrants into the local environment (Boccagni, Hondagneu-Sotelo, 2021). Home is traditionally understood as a private and intra-familial phenomenon that supports home attitudes, repetitive actions and practices (Boccagni, Duyvendak, 2021).

A home has specific spatial outlines, but also has the specific social conditions of our/your private space. Home is a private sanctuary. Researchers distinguish the sense of home, the feeling of home is an experience that includes attitudinal, cultural, structural and emotional aspects (Durnová, Mohammadi, 2021). For people to feel "at home" or to "make home" implies access to certain rights and resources. Home has value as an environment for family members where their emotions and feelings can be acknowledged, which raises the question of intimacy and emotional boundaries of home (Durnová, Mohammadi, 2021).

In English-speaking communities, the concept of home is closely related to homeownership, and consequently, in understanding and creating home, great importance is given to owner-occupied dwellings. How people understand, experience, and create a home, the meaning of home, and household practices have also been explored (Bate, B., 2018).

It has been remarked that the notion of home as a place - and a sense of home in relation to it - can operate at different levels, such as dwelling or neighborhood, city or country of residence / origin. The main factors that shape people's sense of home are living arrangements, proximity to significant others, and the ability to feel safe. Ascribing a sense of familiarity, control, and long-term stability to a place of residence is also important, as are the appropriate infrastructural qualities of a place so that immigrants feel at home there (Boccagni, Vargas-Silva, 2021). Empirical evidence has shown that the connection between feeling at home and the place of residence increases over time, while feeling at home in relation to one's "Homeland" decreases (Boccagni, Vargas-Silva, 2021).

In Ukrainian culture, the concept of home is very important. Home is a place where a person can be himself, rest and gain strength. It is also a place where close people, friends, family members gather and communicate. The content of Ukrainian national mentality concerning Homeland includes national home, family ties, common territory of residence and native land, national clothes, food, dwelling, economic way of life (Popov, 1997). Thus, we want to explore in this article what Ukrainian migrants who left their homes to escape the war abroad feel, what home is for them, what meaning they put into this concept.



SCIENTIFIC BACKGROUND

Scientific background. The creation of home is considered to be linked with group belonging, the creation of place, and the creation of community, based on a unifying faith and culture that facilitates adjustment to life in a new land (Madan, Padgett, 2021). The subjective sense of "home" can be related to a place or can transcend geography, in which case the formation of refugee communities becomes important.

Military aggression has disrupted the stable, predictable flow of Ukrainian's life and introduced uncertainty into people's established social perceptions. There was an awareness of the loss of security, the possibility of losing property, jobs, and perhaps even lives. With the onset of military aggression, many Ukrainians who had experienced traumatic circumstances, shelling, and bombing decided to move to safety abroad. This step, dictated by the desire to preserve life, peace of mind of children and acquire security, led to a sharp change of living conditions, socio-cultural environment, including different cultural customs, language of the host country, which explains the stress experienced by migrants.



Refugees who make the decision to leave are exposed to trauma, and when they arrive in their host country, they experience stress related to adaptation (Carlsson, Sonne, 2018; Sangalang, et al, 2019). These traumas and stresses will be overcome gradually in the processes of acquiring sociocultural experience of familiarization, adjustment, and acculturation to the specifics of life in the country.

Socio-psychological adaptation is an active process of adjustment to the social environment, carried out by adapting to the requirements and social norms existing in society (Halets'ka, 2005). Although this process occurs differently for each person, depending on personal qualities (e.g. flexibility, adaptability), the main socio-cultural achievements (employment, language learning, etc.) will be similar. At the same time, the complex active process of adaptation should be understood not simply as the mutual adaptation of the individual and the environment, but as their union in a new system of a more complex level of organization, as a result of active interaction between the subject of adaptation and the environment (Ball, 2006).

Social adaptation is achieved through the regulation of relations with the surrounding world on the basis of previous experience. Undoubtedly, the experience of previous adaptation to changing conditions increases adaptability as a personality trait, as the capability of a person, regardless of the objective importance of the situation and subjective assessment of its significance to mobilize own resources, model optimal behavioral strategies and respond flexibly to possible changes in the situation (Halets'ka, 2005). It should be emphasized that, for example, the experience of living through the COVID-19 pandemic had a positive impact on the adaptiveness of Ukrainians in terms of adapting to new conditions (Korobanova, 2020; Bondarenko, et al., 2022).

Socio-psychological adaptation results in acculturation in the host country. It is generally considered that the following areas of

acculturation are indicators of acculturation: employment, housing, health care; social relations with other migrants and citizens of the host country; language learning and education (Ager & Strang, 2004).

The loss of home is seen as the loss of a familiar environment, which includes the building itself, the apartment, the city, and the social environment, which includes family and friends, work colleagues, and others (Blackwell, Rode, Scott, 2009; Shami, 1996). Often the loss of home is associated with the loss of a sense of security. Some studies on the psychology of Ukrainian migrants shift the focus to their anxieties about an uncertain future (Spil'nota v umovakh..., 2019; Danilova, et al., 2022).

Regarding the psychological problems of losing one's home, there is a line of research that considers the problem of inaccessible housing in the aggregate of the problems associated with the inability to own and the need to rent (Jansen, 2006). There is still a deep socio-cultural-economic divide between the countries' native communities and, in particular, Syrian refugees (Feinstein, Poleacovschi, Drake, Winters, 2022). Thus, the individual history of the migrant, the collective history of their home country, the host society's and their mutual past history are of great importance in maintaining mental health (Brunnet, Kristensen, Lobo, Derivois, 2022).

Highlighting the unresolved parts of the overall problem. The emotional and socio-cultural problems of Ukrainian war refugees, their perceptions of home and homecoming intentions, as well as the factors surrounding their socio-psychological adaptation and acculturation in the host country have not yet been systematically studied.



STUDY GOAL AND METHODS

Study goal and methods. Examination of the course of socio-psychological adaptation of Ukrainian refugees abroad in the first months after resettlement, their perceptions of home and host country, as well as inter-group interaction between Ukrainian refugees and the native population.

The data on socio-psychological adaptation will be important to consider in the future in psychological counseling of Ukrainian refugees, which will facilitate their acculturation process.

Case study of narratives of Ukrainian migrants as a form of representation of individual meanings and thematic construction of experience was realized. Narratives of Ukrainian women and one Ukrainian man who left the war for Slovakia (Bratislava and Piešťany) and Poland (Krakow, Międzyzecz) were collected and recorded. A total of 17 people participated in the study, 16 women and one man (respondents' age ranging from 30 to 75 years). Narrative analysis was conducted, which revealed the content and structure of comprehension of migration experience and the first months of life abroad.



RESULTS

Results. Narratives of Ukrainian migrants we examined as a form of positioning and interpretation of individual contents of consciousness acquired as a result of personal experiences and experiences. Narrative analysis involved identifying themes based on recurring ideas in the collected data. The theme

represented an issue that many refugees mentioned when talking about their integration process. These themes were embedded implicitly in descriptions of migrants' integration experiences, attitudes, and perceptions of home within a more generalized framework regarding areas of acculturation. Highlighting of themes by refugees was one of the stages of construction and comprehension of their war migration experience (Tytarenko, Kochubeynyk, & Cheremnykh, 2014; Chepeleva, Rudnytska, 2022).

Theme of stress. Singling out this theme is very important in the context of the emotional overload experienced and the need for transition to a new stage of life. Refugees experienced fear, terror and other negative emotions, and particularly children were affected.

"The evacuation was hard, stressful. We got there under shelling. They were already shelling Lozova, and us too, we drove hard, we had a hard evacuation, they stopped us a lot, did not let us through, turned us back, then again somewhere near Kharkiv ... Lozova was shelled by missiles. Again somewhere they did not let us out, well, in general, really, when we got there, even the conductor told us: "You girls are lucky".

"But in Kramatorsk, there were no more houses left. Bombed... It's hard to remember all that horror, the constant bombing, the evacuation, moving to a foreign country. But now I feel almost at home here, while in the beginning we were afraid of everything, we haven't wanted to go out or even talk to anyone".

"We were all in such a depressed state, everyone's faces were grave. It seemed that we even forgot how to smile. But gradually we thawed out. Slovaks are very good people. So benevolent, calm, patient, almost "sunny". They brought us candy, different food, dishes, things, lots of stuffed toys. And there were a lot of kids with us. All different ages. We were fed, warm



and more or less comfortable. But still we often shuddered when something unexpected happened, we cried a lot. Especially children and especially at night, even screaming in their sleep".

"I really had no desire to leave my family home. But recently the shelling of the city intensified and my daughter was very nervous about it. She is 9 years old. She understands everything very well. During the shooting she asked: "Mom, will we stay alive today...?". She began to have insomnia, fears, tantrums... It was for her sake that I came to Slovakia".

The theme of uncertainty. Referring to this theme and understanding the uncertain future in a certain way helps to clarify and define it.

"Well, while the situation there (at home) is unstable, with work and in whole, I will stay here".

"It was very difficult to make such a decision (to evacuate), but the circumstances forced my hand".

Perceptions of the home for refugees can be attributed to several key semantic points, which are most frequently encountered: 1. home as Ukraine, the Motherland, the embodiment of the soul; 2. home as the embodiment of past life in Ukraine; 3. home as property; 4. home as an object requiring action to maintain order, maintenance, care; cultivation of the homestead plot; 5. home as a place where close loved ones who did not leave for evacuation remained; 6. home as a storage of treasured things (for example, photographs); 7. home as a quintessence of peaceful life before the war; 8. home as an object of dreams and hopes; 9. home as a place to return to after the war.

Theme "Home as Ukraine, Motherland, embodiment of the soul".

"Home is our soul. It is associated with Ukraine".

"Of course, I would like to live in Ukraine. That's where my homeland is, where my friends and relatives are, where the sun and the sky are different. It is our own, dear... There is different water, birds sing in a different manner, even flowers smell differently there... I feel that my home is the entire Ukraine".

"Homeland is homeland. I will always have in my heart that small part of our Ukraine where I was born and lived most of my life. I love my city Dnipro very much. It is so beautiful. I would even say a powerful city. I have so many memories, so many things left in this city. And first of all, of course, my family and friends..."

"For me home is not just my apartment, but the whole city, the whole Kyiv. I love my city so much that I never even imagined that I would have to leave it for so long as I did at present... If you throw a stone into the water, it will make circles. That's what home is to me. It is the center of my life, and the circles are Kyiv itself and then Ukraine."

"Your home is your home. Your own land, your own country is still different. It is your own, native, familiar since childhood..."

"You can't replace your home, your Ukraine..."

Home as the embodiment of past life in Ukraine.

"We often remember our home, our relatives, sing our songs. We are very worried about our guys who are fighting in this war. We think about them, pray for them. We have stopped crying. We are happy for the children. They are happier now."

Home as property.

"A house should be yours and your family's."

"We had our own house. My husband and I built it ourselves. My father and my husband's father helped us, and professional builders, of course. I can close my eyes and see every stone, remember every crack and all my favorite belongings."

"We have a beautiful view of the city from our balcony. In summer we practically "live" there."

"We live on Obolon. We like this district very much. It is green, clean, cozy. It's like a city within a city. I wouldn't even want to change it if I had the opportunity."

"It's hard to be away from home. A foreign land is a foreign land."

The theme of the home as the object requiring actions to maintain order, maintenance, care, cultivation of the garden.

"I have a private house there and a garden with many flowers, there were garden beds where I grew vegetables. If I have my house and land near it in the new place, I will also grow flowers, herbs, vegetables, bushes and trees."

"I need to dig potatoes and help my daughter with potatoes. We hope for the best, but we are rural people, our parents taught us that we do not know what will happen tomorrow or in a year, but we always need to plant and dig potatoes."

Home as a place where close loved ones who did not go to evacuation stayed.

"Would I like to return home? I will answer - of course yes! Because there is my family, people whom I love very much, friends."

"The first thing I want to do when I return home is to hug my family, whom I miss very much."

The house as a storehouse of prized possessions.

"I have a two-room apartment. It's small, but it's very cozy. We furnished it the way we like it."

"We have a lot of different souvenirs. These are gifts and memories about friends, as well as souvenirs brought from our travels."

"My daughter loved soft toys as a child. We kept the most beloved ones. Our house always smells of cinnamon, lavender, and

coffee. We love those smells. My daughter's room has modern music equipment. She's into modern music."

The house as the quintessence of peaceful life before the war.

"And how good it was here before the war. Quiet, peaceful, beautiful, calm, warm. Our own house, which my parents built for me and my husband. A child that we could not be happy about... This is our home. Here my brother and I herded cattle barefoot, here we first fell in love, got married, had children. And now our grandchildren are growing up. This is real life and real happiness, because here is our home, our roots, our family."

"And what a good life I had before the war. What a bright and cheerful life."

The house as an object of fantasies and hopes.

"I hope we will be able to rebuild the house. Children have already promised to help. We will make it even better and more beautiful."

"If I return home, I will repair the house, replace everything old in it with new. And with my friends we will develop a healthy lifestyle community so that there are fewer people who lose their health, movement, memory, mental capacity in old age and become a burden for their children."

"We have always dreamed of our big beautiful, spacious house. We dreamed about a fireplace, a balcony, a garden and lots of flowers... And I continue to dream about my home..."

Home as a place to return to after the war.

"When the war is over, I will definitely return home."

"I wish that peace would come quickly and we would return home. And the first thing I would like to do at home is to drink my favorite coffee from my favorite cup and sleep on my bed... really want to return home..."

"And then we'll go home again and live in our little house and garden."

Key indicators of acculturation.

Narratives of Ukrainians showed that they think about finding a job, learn the language of the host country, plan schooling for their children, maintain friendly relations with other Ukrainians in emigration and establish positive relations with citizens of the host country.

Work, employment. Migrants find it difficult to find a job in an unfamiliar country, they need help and are grateful to those who help. They also noted that they received psychological support at work despite their poor language skills.

"I have a good colleagues at work too. Slovaks are very friendly, calm and very similar to us both externally, emotionally and mentally."

"I want to say many thanks to all those who helped me with work, housing. Now is such a difficult time for all of us. This is a test that we must pass without losing our dignity! "

Language, Education. One of the important themes, indicative of the acculturation process.

"Slovak I can understand, not at first, it wasn't easy to follow ... although it was understandable, it seemed to me sometimes that they try to communicate in a way that we can understand, but it's just language that's comprehensible."

"I'm learning Slovak, I'm taking courses, it's a little unfamiliar, words where there are a lot of consonants without vowels, diphthongs, not too difficult, just unfamiliar. A lot of words are similar, a lot of them are very similar to Ukrainian ... there are, vowels dropping out, ... unusual stresses, endings."

"We are all together. Children were admitted to the same Slovak school where other Ukrainian children study. They already speak Slovak. My daughter started learning Slovak back home. The children found new friends.

They are respected and treated as if they were their own."

Housing at the place of temporary stay abroad. One of the most important indicators of the acculturation process.

"The place where I live now is radically different from where I live in Ukraine. But it is very nice here. People are friendly, they always help you out whenever possible. Unfortunately, I can not change much in my current home. Except that I bought some flowers and tidied up a bit."

"Bratislava is a warm city, the people are nice, well, the city is so ordinary, warm. It reminds me a lot of Ukraine, where we are now, it reminds me a lot of old Podil. Or the upper part of Kyiv, where Lvivsky Square, Golden Gate metro station, there are very alike streets. The city where we live now, up there, all the districts are remotely similar... And the houses are alike. Yes, it feels like I am at home... it feels familiar. "

Positive associations associated with foreign urban and natural landscapes, notions of similarity, similarity with home.

An exceptionally important topic, as acculturation proceeds more smoothly in a more positive environment.

"Bratislava reminds of Kyiv. The buildings are similar. I feel like I am at home."

"I like Poland and the place where I live now also appeals to me. The environment where I live now is similar to my home and garden, it reminds me of my home in Ukraine."

Intergroup relations between refugees and residents of the host country.

Gratitude to volunteers for their help. The topic of gratitude turned out to be somewhat unexpected for us and very massively represented. This indicates the positive dynamics of intergroup intercultural relations between migrants and residents of the host country, and, consequently, the group support they receive. Researchers have noted the positive impact of group support on

sensitive group participants and the development of their social connections (Korobanova, 2018).

"We were requested temporary asylum. We are very grateful. We are good here. Everyone helps us. They treat us like children treat their parents."

"We were well received. Volunteers from Slovakia and ours too, very kind people."

"Thank you kind people, they warmed us up."

"Memories will remain warm, everyone are very kind and responsive people, beautiful nature, has its own charm ..."

"To the people who have helped me, I wish health, happiness, prosperity, peace."

"Such a small Slovakia managed to accommodate so many Ukrainians, people were really accommodating, in some ways we'll retain memories about it as such a friendly country. Such simplicity and such friendliness, and attention ... Thank you."

The practices of adaptation. Getting acquainted with the area where they live, where the temporary asylum is located.

"I like it in Slovakia. It's beautiful here. A lot of greenery. The people are very nice. Bratislava even reminds us a little bit of Kiev (in some areas), we got so used to our city, its atmosphere, its people, its parks and our Dnieper, our holidays and weekdays that we would miss and feel like in a foreign country anyway... I have my city, its streets, parks, my favorite cafes, Dnieper almost constantly in front of my eyes."

"While I have the opportunity, I walk a lot in Bratislava with pleasure. I liked the old city very much, it's so quiet..."

"When we first arrived, it seemed to us that the grass and the ground were different here, and the air was different, and the stars weren't the same here, everything was different. And now it seems the same - everything is normal. In Bratislava I feel as if I were at home. There is such a feeling that this is already yours,

this is ours ... our neighborhood, our everything is already ... I've been living here since April..."

"I live and work in the spa town of Pešťany. The neighborhood is very nice. There are a lot of parks, the Vakh River, the Tatra Mountains, and lakes with healing water and mud."

"We're already getting a little bit of a taste for it. It's good that we are all together. Sometimes it even feels like home. Nature and weather are very similar here, and also, some of the buildings are like ours."

Other adaptation practices. Art therapy practices and handicrafts helped refugees to cope with stress and negative experiences.

"We were very bored. Then they brought us paints, pencils, colored paper and everything..."

"I was glad when they brought me knitting thread. I had my own, but not much. And so I went headlong into knitting. It always calmed me down. And we often sang Ukrainian songs and listened to music. Then we got Internet access and the young people cheered up even more. We were able to communicate with friends and relatives now..."

"And we also started making motanki. These were dolls made of thread, our amulets. And for some reason children, even boys, were better at it. We made them out of multicolored scraps."



DISCUSSION

Researchers note the intensification of international flows within Europe, the influx of more and more people, as well as their transit westward (Okólsky, 2002). On the background of these processes socio-psychological adaptation becomes more and more important, and includes, among other things, introduction

into new groups, and in our case, it is a group of Ukrainian refugees and groups of volunteers and local residents of the host country. So, group support plays a role that is difficult to overestimate, especially in a situation when people lose their close circle of communication, relatives and friends, as well as social and psychological roles (Problemna vzayemodiya..., 2021).

In this regard, it requires additional reflection to find an answer to the question: why are our respondents more optimistic compared to the respondents of other researchers (Spil'nota v umovakh..., 2019), despite the trauma of war and the stress of a new place of residence, as well as the unfamiliar language. During the acculturation process, they noted sympathy for the locals, the similarity of the natural landscapes and urban environment to those left at home, in Ukraine.

It is possible that positivity is related to the age of migrants (the average age of the participants in our study 49; $\sigma=13.77$). But it is more reasonable to assume that if refugees are not provided with help, psychological support, their ideas about the world and, consequently, the construction of life experience, would incline them to a pessimistic scenario of the future. On the other hand, the group support of other refugees and volunteers, residents of the host country, provide positive behavioral patterns and thus help them learn new relevant roles in the new social environment, which helps them to experience and cope with a difficult situation in a life-affirming way. Some respondents had previous experience of labor migration to Poland, and at the time the narratives were collected, they had jobs and prospects for the future.

There are mentions in the literature that the stereotypical perception by refugees of citizens of the host country in terms of expectations of discrimination can complicate their integration into society and acculturation (Lutterbach, Beelmann, 2021). Trying to explain the obtained effect of a positive view on the life of migrants in our study, we cannot

discount the socio-cultural and linguistic similarity of the countries where the study was conducted with Ukraine, as well as the positive attitude and help of local residents.

The studies conducted concerning homecoming recommend that the country of migrants' origin should provide significant assistance (Pekin, 1986). In particular, to provide vocational training and re-adaptation, to assist with travel expenses, to accept diplomas, certificates and certificates of education obtained abroad, and to create employment opportunities. The data we have collected indicate that refugees intend to return home.



CONCLUSIONS

The study raised the veil on how the life of war migrants, in particular Ukrainian war migrants, is changing in the host countries. Close circle of communication, loved ones stay at home. Only sometimes part of the family, relatives leave together - sisters, mothers with children, wives and husbands of older generations. In the new place, the way of life and the circle of activities change, as people who fled from the war have lost their jobs. Thus, refugees have lost some of the psychological communicative roles they had at home. Now they are mastering new roles, and how successful they are in doing so will determine the course of their socio-psychological adaptation. For successful integration into the host society, migrants must learn new communicative and social roles that are relevant to life in this country.

In the process of socio-psychological adaptation, the group support provided to refugees, both by other Ukrainians in a similar situation and by representatives of the host country and volunteers, was of great importance. This eased the stressful experience of migration, activated refugees' own resources,

their faith in their own strength and in their ability to cope with difficult circumstances. As a consequence, refugees expressed their gratitude to Slovaks and Poles, and emphasized their kindness and care.

Such a contribution of socio-psychological factors to the structure of migrants' personal life world directs in a positive direction migrants' construction of their experience of their departure from home and the first months spent in the host country. Let us emphasize that a structured life world with the recently integrated experience related to evacuation from Ukraine and a new stage of life in evacuation abroad is a prerequisite for a more successful socio-psychological adaptation and acculturation in the host country.



THE LIMITATIONS OF THE STUDY

The limitations of the study are related to the situational nature of narrative interviews, the different circumstances experienced by different people, and the characteristics of their individual experiences.



PROSPECTS FOR FURTHER RESEARCH

Prospects for further research include the study of age-specific features of socio-psychological adaptation abroad, as well as the temporal dynamics of this process. Perhaps the task of further research will be to identify in the acculturation of Ukrainian migrants what is typical for military migrants from different countries and what is specific to the Ukrainian mentality.



PRACTICAL/SOCIAL SIGNIFICANCE OF THE RESEARCH

Research data on the first months of life abroad, socio-psychological processes of losing old roles and gaining new ones, importance of group support during this period as well as the importance of integration processes and experience construction and structuring of the life world in overcoming stress can be used by practicing psychologists in psychological counseling of Ukrainian migrants.



AUTHORS' PERSONAL CONTRIBUTION

Korobanova O.L. developed the concept, idea and design of the study, analyzed migrants' narratives, and wrote the article. Schulzhenko N.M. collected empirical data from abroad and participated in their analysis.





CONFLICT OF INTERESTS

The Authors declare no conflict of interest.



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Коробанова Ольга Леонідівна

канд. психол. наук, старший науковий співробітник
лабораторії психології малих груп та міжгрупових відносин
Інститут соціальної та політичної психології НАПН України, Київ, Україна
ORCID ID: <https://orcid.org/0000-0003-3539-871X>
Olga.Korobanova@ispp.org.ua

Шульженко Неоніла Михайлівна

психолог-онлайн
Братислава, Словачька Республіка
ORCID ID: <https://orcid.org/0000-0003-3189-4177>
szulzenkoaniela@gmail.com



ПСИХОЛОГІЯ ДОМУ ТА СОЦІАЛЬНО-ПСИХОЛОГІЧНА АДАПТАЦІЯ УКРАЇНЦІВ ЗА КОРДОНОМ

Мета і методи дослідження. Вивчення перебігу соціально-психологічної адаптації українських біженців за кордоном, їхніх уявлень про дім і приймаючу країну, а також міжгрупової взаємодії українських біженців та автохтонного населення.

Дослідження здійснено в межах наукового підходу до міжгрупової взаємодії як динаміки свідомого та несвідомого. Здійснено аналіз нарративів українських мігрантів як форми репрезентації індивідуальних смислів та тематичного конструювання досвіду.

Висновки. Структурований життєвий світ, що інтегрував досвід, пов'язаний з евакуацією біженців з України та новим етапом життя за кордоном, на основі конструювання особистісного досвіду в смислові події блоку, є передумовою успішної соціально-психологічної адаптації й акультурації в приймаючій країні. Під час інтеграції в суспільство приймаючої країни триває процес освоєння мігрантами нових релевантних комунікативних та соціальних ролей. Велике значення має групова підтримка, яку отримують біженці, як з боку інших українців, що опинилися в аналогічній ситуації, так і з боку представників країни, що приймає, і волонтерів.

Обмеження дослідження пов'язані із ситуативністю нарративних інтерв'ю, мінливістю значущих у поточний момент для особистості подій і смислів.

Перспективи подальших досліджень полягають у вивченні вікових особливостей соціально-психологічної адаптації за кордоном і часової динаміки цього процесу.

Практичне значення. Дані оригінального дескриптивного дослідження соціально-психологічних процесів акультурації свідчать про значення групової підтримки та конструювання досвіду в подоланні стресу і можуть бути використані при наданні психосоціальної підтримки українським військовим мігрантам.

Keywords:

психологія дому; соціально-психологічна адаптація за кордоном; акультурація; конструювання досвіду; нарратив; мігранти; біженці з України.

Інститут соціальної та політичної психології НАПН України

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