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Timely Mental Health Interventions in the Context of War and Humanitarian Crises as a Factor in Preventing the Long-term Consequences of Individual Trauma and Its Intergenerational Transmission

Bireysel Travmanın Uzun Vadeli Sonuçlarının ve Nesiller Arası Aktarımının Önlenmesinde Bir Faktör Olarak Savaş ve İnsani Krizler Bağlamında Zamanında Ruh Sağlığı Müdahaleleri

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Objectives: There is a need to screen individuals requiring assistance, identify their specific needs, and determine predictors of the impact of war on their mental health. This will allow us to assess the burden of trauma and the mental health resources of people, with a focus on perceptions of support and recovery from the crisis.

Materials and Methods: Based on the analysis and synthesis of the psychological needs of the respondents, we have identified of mental, spiritual, hedonistic and eudaimonic needs, leading the construction of a comprehensive pyramid model. A unique inclusive model of psychological interventions has been developed proposing four dimensions for future developments: theory-centered, phenocentric, method-centered and context-centered.

Results: The timely intervention methods developed by us will enhance the existing conceptual framework of crisis and martial law psychology, providing clinical practitioners with essential guidance in organizing support for individuals affected by war. These methods will facilitate the implementation of effective integrated models of psychological therapy, counseling and support.

Conclusion: The history of our country leading up to the critical year of 2022 is marked by numerous traumatic events, including national liberation wars, the Holodomor, and various forms of repression. These experiences have instilled an profound sense of sorrow and suffering within the national psyche. The prevalence of post-traumatic disorders, threats to mental health, and the risks of transgenerational trauma underscore the significant impact of the current conflict on both present and future generations. The importance of timely intervention methods increases in proportion to the depth of unique national images and archetypes embedded in the collective unconscious of Ukrainians which serve as vital sources of resilience for post-traumatic recovery.

Keywords: Humanitarian crisis, post-traumatic growth, resilience, mental health, trans-generational trauma, psycho-social needs

Amaç: Yardıma muhtaç bireylerin taranması, özel ihtiyaçlarının belirlenmesi ve savaşın ruh sağlığı üzerindeki etkilerinin öngörülmesi için nesnel bir ihtiyaç bulunmaktadır. Bu, travmanın etkilerini ve bireylerin ruh sağlığı kaynaklarını, yardım algısını ve krizden kurtulma mekanizmalarını değerlendirmemizi sağlayacaktır.

Gereç ve Yöntem: Katılımcıların psikolojik ihtiyaçlarının analizi ve sentezine dayanan bu çalışamada, zihinsel, ruhsal, hazcı ve ödemonik ihtiyaçların tanımlanması ve bu ihtiyaçların piramidinin oluşturulmasına dayanarak, benzersiz bir kapsamlı psikolojik müdahale modeli geliştirilmiştir. Gelecekteki gelişmeler için dört boyut önerilmiştir: teori merkezli, fenomen merkezli, yöntem merkezli ve bağlam merkezli.

Bulgular: Geliştirilen zamanında müdahale yöntemleri, kriz ve sıkıyönetim psikolojisinin mevcut kavramsal çerçevesini zenginleştirerek, uygulayıcıların klinik çalışmalarını zenginleştirecek ve savaştan etkilenen bireylere yardım organize edilmesinde ve etkili entegre psikolojik terapi, danışmanlık ve destek modellerinin uygulanmasında onlara rehberlik edecektir.

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Sonuç: Ülkemizin 2022 yılına kadar olan tarihi ulusal kurtuluş savaşları, Holodomor, baskılar vb. acı olaylarla doludur. Bu olaylar ulusal bilinçte derin üzüntü ve acıların kodlarını oluşturmuştur. Travma sonrası bozukluklar, bireylerin ruh sağlığına yönelik tehditler ve kuşaklar arası travma riskleri mevcut savaşın şimdiki ve gelecek nesiller üzerindeki etkisi göz ardı edilemez. Zamanında müdahale yöntemlerinin önemi, Ukraynalıların kolektif bilinçdışında yer alan ve travma sonrası iyileşme için hayati bir enerji kaynağı olan benzersiz ulusal imgelerin ve arketiplerin daha derinbir şekilde anlaşılmasıyla artmaktadır.

Anahtar Kelimeler: İnsani kriz, travma sonrası büyüme, dayanıklılık, ruh sağlığı, nesiller arası travma, psiko-sosyal ihtiyaçlar

Introduction

This document presents a comprehensive analysis of transgenerational trauma and intergenerational memory. In the twenty-first century, the traumas experienced by individual civilizations do not solely manifest as overwhelming emotional experiences that destabilize their development due to destructive events. Instead, these traumas extend beyond the immediate next generation, encompassing a broader transgenerational and trans-subjective layer of reality that lacks a clear origin. Such traumas are not confined to a single individual, generation, or time period; rather, they represent a psychosocial reality that is inherintly traumatic and persists across generations.1

War constitutes a profound political and humanitarian crisis, resulting in extensive humanitarian repercussions that endure for generations. The framework of hedonic, eudemonic, spiritual, and emotional needs among individuals in wartime undergoes significant transformation, necessitating a reevaluation stemming from their traumatic experiences. Hedonic needs refer to the physiological desires for pleasure and positive sensations, driven by an innate human inclination to satisfy personal needs and and avoid pain.2 Eudemonic needs, on the other hand, represent more conscious aspirations for happiness, flourishing, and well-being through personal development.3 Spiritual needs reflect an individual's evolution as a higher social being, encompassing and include self-realization, respect, cognition, and spiritual and moral fulfillment. The satisfaction of mental and emotional needs constitutes the "goal of the soul", aiming to fulfill requirements for attachment, independence, identity, freedom, spontaneity, enjoyment and the experience of a diverse range of emotions that are exchanged, transformed, and not merely accumulated.4

Persistent anxiety regarding personal safety and the well-being ofloved ones, coupled with the trauma of destroyed homes, forced relocations, emotional disorders, and loss of employment and income, has fundamentally altered individuals' needs. In this context instinctive requirements for self-preservation, and basic necessities such as safety, survival, avoidance of pain and death take precedence, relegating the desire for enjoyment, spontaneity and a carefree attitude to a secondary status. These circumstances significantly diminishquality of life and contribute to profound psychological trauma.

The ongoing conflict between Russia and Ukraine has drastically impacted the lives of millions, resulting in humanitarian crisis with potential long-term detrimental effects on mental health. 5-7

Researchers indicate that the psychological effects of the conflict in Ukraine trace back to 2014, when Russia's invasion of southern and eastern Ukraine contributed to the emergence of mental illness and disability.8 This situation escalated into complex post-traumatic stress disorders following the full-scale invasion in 2022.9 The war has been unprecedented in its level of destruction since World War II, resulting in one of the largest displacements of people from Ukraine to other countries and creating a new humanitarian crisis characterized by both shortand long-term health challenges.¹⁰ According to the United Nations, as of November 2022, official statistics reported approximately 6,500 Ukranian deaths and around 10,000 injuries, although the true figures may be significantly higher. 11 Furthermore, over 7 million Ukrainians have sought refuge in other countries, while an additional and 7 million are registered as internally displaced. 12

The significance of timely psychosocial support and intervention in addressing individuals' challenges cannot be overestated, particularly in light of the threats posed by mental disorders, including aggression and violent behavior towards oneself and others. The Ministry of Health of Ukraine estimates that approximately 15 million individuals may require psychological support due to the war, with 3-4 million needing medication. Such interventions are essential to mitigate the long-term impacts of mental health detoriation.¹³ The urgency for prompt mental health interventions is intensified by the damage inflicted of Ukraine's mental health service system, characterized by a shortage of qualified personnel and the destruction of facilities and equipment.14

Women are especially in need of timely assistance. The war has resulted in the mobilization of over 800,000 men, leaving their families behind, thus placing the burden of family support women. In the context of the ongoing humanitarian crisis, women-who serve as vital source of peace and comfort-must demonstrate resilience and mental fortitude more than ever. They represent the backbone of a nation's internal strength and play a crucial role in the transference of psychological well-being across generations. Numerous clinical studies indicate that children of mothers who have experienced trauma are at a higher risk of developing emotional, cognitive, and behavioral problems, including post-traumatic symptoms, depression, anxiety, hyperactivity, and conduct disorders,15 particularly when the trauma is associated with social upheavel.¹⁶ Consequently, women's resilience to psychological challenges resulting from war is fundamental for fostering the transgenerational tranmission of positive mental health experiences and strategies for maintaining mental well-being in challenging existential conditions.

Transgenerational trauma, derived from the Latin term "trans generation" meaning "through generations", refers to the accumulation of traumatic experiences from ancestral events that remain unprocessed over time and leave an imprint on genetic memory. While women play a significant role in transmitting these traumatic experiences, they are not the sole contributors. Transgenerational trauma extends the motherchild relationship, encompassing the negative experiences of ancestors accumulated over centuries as a result of the suppression of their national identity. Contemporary analyses of inherited personal trauma consider it within the framework of "wounds of history" which are often linked to the legacies of war, genocide, slavery, political persecution, and forced migration.¹⁷ The human psyche can serve as a vessel for parental mental heritage, as the struggles of previous generations influence the mental health of subsequent generations and their ability to navigate life events. 18

The transgenerational mechanism should uphold national identity, Ukraine-centrism, and the cultural norms, and traditions that our ancestors have bequeathed to us over the centuries. 19 Mental resilience and the capacity to endure crises are fundamental for transmitting the legacy of a healthy and strong nation to future generations. Women facing the challenges posed by the war encounter a myriad of issues, often influenced by their individual personality types. These challenges may include difficulties with adaptation in foreign countries, feelings of loneliness, identity crises, organizational and psychological struggles related to their children, loss of social status, job searching, nostalgia for Ukraine, assimilation into a new environment, apathy and a depletion of recovery resources, leading to a sense of being at an impasse. To cope with their anxieties, some women may engage in erratic activity while grappling with unresolved problems from their past. They may experience repressed anger, a loss of self-identity, and difficulty in planning for the future. Furthermore, these challenges are exacerbated by conflicts in relationships with loved ones, a loss of trust and support and the influence of social media. Ultimately, these factors contribute to both physical and mental exhaustion, and the emergence of depressive psychological states.19

Therefore, there is an increasing necessity to develop and implement effective intervention methods through pilot studies. Such interventions should be comprehensive, incorporating cognitive-behavioral and interpersonal therapy, with the aim of enhancing the quality of psychological care in the critical conditions of war and resource scarcity in state specialized institutions.

The purpose of this article is to develop an original methodology that is both scientific and practical for psychological interventions during wartime based on the construction of an inclusive model. This methodology has been practically tested since the onset of Russia's full-scale invasion and has demonstrated positive results in delivering psychological assistance to individuals affected by the war. The objectives of the study include conducting a sociological survey, analyzing and systematizing data obtained from screening individuals in need of psychological support, identifying needs within the wartime context, analyzing predictors of the impact of war on psychological health, assessing trauma burden, investigating resources for self-healing and perceptions of assistance, and creating effective models and tools for mental health care.

The object of this study is the mental health of the nation as a critical factor in the well-being of future generations. The subject of the study is the methods of timely intervention in mental health to ensure resilience to loss and facilitate posttraumatic growth during and after crises.

Literature Review

An in-depth conceptual analysis of existing scientific and applied approaches to psychological interventions during wartime and other crises highlights the increasing interest in this field and the effectiveness of various interventions, which range from low-threshold and short-term group therapies to individualized evidence-based psychotherapy. The traumatic experiences endured by refugees and their children considerably compromise their health and well-being. The natural necessity for effective psychological interventions is heightened at both individual and collective levels, addressing personal trauma from grief as well as widespread stressors. Consequently, the development of appropriate mental health recovery interventions is a priority, particularly in response to mental health crises stemming from individual's reactions to death, loss of loved ones, anxiety and subconscious desires to ignore or avoid death. In this context, medical science confronts the fundamental challenge of establishing a compassionate relationship between doctor and patient, grounded intact, insight, and sensitivity in managing suffering and the ensuing psychological crisis.20 Kübler-Ross and Kessler²¹, an American researcher renowned for her work on of near-death experiences and the concept of psychological support for individuals facing terminal ilness, proposed a five-stage model of grief. This model encompasses denial, anger, bargaining, depression, and acceptance. It addresses the emotional, physical, mental, and spiritual needs of individuals navigating these stages of grief management. It establishes a framework that enables mourners to identify their feelings and learn to cope with their bereavement.

Many individuals may initially experience temporary challenges in coping with loss; however over time, they can often recover through self-healing mechanisms. Yet, some individuals may struggle to overcome grief or traumatic events, even after several months. If their grief symptoms intensify and persist for more than six months, it can adversely affect their daily lives. This condition becomes evident when an individual is unable to manage the trauma independently, engages in denial and actively avoids confronting the pain of loss. Such behaviors can prolong the experience of grief, potentially leading to complex or pathological grief, which may pose risks to both physical and psychological well-being and requires appropriate psychological intervention.22

The convergence of interests among numerous global communities worldwide generates significant

collective stressors, both natural and anthropogenic. This underscores the necessity of establishing a transnational framework for growth and resilience, informed by shared experiences of psychological trauma.²³ The prevailing geopolitical turbulence exacerbates these collective stressors, as evidenced by frequent military conflicts and the resulting protracted humanitarian crises in regions such as Syria, Abkhazia, Nagorno-Karabakh, Israel and Ukraine. Many people live in conditions that hinder the harmonious development of their psyche and sense of happiness, facing challenges such as stress, mental disorders, and emotional trauma. In these circumstances, high-quality evidence-based research is essential to inform individuals about the effectiveness of mental health interventions and psychosocial support in minimizing the devastating impact of war.²⁴ Humanitarian crises caused by cataclysms and shocks-such as wars, diseases, famine, and migration- are rooted in the decline of the state, exacerbated by the spread of genocide as a barbaric method of resolving geopolitical disputes, which ultimately affects the mental health of entire nations.25

The emergence of modern research on the impact of war on mental health and timely interventions for recovery is notably marked by the Yugoslav Wars from 1991 to 2001. This period stimulated numerous studies on refugee mental health,26 political violence, and the psychological well-being of affected individuals.²⁷ The spiral of military conflicts in Afghanistan, Iraq, Syria, and Africa, along with the resulting humanitarian crises, has heightened the scientific community's interest in changes to refugee mental health28 and in psychological interventions to support refugees.²⁹

Wars significantly alter the established system of human needs, placing the importance of state security and unity on par with personal security.³⁰ War, regardless of its justification, fundamentally contradicts human needs for peace, love and justice³¹ highlighting the necessity to protect and fully respect the rights of refugees within the framework context of humanitarian law.32 In the face of threats to human life, grief over the loss of loved ones, and fear for the future, the classic pyramid of needs -consisting of physiological needs at the base, followed by safety, social needs, respect and self-expressionbecomes modified and more complex.³³ Nevertheless, it remains a valuable guideline for addressing the needs of those affected by war. Contemporary works emphasize the importance of operationalizing the needs of refugees by introducing of spider diagrams that categorize these needs at each stage of providing asylum and related assistance.34

In applied psychology, interventions serve as effective assistance for individuals, involving targeted actions by professionals aimed at achieving sustainable positive changes in a person's emotions and behavior. While behavior refers to observable actions, the "mind" encompasses perception, memory, motivation, emotions and more.³⁵ The activity of the individual requiring intervention should serve as the foundation for studying higher mental functions, with the logic of intervention reflecting a purposeful transition from pathology to normality.³⁶ In other words, an appropriate psychological intervention emerges from a specific psychological need, where untimely satisfaction or failure to meet that need can lead to the development of pathologies.

Modern meta-analyses demonstrate the high effectiveness of psychological interventions for various mental health issues, including depression,³⁷ anxiety disorders,³⁸ post-traumatic stress disorder,³⁹ obsessive-compulsive disorder,⁴⁰ eating disorders, 41 and other conditions. In addition to conducting a comprehensive assessment of the effectiveness of routine psychological therapy, researchers are examining the impact of controlled positive psychological interventions on individuals' subjective and psychological well-being, as well as the effects of these interventions on hedonism and eudaimonia.⁴²

In modern studies, the war is regarded as a severe humanitarian crisis due to the extensive destruction of infrastructure and services that impact people's well-being. The devastation, grief, and loss of loved ones will inevitably leave a lasting imprint on future generations of Ukrainians.43 Mental health disorders, anxiety, neuropsychiatric disorders, and suicidal thoughts resulting from the war's devastating effects leave enduring scars and influence a wide range of emotional responses.⁴⁴

Neuropsychiatric disorders arising from stress and depression are common among those affected by war, impacting⁵ their entire emotional response system. Individuals who have experienced separation from their families, the murder of relatives and friends, require years of mental health support. They often suffer from sleep disturbances, intrusive memories, anxiety, grief, and anger. Each person possesses their own coping skills, but without timely intervention from specialists, it becomes exceedingly difficult to navigate the crisis independently, with potential repercussions for both their own future and that of future generations. Effective strategies for prompt psychological assistance can help alleviate symptoms such as psychological stress, anxiety, and insomnia during wartime. 45

Individuals affected by war may develop addictions to alcohol, drugs, gambling, and may also exhibit violent behaviours. The high prevalence of these disorders during and after conflict underscores the necessity of screening individuals in need of treatment.46 Additionally, it is crucial to identify predictors of the onset and progression of post-traumatic stress disorders, including demographic factors (such as age, gender and education), war-related factors (such as the number of traumatic events and experiences during the conflict), post-migration factors (including duration of migration, post-migration stress, employment status, income, language proficiency, social support and marital status), as well as other considerations (such as previous mental health disorders and the presence of an affected mother in the child's life).

Special attention is given to the impact of war on the psyche of children, who are representatives of the future generation critical to our country's social development. War is viewed as a violation of their human rights and a catalyst for the

destruction of their physical and mental health. Psychological interventions aimed at children's mental health should focus on relieving them of the burden of war and addressing their needs to restore and maintain security amid stress, increased risk of mental disorders, suffering from parental separation, and fear. These experiences contradict their need for normal development in a safe environment. Therefore, interventions should be immediate and include the provision of essential physical and emotional resources, along with appropriate care. 47 Incorporating psychological rehabilitation programs into school counseling initiatives has proven effective in reducing symptoms of post-traumatic stress disorder during and after wartime.48

War-related events can be categorized into threatening events, experiences of loss, migration, and the challenges of adapting to a new culture and language. These experiences generate a range of emotional responses associated with stress and the risk of mental disorders, which can accumulate and develop into pathology. Additionally, age and gender play a complex role in this context, as the impacts of war events can vary. Women, for instance, may be more likely to have internalizing symptoms.⁴⁹

Studies on the impact of Russia's war against Ukraine on mental health have identified several contributing factors. These factors include being female (as women are more vulnerable to mental disorders due to the war), self-assessment of health, psychiatric history, and avoidance of stress management (where previous coping experiences positively influence health recovery). Additionally, timely intervention (with earlier intervention resulting in less negative impact), online mental health support, access to psychotropic medications, and distraction techniques can help improve the mental well-being of individuals in Ukraine and abroad.50 The higher vulnerability of women to mental disorders as a result of the war was confirmed in the initial wave of research, which focused on the symptoms of mental health decline among Ukrainians. In contrast, young people tend to exhibit greater resilience and resistance to stress compared to older individuals. Moreover, Ukrainians who have relocated outside their home country report higher levels of anxiety, depression, and fear than those who remained within Ukraine.⁵¹

Professionally organized interventions aimed at restoring individuals' mental health following wartime experiences can lead to post-traumatic growth-lasting positive psychological changes arising from the experience of mental trauma.52 Individuals affected by trauma, particularly those experiencing post-traumatic stress disorder, often reinterpret tragic events, allowing them to relieve these experiences in a manner that way that fosters and a sense of empowerment. When this reprocessing is successful post-traumatic growth occurs. The effectiveness of the emotional journey through grief and the attainment of post-traumatic growth is influenced by factors such asoptimism, extraversion, social connectivity (including support from friends, family and others with similar experiences), self-confidence, and openness to new ideas. Conversely, these growth predictors can be hindered under conditions of isolation, depression, low self-esteem, and passivity. Consequently, the role of psychologists is crucial, particularly when support is provided within the context of the current socio-cultural climate.53

Scientometric analysis reveals various approaches to assessing posttraumatic growth factors, including posttraumatic experiences, the exchange of negative emotions, cognitive processing or rumination, positive coping strategies (e.g., positive reappraisal), personal characteristics, sources of trauma, resilience and support for aggressive behavior, among others. According to this analyses, the search for social support and optimism serves as secondary predictors of posttraumatic growth.⁵⁴ Overcoming psychological trauma leads to a stable trajectory of healthy development and psychological resilience. However, identifying predictors of resilience in challenging, as human resilience to trauma is an elusive phenomenon influenced by complex and multifaceted factors.⁵⁵

The scientometric analysis revealed a multidimensional approach to the studying psychological interventions in the context of cataclysms. Modern works present a variety of evaluation methods, but no comprehensive single multisystemic approach to psychological interventions during crises has been developed. Such an approach would integrate combine conceptual analysis, national identity, a pilot project, and explore various dimensions for further implementation.

To conduct this study and achieve its objectives goal, it is advisable to propose a key research hypothesis: the proposed multisystemic, Ukraine-centered methodology of psychological interventions can foster positive outcomes such as post-traumatic growth, national unity, and strengthened mental health during crises, while also reducing the risks of transgenerational trauma.

Materials and Methods

The methodological design of the study is illustrated in Figure 1. Conducted from June 19 to August 20, 2023, this study was part of a pilot psychological support project within the Ukrainian Circle initiative of the Ukrainian Center for Psychology "The SOUL". This is a professional community of psychologists offers a wide range of applied tools, including psychoanalysis, psychotherapy, Jungian analysis, schema therapy, psychodrama, dance-movement therapy, and body-oriented therapy. The study focused on 223 women, as they represent the most vulnerable group among war-affected individuals and play a crucial role in the intergenerational transmission of mental trauma.

The ultimate goal of the pilot project was to create a unique, inclusive model of effective interventions aimed at mitigating the effects of post-traumatic disorders in women. The project aimed to screen individuals affected by Russia's war against Ukraine, identify predictors of their psychological trauma and needs, and develop and implement methods for providing timely assistance to facilitate their journey toward post-traumatic growth.

Stages of the pilot project are as follows:

- Formation of a sample of respondents (considering age, regional, and cross-country context);
- Justification of the sociological research logic;
- Obtaining research results:
- Identifying the psychological problems of the participants;
- Screening for hedonic, eudaimonic, mental and spiritual needs, correlating with the Kübler-Ross model of emotional, physical, mental and spiritual needs;
- Implementation of modular research tools based on national architectonics;
- Development of a pyramid of psychological needs and inclusive multidimensional model of psychological interventions.

Compliance with ethical standards: The study was conducted to ensure that psychologists adhere to ethical standards of practice, including respect for individuals, protection of human rights, responsibility, honesty and sincerity toward respondents, prudent use of instruments, competence, and a scientific basis. This study was approved by the Ethics and Bioethics Committee of Bogomolets National Medical University (protocol no: 24, date: 17.06.2023), and informed consent was obtained from each participant, confirming their voluntary agreement to partake in the study.

Statistical Analysis

Selection of the Sample of Respondents

The sample of respondents was generated randomly, with a registration form for participation posted on the Ukrainian Circle website.⁵⁶ Participation was also facilitated through a Telegram channel. All project participants have been by the war to varying degrees and have experienced traumatic psychological conditions.

Figure 2 illustrates the geographical distribution of participants within Ukraine, while Figure 3 depicts the distribution of participants outside of Ukraine. The study included 71 % of the sample from within Ukraine, with the following regional distribution: 22 % from Kyiv; 12 % from Dnipro; 7 % from Kropyvnytskyi; 6 % each from Ivano-Frankivsk, Ternopil, Khmelnytskyi; 4 % from Poltava; 5 % from Lviv; 3 % each from Vinnytsia, Zhytomyr; and 2 % each from Cherkasy, Zaporizhzhia, Mykolaiv, Kharkiv, Sumy, and Chernihiv; with 1% each from Uzhhorod, Lutsk, Rivne, and Odesa.

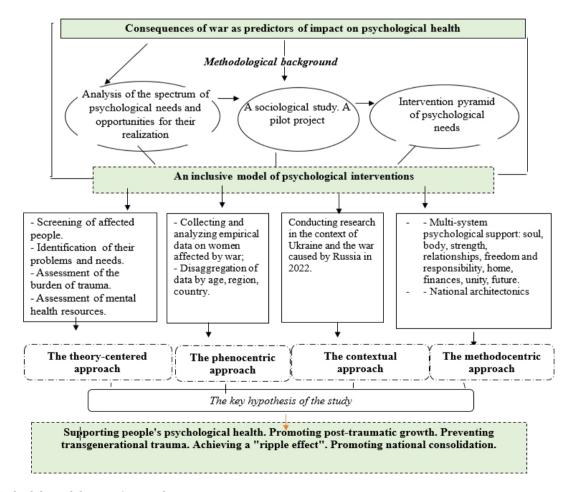


Figure 1. Methodological design of research

Source: Compiled by the authors



Figure 2. Regional distribution of respondents Source: Based on the survey results⁵⁶



Figure 3. Cross-country distribution of female respondents Source: Based on the survey results⁵⁶

Additionally, 29% of respondents were located abroad, with the largest share (12%) residing in Poland, followed by 2% each in the UK, Belgium, and Germany, and 1% each in the US, Portugal, France, the Netherlands, Sweden, Norway, Austria, Italy, Greece, Bulgaria, and Cyprus. Figure 4 presents the age distribution of female respondents.

The largest age group of participants was 41-45 years old (25 %), followed by those aged 45-50 years old (22%), 36-40 (20%), over (13%), 31-35 (10%), and 26-30 (8%). The smallest group

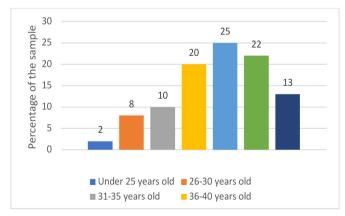


Figure 4. Distribution of female respondents by age Source: Based on the survey results⁵⁶

comprised the youngest participants, those under 25 (2%). Women aged 36-50 demonstrated the greatest interest and need for timely psychological health intervention (47%); while women under 35 showed moderate engagement (20%), and women over 50 exhibited lower activity (13%). The aimed to establish a system of postulates to achieve internal and external effects through the introduction of modular tools (Figure 5).

This model is designed to engage and integrate individuals affected by mental health challenges resulting from the war, providing them with opportunities for sustainable post-traumatic growth. Ultimately, this approach aims to equip those impacted with resources for post-traumatic growth, fostering a ripple effect, promoting national unity, and preventing trans generational trauma.

Results

The identification of the psychological problems experienced by participants, as shown in Figure 6, contributed to assessment of their psychological needs.

The participants' responses regarding traumatic psychological health disorders revealed the following distribution of needs:

24% experienced disturbances in mental balance, including lack of self-confidence, loss of inner core, feelings of helplessness and self-criticism;

18% suffered from mental health disorders such as apathy, powerlessness, depression, loss of interest in life, outbursts of anger, irritability, anxiety, and excessive control;

17% reported issues related to work and income, including loss of confidence in their abilities, loss of business, lack of

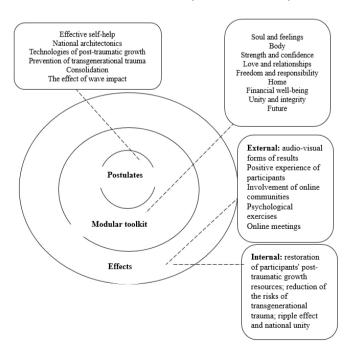


Figure 5. Research logics Source: Developed by the authors

motivation, inability to earn, unfulfilled potential, and conflicts within teams or with management;

16% faced challenges with self-identification, including loss of meaning in life, reassessment of values, feelings of loneliness, isolation, and loss of desires;

13% complained of severe physical conditions, including insomnia, anxiety, panic attacks, eating disorders, palpitations, and overall poor health reported general;

12% had difficulties in personal relationships, including loneliness, anxiety, conflicts, divorce, infidelity, and lack of relationships.

Table 1 provides a screening of hedonic, eudaimonic, mental and spiritual needs.

The survey on the needs and positive effects of psychological intervention, aimed at achieving hedonism and eudaimonia-subjective and psychological well-being- revealed that these aspects were adversely affected by trauma stemming from war and economic factors. Additionally, the survey indicated that participants' exhibited a tendency to prioritize higher-level needs, particularly spiritual needs related to self-identification and value systems. A range of hedonic needs was identified, including the need for love and enjoyment of life, as well as achieving financial well-being, alongside eudaimonic needs such as happiness and overall well-being.

All respondents indicated a need to restore a sense of harmony and balance within themselves and in their partnerships. They expressed desires for inner peace, search a future goal, a sense of control over their lives, effective planning, the restoration personal resources, self-confidence, joyful emotions and happiness through self-realization.

The project comprised 9 modules that addressed the psychological needs of the respondents, categorized into 9 levels. The survey revealed an intertwining of spiritual, mental, hedonistic, and eudaimonic needs at each level of the pyramid.

The first module ran from June 19 to June 25, 2023, and focused on tools for analyzing, managing, and controlling emotions and feelings-essentially the human state of mind (Figure 7). This module was registered on the Telegram channel and was attended by 201 participants.

The second module, which took place from June 26 to July 2, 2023, introduced tools for analyzing, managing, and controlling bodily experiences (Figure 8). It was also available on the Telegram channel and attracted 203 participants.

The third module ran from July 3 to July 9, 2023, and provided tools for analyzing, managing, and leveraging personal strengths and values beginning with the formulation of constructive goals (Figure 9). A total of 206 participants who registered on the Telegram channel.

The fourth module of the project took place lasted from July 10 to 16, 2023. It focused on tools for analyzing, managing, and controlling changes in relationships during the war, the impact of the internal situation on these relationships, and achieving

balance (Figure 10). A total of 206 participants, registered in the Telegram channel for this module.

The fifth module ran from July 17 to 23, 2023, and introduced tools for understanding and analyzing freedom and responsibility, enabling indviduals to realize their own potential (Figure 11). This module covered 207 participants registered in the Telegram channel.

The sixth module of the project, which took place from July 24 to 30, 2023, provided tools for understanding and analyzing the impact of war on the loss of a sense of inner home and internal protection (Figure 12). This module included 209 participants registered in the Telegram channel.

The seventh module, held from from July 31 to August 6, 2023, focused on tools for managing financial flows, budgets, and resource utilization to unlock talent (Figure 13). It was attended by 221 participants registered in the Telegram channel.

The eighth module occured from August 7 to 13, 2023, and addressed tools for overcoming divisions at both the individual and societal levels, promoting manifestations of tolerance, and exploring methods of consolidation (Figure 13). This module included 223 participants registered in the Telegram channel.

The ninth module, which took place from August 14 to 20, 2023, revealed tools for managing future life by addressing past and present factors, as well as strategies for overcoming psychotrauma and facilitating post-traumatic growth (Figure 14). This module included 221 participants registered in the Telegram channel.

Development of an intervention pyramid for psychological interventions and an inclusive model of these interventions. The methodology for timely interventions, developed by the authors, encompasses a set of psychological needs in the context of war and tools designed to constructively influence individuals' psychological health. The tools include:

- A theoretical block that outlines the limits the cognitive understanding of psychological problems, offers alternative perspectives, and identifies resources for these challenges;
- A practical block that provides written, audio, and video practices containing ideas and solutions that reflect people's worldview, as well as a survey addressing factors that contribute to psychotrauma.
- A communication and analytical block that facilitates communication with psychologists and analyzes participants' activities and feedback.

Consequently, the psychological needs of individuals were categorized into nine groups, leading to the implementation of nine corresponding psychological intervention tactics (Figure 15).

Discussion

Our research aims to reorient scientific communities, clinicians, and the public towards developing timely interventions for the psychological health of individuals affected by war.⁵⁷ We seek to conduct evidence-based research on the effectiveness^{57,58} of these interventions, and to conceptualize post-traumatic growth and resilience following large-scale human-made disasters. War is a significant predictor of prolonged humanitarian crises that result in long-term psychological trauma, diminishing individuals' emotional responses⁵⁸ and facilitating the transmission of grief and loss across generations.⁵⁹ In this context, women often serve as the primary conduit, frequently exhibiting internalizing symptoms that necessitate targeted psychological interventions. 59,60

The analysis presented in this article regarding evolution of individuals' psychological needs in the aftermath of war aligns with recent research findings, which indicate that war cannot be integrated into the framework of normal human needs or their fulfillment.60 War undeniably intensifies the urgency of adderssing psychological needs for protection⁶¹ to prevent exacerbation of trauma and the develop of pathological conditions such as depression, anxiety disorders, post-traumatic stress disorder, and obsessive-compulsive disorder, etc.

According to our approach, the pyramid of psychological needs is based on Maslow's foundational concept, which has been significantly modified but still serves as a guideline for timely psychological interventions. 62 We have grouped the psychological needs of war-affected women into nine clusters: emotions, body, strength and confidence, love and relationships, home, freedom and responsibility, money, unity and future. We analyze the predictors of war in each cluster and have developed a practical toolkit of interventions for each group of needs. Additionally, our system of hedonic, eudemonic, mental, and spiritual needs correlates with the Kübler-Ross model of emotional, physical, mental, and spiritual needs. However, a fundamental difference is that the stages of denial, anger, bargaining, depression, and acceptance, as identified in our research, are experienced by individuals who have suffered from war but retain prospects for a happy future. Thus, we consider their needs in the context of hedonism and eudemonism. In contrast, the Kübler-Ross approach focuses on grief resulting from the acknowledgement of death, shifting the emphasis on studying psychological trauma and providing assistance to purely emotional, physical, mental, and spiritual needs.63

Our perspective aligns with Vygotsky's classical approach, which posits that psychological disorders in an individuals' activity, serve as a basis for studying higher mental functions. The logic of intervention involves conscious manipulations that transition individuals from a state of pathology to normality. 63 Sociological research has allowed us to detail the needs of women and identify positive effects that lead to sustainable changes in thinking, motivation, emotions, and behavior, confirming the effectiveness of modern psychiatric approaches. A psychological need that is not met in timely manner can lead to the development of pathologies, necessitating effective intervention. Controlled psychological interventions address spiritual, emotional, hedonic, and eudemonic needs, ultimately enhancing individuals' subjective and psychological well-being over the long term.

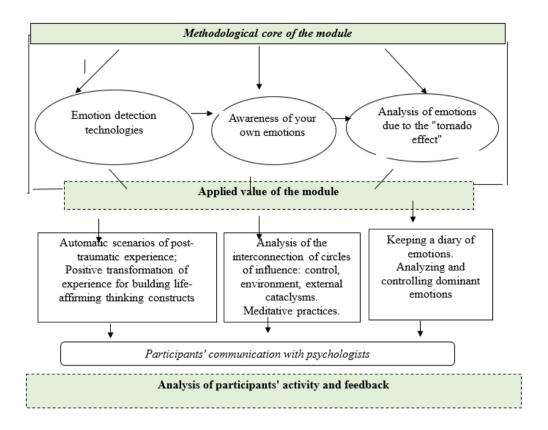


Figure 6. Psychological problems of respondents Source: Based on the survey results⁶³

Table 1. Analysis of psychotrauma as a factor of needs and motivation for psychological intervention			
Traumatic state	Scope of the sample coverage (%)	Groups of needs	The purpose of psychological intervention
Disturbance of spiritual balance	24	Spiritual, euphemistic	Formation of life-affirming thinking constructs
Disorders of mental states	18	Spiritual	Controlling emotions. Transformation of post-traumatic experience
Problems caused by economic factors	17	Hedonistic	Transforming a materially oriented view of life into a financially prosperous mindset
Problems of self-identification	16	Spiritual	Building a psychological route of life, finding your own purpose
Severe physical conditions	13	Eudaimonistic	Restoration of body resistance mechanisms
Problems in interpersonal relationships	12	Eudaimonistic	Formation of responsible thinking for happy relationships

Source: Developed by the authors based on the results of a survey 64

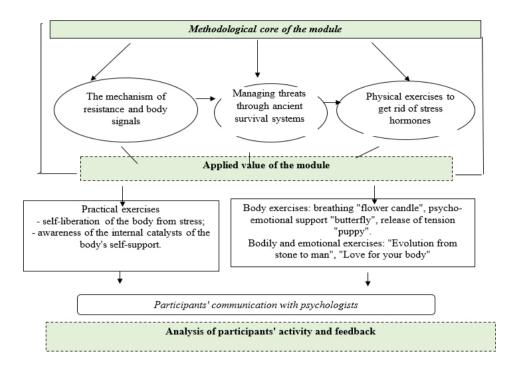


Figure 7. Toolset of the module "Emotions and feelings" Source: Developed by the author⁶⁴

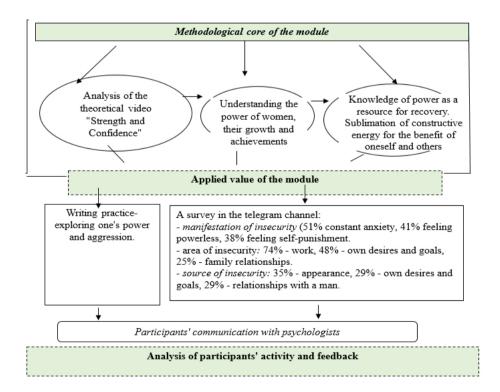


Figure 8. Toolset of the module «Body» Source: Developed by the authors⁶⁴

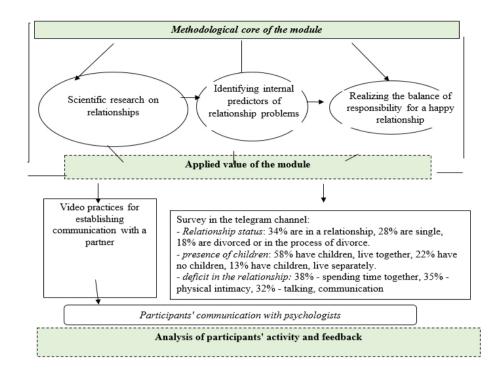


Figure 9. Toolset of the module "Strength and Confidence" Source: Developed by the authors⁶⁵

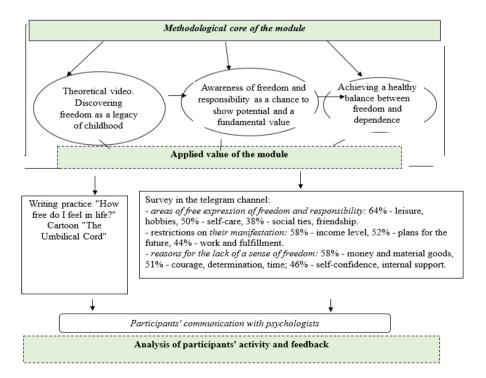


Figure 10. Toolset for the module "Love and Relationships" Source: Developed by the author⁶⁵

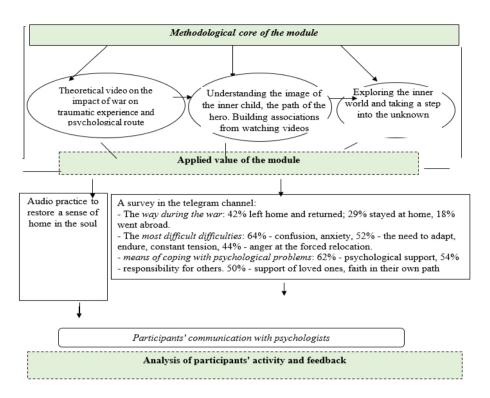


Figure 11. Toolset for the module "Freedom and Responsibility" Source: Developed by the authors⁵¹

We align with Bonanno's perspective that psychological interventions can help individuals emerge from psychological trauma and foster resilience and growth. However, identifying resilience factors can be challenging due to their multifaceted and flexible nature. 63,64

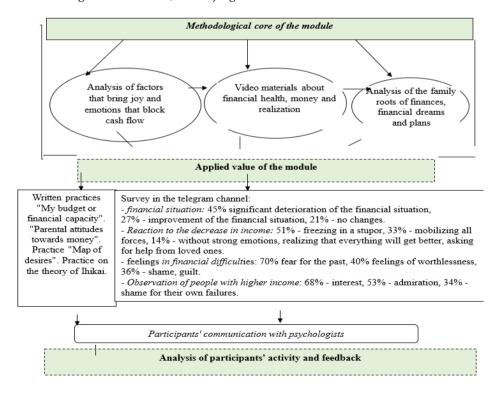


Figure 12. Toolset for the module "Home" Source: Developed by the authors⁶⁵

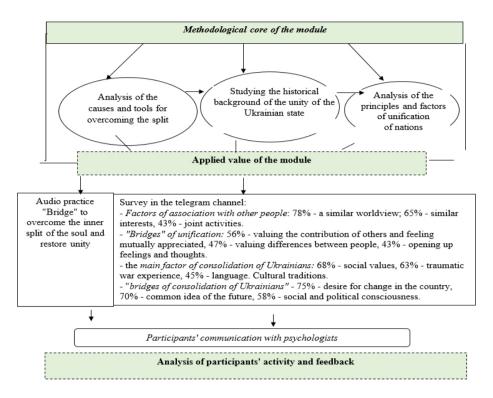


Figure 13. Toolset of the module "Money and well-being" Source: Developed by the authors⁶⁶

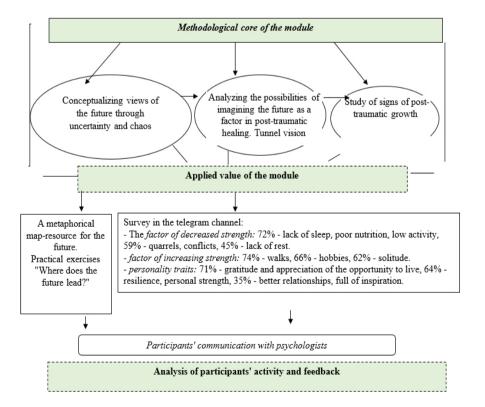


Figure 14. Toolkit of the "Future" module Source: Developed by the authors⁶⁴

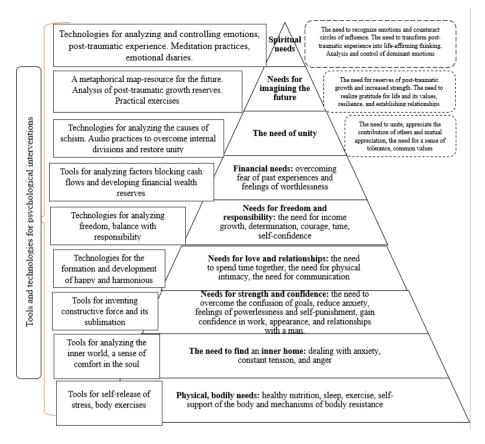


Figure 15. Intervention pyramid of psychological interventions "need-intervention"

Timely psychological interventions are critical for individuals' health especially considering the potential consequences of allowing a crisis to unfold unchecked^{65,66}. A person's inherent optimism, extraversion, intensity of communication, and selfconfidence can be diminished under the harsh conditions of war. Victims of war are particularly susceptible to aggression, substance abuse, gambling, and other risky behaviors.

Study Limitations

The study was conducted with a limited respondent, specifically women affected by Russia's war against Ukraine. Consequently, the finding are constrained by the insufficient scale of the survey. However, even within this sample, patterns emerged regarding in psychological needs, methods of psychological interventions, and their outcomes. A second limitation pertains to the potential for excessive subjectivity in the respondents' assessments of their psychological well-being, which may have been influenced by their emotional experiences.

Conclusion

Conceptualizing the impact of war on people's mental health by analyzing the range of problems and available resources for addressing them has led us to conduct a sociological study as part of a pilot project that utilizes psychological support methods. We have developed a unique inclusive model of psychological interventions, aimed at involving and integrating as many individuals as possible who have experienced mental health issues due to the war. This model provides opportunities for sustainable post-traumatic growth, ultimately resulting in a saturation of resources for affected individuals, a ripple effect of healing, national unity and the prevention of transgenerational trauma.

The timely intervention methods developed by our team are based on identifying categories of individuals in need of psychological assistance, analyzing their needs, and constructing an inclusive model of interventions. Through a comprehensive, multidimensional study of the psychological challenges faced by war-affected individuals, we can foster personal coping with loss and grief, accelerate post-traumatic growth, and address hedonic, eudaimonic, mental, and spiritual needs. In this way, we can ensure the mental well-being of the nation for generations to come.

The proposed approach consists of four dimensions designed to enhance future research. The theory-centered dimension facilitates a deeper understanding of psychological intervention theories by explorinf the effects of various mental collapses. The phenocentric dimension enables us to extend the logic of our project to larger-scale studies, encompassing both men and children at national and global levels. From the methodocentric dimension, we can consider integrating our modular system with national architectonics to adapt the system and develop new psychological methods, such as those based on patriotic,

Ukraine-centered thinking. Finally, the context-centered dimension allows our approach to be applied across different time periods and event contexts.

Ethics

Ethics Committee Approval: This study was approved by Ethics and Bioethics Committee of Bogomolets National Medical University (protocol no: 24, date: 17.06.2023).

Informed Consent: Informed consent was obtained from each participant, confirming their voluntary agreement to partake in the study.

Footnotes

Authorship Contributions

Surgical and Medical Practicies: M.O.V., Concept: I.V.R., Design: M.O.V., Data Collection or Processing: O.S.S., Analysis or Interpretation: M.O.V., Literature Search: O.S.S., Writing: I.V.R.

Conflict of Interest: The authors declare no conflicts of interest.

Financial Disclosure: The authors declare that this study received no financial support.

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