

## SOME INDICATORS OF STUDENTS' MENTAL HEALTH IN THE CONDITIONS OF WAR (ON THE EXAMPLE OF THE KHARKIV STUDENTS DURING THE FULL-SCALE MILITARY INVASION OF RUSSIA INTO UKRAINE)

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**Abstract.** The article is dedicated to the issue of the impact of war on the mental health of the civilian population, particularly focusing on students. Thus, the aim of this article is to provide a comprehensive analysis of the mental health of students during wartime (using the example of students in Kharkiv during the full-scale military invasion of Russia into Ukraine). The theoretical part of the article analyzes scientific concepts regarding the phenomenon of mental health, the impact of war-related stress on the mental health of the population, and reviews research findings on the mental health of the civilian population in general and students in particular. The empirical part of the article presents the results of a study on the mental health of Kharkiv students, conducted by the authors. The study involved secondary data analysis of research on the mental health and subjective well-being of the civilian population of Kharkiv and the Kharkiv region (November 2023, n = 730), conducted by a research group from the Department of Sociology and Psychology at the Kharkiv National University of Internal Affairs, which included some of the authors of this article. The results of the study revealed that overall, the indicators of students' subjective (psychological) well-being and mental tension tend toward normal levels. No significant signs of post-traumatic stress were identified. The biggest problem highlighted was loneliness, associated with the forced social isolation of students due to distance learning and the unfavorable security situation in Kharkiv and the Kharkiv region. In light of this issue, the authors provide a set of recommendations for addressing it.

**Keywords:** mental health, subjective (psychological) well-being, stress, post-traumatic stress disorder, student, higher education institution, university, full-scale military invasion of Russia into Ukraine, wartime conditions.

### 1 Introduction

War and military conflicts bring significant psychological and emotional disturbances that directly impact the mental health and psychological well-being of people. It is evident that not only military personnel suffer from war but also the civilian population. War leads to the development of post-traumatic stress disorder, significant mental and emotional strain, depression, anxiety disorders, and other mental illnesses. Understanding the stress factor of war and its impact on the mental health of civilians is crucial for developing effective strategies for the support and rehabilitation of those affected. Knowledge of how different population groups respond to stressful situations allows for the creation of targeted psychological support and intervention programs to help reduce the negative effects of war on mental health.

Students represent a social group that accumulates the potential for the country's future development, including post-war recovery. It is obvious that studying during wartime is significantly different from studying during peaceful times, as it is accompanied by constant stress related to military actions. This primarily concerns students who live and study in areas located in close proximity to military activities, as well as near the border with the aggressor country, making these areas easy targets for constant enemy bombings (for example, the city of Kharkiv and the Kharkiv region).

Before the war, Kharkiv was considered a "student city" as, according to the Main Department of Statistics, the higher education network in the Kharkiv region included 74 higher education institutions [42]. If we consider this number on a national scale, it constitutes nearly a quarter of all higher education institutions in Ukraine. With the onset of the full-scale invasion, all higher education institutions located in Kharkiv and the Kharkiv region switched to fully remote learning — the only

relatively safe form of education. Later, some of them, particularly those classified as universities "with specific learning conditions," were forced to temporarily relocate to other cities in the country where in-person learning is possible, as this format of education is mandatory in such institutions (primarily referring to institutions that train police officers, military personnel, etc.).

According to the Regional Department of Science and Education, 22 higher education institutions in Kharkiv sustained significant damage due to Russian bombings and shelling [25]. Despite the extremely challenging conditions in which the educational system of Kharkiv region operates, and despite the damage to numerous university buildings in Kharkiv, as of June 2024, the Kharkiv region ranks second in the country in terms of the number of students enrolled in higher education institutions. This information was confirmed by the Ministry of Education and Science of Ukraine [16].

Students attending universities in Kharkiv and residing in the city or other localities within the Kharkiv region face high levels of stress due to constant threats to their lives, the loss of loved ones, destruction of homes, and the disruption of their usual way of life. Investigating the mental health status of these students is essential for understanding the potential for both current and post-war development of the region, as the state of their mental health influences their ability, as a key social group, to fully realize their potential.

In light of the above, the aim of this article is to conduct a comprehensive analysis of the mental health status of students in wartime conditions (using the example of students from Kharkiv during the full-scale military invasion of Russia into Ukraine).

### 2 Method

Theoretical and methodological foundations of the study were composed of:

- 1) Scientific concepts of the phenomenon of mental health by A. Maslow, C. Rogers, V. Frankl, V. Ananiev, B. Bratus, F. Vasiliuk, I. Dubrovina, V. Pakhalyan, O. Shuvalov, and others; research on the state of mental health during wartime conducted by foreign researchers such as S. Galea, K. Wortman, D. Koren, D. Norman, A. Cohen, et al.;
- 2) Studies on the mental health of students conducted by both Ukrainian and international scholars, including Yu. Borets, I. Shlimakova, I. Vlasenko, O. Reva, N. Grankina-Sazonova, H. K. Altinyelken, L. Hoek, L. Jiang, E. Sokolowska, L. Zabłocka-Żytka, S. Kluczyńska, J. Wojda-Kornacka, and others;
- 3) Research by Ukrainian scholars on the mental health of students in wartime, specifically researchers such as K. Chmeliuk, L. Tampilina, Ya. Inatenko, O. Gogol, M. Tsymbaliuk, N. Zhyhailo, M. Kichula, V. Zavorotna, L. Trushchenkova, A. Vyshnevskiy, K. Levchenko, N. Kharitonova, H. Chuiko, T. Koltunovych, N. Yeremenko, N. Kovaliova, and V. Uzhvenko.

**Empirical Methods:** Surveys (online questionnaires for the population of the Kharkiv region to assess indicators of mental health and well-being, as well as the factors influencing them); psychodiagnostic methods—use of standardized tests and scales to measure stress, anxiety, depression, and other indicators of psychological well-being, specifically: 1) the modified BBC Subjective Well-being Scale (BBC-swb) (P. Pontin, M. Schwannauer, S. Tai, & M. Kinderman; adapted by L. M. Karamushka, K. V. Tereshchenko, O. V. Kredentser) [14]; 2) the Neuropsychic Stress Questionnaire (T. A. Nemchin) [22]; 3) the Traumatic Stress Questionnaire (I. O. Kotieniev) [33].

Methods of mathematical-statistical data analysis: correlation analysis, cluster analysis.

### 3 Results and Discussion

The analysis of scientific sources devoted to the theoretical conceptualization of the stress-inducing conditions of war and the study of stress states during wartime indicates the prevalence of psychopathology among those who have experienced war. This applies not only to military personnel but also to civilians [5; 24; 34]. Galea S. and Wortman K., in their article, convincingly summarize the relevant evidence, demonstrating that individuals who are socially or economically vulnerable (low-income, children, the elderly), and in many cases, women, are more prone to experiencing distress during war. The impact of war on their mental health tends to be significantly more negative [8].

Furthermore, researchers have shown that displacement (either internal or abroad) and war-related losses (human, material, etc.) can prolong the course of psychopathology and delay recovery, even if the individual has been in a safe environment for an extended period. This indicates both a temporal and spatial "potential prolongation" of war conditions, meaning that they continue to exert their stress-inducing effects even after the war has officially ended.

Karam E. and Ghosn M. highlight that war is always accompanied not only by a surge in mental disorders but also by significant mortality and physical illness. It is important to take into account the strong interconnection between physical and psychological illnesses: individuals who have suffered physical injuries are more likely to experience prolonged psychopathology, and conversely, mental illnesses or traumas increase the likelihood of deteriorating physical health [12]. This conclusion is particularly relevant for further modeling of the tools used in our empirical research.

Koren D., Norman D., Cohen A., and others point out that "war is a demonstration of force aimed at subjecting one group to the will of another" [13; 18]. The researchers suggest that one of the primary goals of war is to inflict harm (both physical and psychological) "as a means of coercing capitulation and stopping actions undesirable to the aggressor" [18]. Ukrainians, at the cost of their own lives, have confirmed this hypothesis, especially those living in close proximity to the aggressor nation. For instance, when Kharkiv became an unattainable target for Russia, despite being a highly desired military "trophy," the aggressor intensified bombings of civilian infrastructure, residential areas, and the homes of ordinary citizens in an effort to subjugate the city's inhabitants, intimidate them, and cause suffering.

One of the modern myths about war (which prevailed in the civilized world until the full-scale Russian invasion of Ukraine) was the belief that wars could be conducted in a deliberate, "smart" way, focusing military actions exclusively on soldiers, military targets, etc., without causing harm to civilians. However, current events in Ukraine demonstrate that it is practically impossible to wage war in such a manner that only those who can resist, or those responsible for political and military decisions, are targeted. The consequences of war inevitably include the deterioration of existing social structures, exposing the population to stress and trauma, limiting access to preventive and therapeutic resources and healthcare institutions, and leading to increased levels of psychopathology and physical illness among individuals who may not be direct targets of military attacks [8].

Poor public health is an inevitable consequence of war. The achievement of personal goals by individuals and, broadly, societal objectives depends on the health of the population—both physical and mental. Due to the significant harm to public health, war effectively hinders the attainment of strategic development goals for communities, regions, and society as a whole, which were set before its onset. This is an argument in favor of recognizing the fact that the impact of war on society

persists long after the war itself has ended. The experience of all wars that took place in the 19th century shows that the consequences of war-related stress, as well as various mental and physical pathologies that arose and developed during the war, continue to affect people for many years after the conflict is over.

Galea S. and Wortman K. assert that "war rarely 'ends' within the lifespan of any generation." Given that the negative health consequences of war persist long after its conclusion, this leads to social and economic effects that shape the entire future experience of the generation that lived through the war [8]. Even more concerning are research findings indicating that the psychological trauma caused by war-related stress is transmitted from generation to generation [18].

The stress, depression, and anxiety that accompany war-related traumatic events can profoundly impact the physical health of society as a whole, its internal relationships, and daily life. As previously noted, war significantly contributes to the onset and severity of stress and mental disorders observed among the civilian population. The most common conditions include post-traumatic stress disorder (PTSD), depression, and anxiety. Moreover, the exacerbation of pre-existing mental disorders is seen not only among individuals living directly in conflict zones but also among internally displaced persons and refugees [19].

Most existing studies focus on examining the psycho-emotional state and mental health of affected communities during the post-war period. Despite the prevalence of active military conflicts in various parts of the world, the understanding of war's impact on the mental health of civilian populations, particularly regarding stress and anxiety, remains quite vague. Although this issue is of great importance, few studies have specifically explored the relationship between active military operations and the levels of stress and anxiety [11; 31]. For this reason, the situation in Ukraine, where on February 24, 2022, a full-scale Russian military invasion began, is of heightened research interest, particularly in regard to those territories where the civilian population suffers from ongoing terror.

Stress and anxiety are expected consequences of living in wartime conditions, significantly affecting the quality and safety of human life. War creates a fertile ground for the development of anxiety disorders, as it involves a high degree of trauma, both mental and physical [6]. Existing research literature demonstrates that war has a profoundly negative impact on the civilian population involved, leading to stress disorders [15], anxiety [6; 12], depression [7], and post-traumatic stress disorder (PTSD) [9]. Researchers place particular emphasis on the mental health of refugees who are forced to leave their homes due to military conflict in their country or region. For instance, Kashdan et al. [15] confirm that refugees represent a vulnerable group, more susceptible to anxiety disorders, PTSD, and depression. The authors explain the causes of these conditions as being due to sudden changes in lifestyle, forced relocations, and the need to separate from family and loved ones.

Alongside this, it is important to note that the study of the relationship between war and stress, as well as anxiety disorders among the civilian population of Ukraine, remains under-researched. However, some explorations have been undertaken by Ukrainian scholars. For example, Kurapov A. et al. report a deterioration in the psycho-emotional state of Ukrainian students; specifically, the majority of respondents exhibited signs of depression and nervousness, reporting increased feelings of loneliness and anger. There was also a rise in cases of alcohol, tobacco, and sedative abuse among them [20]. Pavlenko V. et al. focused on the mental health of women working in education, including students and teachers. Their study revealed that the respondents experienced elevated levels of fear and reduced resilience to stressful situations [29].

Researchers Kurapov A., Danyliuk I., Loboda A., Kalaitzaki A., Kovach T., Klimash T., and Predko V., based on the results of their study (respondents – adult representatives of the civilian population of Ukraine, sample – random, non-representative;

online survey, field stage – July to October 2022), found that, on average, Ukrainians exhibit low levels of anxiety and depression that do not meet the diagnostic criteria for disorders. However, a significant portion of the population still shows signs of these disorders. The situation is different with stress: 70% of Ukrainians report acute stress symptoms [20]. Referring to Hinz A. and Schwarz R., the authors suggest that the prevalence of depression is generally age-related and should not exceed 15% in a normal population. This indicates that Ukrainians demonstrate significantly elevated levels of anxiety and depression due to the war.

Kurapov A. and his colleagues note that, although the high level of stress among Ukrainians seems evident, the results of their study differ considerably and even contradict the findings of studies conducted during the first month after the Russian invasion, which reported a significant deterioration in the mental health of Ukrainians [29; 31]. That is, the results of Kurapov A. and his colleagues are considerably more favorable, especially regarding stress. However, as the authors themselves note, it is important to understand that the mental health of people who have experienced the stress of war may worsen over time. The researchers also hypothesize that the strengthening of national unity, which has consistently accompanied each crisis throughout Ukraine's independence, may have contributed to the development of effective coping strategies for overcoming stress, anxiety, and depression among Ukrainians, which have worked relatively well during the war. For example, Ukrainians typically employ support-seeking and providing strategies rather than distancing or emotional venting strategies [26].

Kurapov A. and colleagues also found that individuals who remained at their permanent place of residence experienced lower levels of stress and anxiety compared to internally displaced persons and refugees. These findings align with previous research that reported the psychological effects of displacement [6; 7; 9; 12; 13; 11; 15]. This may suggest that Ukrainians perceive direct military threats as less traumatic than fleeing their homes and country. In other words, Ukrainians' resilience to the reality of war and constant threats can be explained by their strong family values and attachment to home. However, it is important to note that mental disorders may manifest in the short or long term with a high likelihood in individuals who have experienced displacement or other traumatic events. Participants who reported direct trauma experiences (armed attacks, sexual violence, severe human suffering, physical violence, military actions, and other war-related stressful events) exhibit higher levels of distress, anxiety, and depression. This is particularly evident in victims of sexual and physical violence, who report symptoms of anxiety and depressive disorders if they have experienced such trauma.

Direct experience of a war-related stressful event (occupation, violence, loss of loved ones, home, or property) significantly increases symptoms of anxiety and depressive disorders, as well as perceived stress [19; 20]. Interestingly, it is refugees who report direct experiences of severe human suffering, not participants who remained in Ukraine, and this is associated with a significantly elevated level of anxiety-depressive disorders. The situation is quite different for participants who stayed in Ukraine, as they report only a slight increase in depression, and even then, only as a result of experiencing severe human suffering.

When considering war-related stress factors specifically affecting social groups such as students, it is important to note that by the third year of the full-scale war, Ukrainian students faced reduced governmental support instead of improvements in social protection [2].

The economic aspect of student issues is primarily reflected in the fact that a large portion of students is forced to combine studies with work, often working full-time. This issue is certainly not new, but in the context of war and the accompanying economic crisis, the situation has worsened. This prevents individuals from fully engaging in the educational process, limits opportunities for personal development, and leads

to both physical and psychological fatigue. Many respondents reported burnout in their workplaces due to excessive workloads [2].

The necessity to work while studying may impact their future professional lives, particularly their ability to find suitable employment in their field of study. The fragmented knowledge they acquire often makes it difficult to enter the relevant labor market. According to the 2022 Employment Monitoring Report of Graduates of Higher and Specialized Secondary Education Institutions, the employment rate for bachelor's degree graduates was only 36.3% [10].

Working students are more likely than others to face labor rights violations and uncertainty regarding their status in the labor market. Lacking experience, they often take short-term jobs, frequently in informal employment. In some cases, their employment relationships are disguised as "self-employment," with employers requiring them to register as individual entrepreneurs. This strips students, particularly female students, of proper social protection and complicates the formal defense of their labor rights when necessary. The new legislation allowing for zero-hour contracts—employment agreements without guaranteed working hours—could further worsen the position of young people in the labor market [10].

Russian military aggression has altered the lives of all students, but especially those living in frontline and occupied territories. Even if a university offers students the option of distance learning, there are often issues that can only be resolved by being physically present at the educational institution, which becomes an additional stress factor. Reaching the university's location is dangerous, and in some cases, completely impossible [10].

After the onset of the full-scale war, many students were forced to take academic leave because they became refugees, had to work more, or joined the front lines. It is important to emphasize that taking academic leave for many students (except for those who joined the Ukrainian Armed Forces) means losing the opportunity to continue their education funded by the state. Returning from academic leave is possible only if the student continues their studies on a paid, contractual basis [10].

Following the COVID-19 pandemic, the war has caused prolonged periods of distance learning at many educational institutions. This complicates, and sometimes makes it impossible to complete practical training, occasionally leading to a loss of interest in acquiring knowledge. In-person education during wartime is also problematic, especially when university and dormitory shelters are in poor condition, with issues related to capacity and safety. Students from occupied, de-occupied, and frontline areas report increased nervous reactions to air raid sirens, loud noises, and issues with sleep and self-control [3; 40]. This clearly indicates mental health issues that have arisen specifically as a result of the war.

It is important to emphasize that the stress factors negatively affecting students' mental health are not limited to the educational process itself. Many students have lost their homes, property, family members, friends, and much more due to the war. Despite these losses, they are forced to move forward, continue their studies, work, conduct research, write qualification papers, take exams, and more.

Once again, it should be noted that studying the mental health of students is crucial for understanding and assessing the human potential of our country, particularly in the context of post-war recovery. From a sociological and socio-psychological perspective, the student body represents a significant social group within society.

The term "student" (from Latin *studens*, genitive *studentis* – one who diligently works, studies) refers to a person pursuing higher education. In ancient Rome and the Middle Ages, the term "student" applied to anyone engaged in the process of learning. With the establishment of universities in the 12th century, the

term "student" began to refer specifically to those who study and work within these institutions. After academic titles were introduced for teachers (such as professor), "student" was used exclusively to refer to those engaged in studying [3].

The term "student body" refers to students as a socio-demographic group, characterized by a specific size, gender-age structure, territorial distribution, and so on. It denotes a certain social status and corresponding roles, as well as a distinct phase or stage of socialization (the student years) that the youngest people go through. This stage is marked by specific socio-psychological characteristics [3].

With the increasing social significance of higher education, the role of students in society is growing, and their numbers are increasing. Students are not only a source of replenishment for qualified personnel and intellectuals but also constitute a substantial and significant social group in their own right. The process of massification of higher education in Ukraine reduces its elitism on one hand, while on the other hand, it makes higher education more democratic and accessible to people from various social strata. There are also changes in gender structure, with an increasing number of women participating. Despite differences in social background and material resources, students share a common type of activity and form a specific socio-professional group that is potentially important for the existence and development of various professional fields and industries [28].

According to the classic definition prevalent in social and behavioral sciences, a social group is a collection of individuals united by a common purpose, idea, or work [21]. In contrast to, for example, a socio-demographic community, a social group contains significant activity potential, meaning the potential for social engagement, which leads to noticeable social changes and shifts. Therefore, in the context of considering students as an important social group, given the difficult conditions they face during the war, it is crucial to assess their mental health. This is directly related to their ability to realize their activity potential.

The mental health of students is also analyzed by foreign scholars such as Altinyelken H. K., Hoek L., Jiang L., Sokolowska E., Zabłocka-Żytka L., Kluczyńska S., and Wojda-Kornacka J. However, the scientific works of these international authors mainly address general aspects of students' mental health, without specifically considering the conditions of war [1; 36].

Regarding scientific publications on the mental health of students specifically under wartime conditions, the authors are Ukrainian researchers. It should be noted that the theoretical and methodological foundations for studying student mental health in a state of war have been thoroughly defined and analyzed by Ukrainian scholars such as Kichula M. Y., Zavorotna V. M., Trushchenkova L. V., and Vyshniovsky A. V. [17]. Issues faced by Ukrainian students during the war have been the focus of specific scientific and practical conferences. For example, the Khmelnytsky Cooperative Trade and Economic Institute organized and held a nationwide scientific and practical conference titled "Ukrainian Students in the Context of War with Russia" [41].

At the empirical level, the mental health of students has been researched by several scholars. In November 2023, Ukrainian researchers Tamilyna L., Inatenko Y., and Hohol O. conducted a survey titled "What Allows Young People to Feel Happy During the War? A Study of Life Satisfaction Among Students of Higher Educational Institutions in Ukraine." The research focused on examining the subjective well-being of Ukraine's young population, with particular attention given to the life satisfaction of students at Kyiv universities. The survey included 184 students aged 18 to 25 years (average age 18.6 years). The study found that "the war significantly impacts the life satisfaction of young people in Ukraine. Students show increased sensitivity to social isolation, which is felt directly or indirectly through the transition to online learning. The perception of positive changes in personal life or surroundings

greatly contributes to an increased overall level of subjective well-being. Universities can further enhance this level by offering psychological counseling services on campus." Despite the war, respondents demonstrated a relatively high level of life satisfaction, averaging 7 on a 10-point scale (where 1 is the lowest level of satisfaction and 10 is the highest) [37].

Research conducted by M. Tsybaliuk and N. Zhyhailo among students of Ivan Franko National University of Lviv and other higher educational institutions revealed that prior to the full-scale invasion, students were relatively stress-resistant. For instance, 46.7% of students did not experience stress. However, the war has negatively affected students' psychological resilience. The severity and frequency of stress have increased, and stress resistance has decreased [38].

Levchenko K. and Kharitonova N. tracked the mental health and the impact of traumatic situations among students of the State University "Zhytomyr Polytechnic" during the first year of Russia's full-scale invasion of Ukraine. The researchers noted that six months after the invasion began, the overall psycho-emotional state had worsened for 40.7% of respondents, remained unchanged for 36.4%, and improved for 22.9%. One year after the invasion started, the trend had shifted: 58.1% of respondents reported an improved overall state, 27.1% remained unchanged, and 14.8% experienced a deterioration. These results indicate a high capacity among students to cope with stress and psychological pressure and to combat distress. The authors interpret this trend as indicative of post-traumatic growth [23].

Chuiko G. V. and Koltunovich T. A. investigated mental health by analyzing indicators of psychological well-being, reactive anxiety, and trait anxiety among first-year psychology students ( $n = 45$ ) at Yuriy Fedkovych Chernivtsi National University. They found that, on average, all components of psychological well-being and its overall indicator were at a moderate level in the sample; the same applied to the indicator of reactive/situational anxiety. However, the average level of trait anxiety in the sample was high, suggesting a likelihood of experiencing prolonged stress/distress among the respondents [4].

Yeremenko N. P., Kovaliova N. V., and Uzhvenko V. A. conducted a survey on mental health among first-year students of the National University of Physical Education (Kyiv). The results led to the conclusion that student youth require mental health support and assistance from relatives, friends, and the government [43].

It is important to note that each higher education institution conducts annual surveys of its students to identify existing issues, such as the quality of teaching, adequacy of material and technical support, and availability of social, psychological, and other types of support. Since the onset of the full-scale invasion, some educational institutions have introduced special surveys, such as "Students in Wartime" (National University "Lviv Polytechnic") and similar initiatives [27].

The reviewed literature highlights a connection between war, stress states, and anxiety disorders among the civilian population. However, there is no comprehensive understanding of the mental health and well-being of communities that experience daily enemy attacks while continuing to work, study, rebuild, and achieve their goals. The aforementioned research results on war stress and the impact of wartime conditions on the mental health of the civilian population in general, and students in particular, indicate the need for further studies. These studies have shown that the war has indeed harmed the mental health of Ukrainians, though not as severely as might be expected given the scale, brutality, and ferocity of the Russian aggressor's military actions. It is important to note that previous wars worldwide suggest that the situation regarding mental health may worsen over time, and thus it needs to be continuously monitored. This will provide insight not only into the current state but also into the prospects for Ukraine's post-war development and the development of its regions, which will be based on this state.

Overall, a review of the specialized scientific literature dedicated to empirical studies of students' mental health in wartime conditions reveals the following:

- limited scope of research (small sample sizes);
- focus on specific educational institutions (samples consisting of students from a single university);
- variability, ambiguity, and sometimes contradictory conclusions, which prevent the formation of a more or less coherent picture of students' mental state;
- lack of empirical data characterizing the mental health of students living and studying in areas close to active combat zones or under occupation (stressfulness of conditions and intensity of stress experience are significantly higher in these cases compared to students living in central and western regions of Ukraine).

These findings prompted authors to conduct own study on the mental health of students studying at universities in Kharkiv and residing in Kharkiv city or other settlements in the Kharkiv region. The results of this research are presented below.

But before presenting the data from authors' empirical research, it is necessary to define key concepts and terms.

The concept of mental health is relatively new but one of the most significant and relevant in contemporary psychology. The phenomenon of mental health has been explored by scholars such as A. Maslow, C. Rogers, V. Frankl, V. Ananyev, B. Bratus, F. Vasilyuk, I. Dubrovina, V. Pakhaliyan, O. Shuvallov, and others. According to the World Health Organization's definition, mental health is understood as a state of well-being in which an individual realizes their own abilities, can cope with the usual stresses of life, and can work productively and fruitfully to contribute to their community. The World Health Organization's protocols define the role of mental health in individual and social functioning. It is noted that mental health is a fundamental basis for both collective and individual capacities to think, experience emotions, interact with others, and enjoy life emotionally. Consequently, mental health is considered a foundation for adequate and healthy functioning in both personal and social environments [32].

For analyzing the phenomenon of mental health, its structural characteristics and criteria are crucial. When defining the structure of mental health, a hierarchical model of personality is often used, with its components determining the components of mental health. Health at the biological level involves a dynamic balance of the functions of all internal organs and their adequate response to external environmental influences. It makes sense to understand psycho-emotional health as "specific" in relation to the "general," which is psychological health. If psycho-emotional health is understood as a subjective construct, then the orientation of emotions towards satisfying certain personal needs becomes more significant. Health is linked to the personal context in which an individual is viewed as a psychological whole at the psychological level.

On one hand, mental health is influenced (both positively and negatively) by the social environment. On the other hand, the mental health of individuals affects society as a whole. It is important to emphasize that only those with strong mental health feel like active participants in society. In its definition of mental health, the World Health Organization identifies seven components: 1) awareness of the stability and identity of one's physical and psychological "self"; 2) consistency and uniformity of experiences in similar situations; 3) critical self-reflection and assessment of one's activities; 4) adequacy of mental reactions to environmental influences; 5) ability to manage behavior according to established norms; 6) planning and carrying out one's life activities; 7) ability to adapt behavior according to changing life circumstances [32].

Various criteria are used to assess an individual's level of mental health. According to most authors, the most informative criteria are: the alignment of subjective images with real objects of reality and the nature of reactions to external stimuli; age-

appropriate and maturity level-specific aspects, particularly in the emotional-volitional and cognitive domains; adaptability in micro-social relationships, the ability to consciously plan life goals, and maintain activity in achieving them.

Thus, mental health is well-being in the psychological, emotional, social, and somatic spheres, which enables effective functioning in the environment, the development of personal goals, and their achievement [30]. It is also important to consider that mental health and mental disorder are not opposing concepts. The absence of a recognized mental illness does not necessarily equate to mental health.

War is the most pronounced negative factor affecting an individual's psyche, as it involves a direct threat to human life and various forms of violence that are antagonistic to the aforementioned well-being. The persistent stress, which is a daily reality in the modern context, pushes a person beyond their window of tolerance. As a result of this displacement, the homeostasis of the nervous system is disrupted, leading to uncontrollable behavioral responses. These responses occur at the level of the reptilian and limbic systems, both of which are instinctive and not subject to conscious regulation. Therefore, stress reactions at these levels are uncontrolled and manifest on physiological, cognitive (narrative), linguistic, and behavioral levels, with specific manifestations and negative consequences for the individual and their surroundings during an emergency situation. In cases of excessive stress, the psychological defense mechanisms may fail, leading to an acute stress reaction. According to research diagnostics, an acute stress reaction is a temporary disorder that develops in response to unusual physical or psychological stress without other manifestations of mental disorders and usually subsides within a few hours or days [39]. The duration and intensity of this reaction depend on the severity of the circumstances and the individual's ability to cope with stress, based on past skills and experience. With prior experience, the recovery period may be shorter; otherwise, there is a potential tendency to develop distress, which can result in post-traumatic stress disorder, generalized anxiety disorder, chronic fatigue syndrome, and depression. Overall, prolonged distress leads to biochemical and physiological changes in the central nervous system, particularly the brain [39].

When presenting data on the mental health status of students in Kharkiv amidst the full-scale invasion of Russia into Ukraine, it is important to note that authors conducted a secondary analysis of the data. In other words, the analyzed empirical data were originally collected for a different purpose, intended for another study. Specifically, this study was focused on examining the mental health and subjective well-being of the civilian population of Kharkiv and the Kharkiv region (data collection: November 2023; n = 730; random, non-representative sample). The research was conducted by the research group of the Department of Sociology and Psychology at the Kharkiv National University of Internal Affairs. Some authors of this article were members of the research group. The results of this study are fully presented in a collective monograph [44]. The study was conducted using an online survey. The collected data were then coded, imported into SPSS, and subjected to mathematical and statistical analysis. The sample consisted of adult civilians from Kharkiv and the Kharkiv region who were residing in these areas at the time of the survey. A significant portion of the sample (130 respondents) were students attending universities in Kharkiv. During the data analysis, it was observed that the responses of students significantly differed from those of representatives of other groups (particularly age and professional groups). This prompted a secondary analysis of the data, focusing specifically on students and their mental health.

Therefore, using SPSS functions, it was filtered the data to include only students (n1 = 130), and all subsequent mathematical and statistical processing and analysis were conducted with this (student) sub-sample. Initially, it is necessary to outline some important specific characteristics of this sub-sample.

Among the surveyed students, there were nearly twice as many male respondents: 68.5% male and 31.5% female. Considering that men are generally less anxious, research by the Penn State University College of Medicine, using magnetic resonance imaging (MRI) of the brains of 96 volunteers, demonstrated significant differences in the nervous system's response to psychological stress between men and women. The study revealed that different parts of the brain are activated in men and women under stress, explaining why statistics show that women have a higher prevalence of mental disorders, depression, and heightened anxiety compared to men [35]. Thus, authors hypothesized that the gender factor might influence the overall results of our analysis, potentially skewing them towards more normalized indicators of mental health. To confirm or refute this hypothesis, authors conducted a correlational analysis. The results indicated that gender has almost no impact on the mental health indicators of students. For example, gender did not affect any indicators of subjective (psychological) well-being. Regarding indicators of neuropsychic tension, a weak statistically significant correlation was found only for four of the 30 characteristics predicted by the respective questionnaire: the presence of physical discomfort ( $T = 0.21$ ;  $Tcs = 0.25$ ;  $r = 0.16$ ); frequency of tension ( $T = 0.22$ ;  $Tcs = 0.26$ ;  $r = 0.23$ ); overall degree of tension ( $T = 0.21$ ;  $Tcs = 0.25$ ;  $r = 0.25$ ). Analysis of the two-dimensional distribution tables shows that among female students, a significantly higher proportion experiences mental discomfort at a moderate level (24.4% versus 6.7% among male students). Additionally, female students are twice as likely to experience tension when there are objective reasons and circumstances causing it (48.9% versus 24.7% among male students). In contrast, male students significantly outnumber those who rarely experience tension (70.8% versus 43.9% among female students). Furthermore, among female students, there is a noticeable number who report that when tension occurs, it is often moderate (31.7% versus 13.5% among male students). Conversely, among male students, those who report a complete absence of tension are more prevalent (85.4% versus 63.4% among female students).

According to the post-traumatic stress questionnaire, which included 110 items, statistically significant weak correlations were found in only 8 cases: loss of interest in many usual activities ( $T = 0.21$ ;  $Tcs = 0.30$ ) and, at the same time, deriving pleasure from minor things ( $T = 0.19$ ;  $Tcs = 0.28$ ;  $r = -0.18$ ); emotional self-control ( $T = 0.20$ ;  $Tcs = 0.28$ ;  $r = -0.24$ ) and emotional balance ( $T = 0.21$ ;  $Tcs = 0.28$ ); effort required to work ( $T = 0.21$ ;  $Tcs = 0.31$ ); unpleasant (difficult) memories of recent events ( $T = 0.24$ ;  $Tcs = 0.35$ ); tendency to take medication even when not acutely necessary ( $T = 0.22$ ;  $Tcs = 0.31$ ;  $r = -0.28$ ); and gratitude towards fate ( $T = 0.23$ ;  $Tcs = 0.32$ ).

Analysis of the two-dimensional distribution tables indicates that among female students, there is a slightly higher proportion who report losing interest in many usual things, and at the same time, a noticeably higher number who tend to derive pleasure from small things. For instance, nearly 66% of female students report being strongly or very strongly inclined towards this, whereas among male students, this figure is significantly lower at 37.1%.

It is expected that female students are more emotional compared to their male counterparts and feel they need to better control their emotions. More than a quarter of male students (25.8%) believe they have no problems with emotional control, whereas only 9.8% of female students feel the same. Logically, male students are more likely to consider themselves emotionally balanced, with only 3.4% perceiving themselves as imbalanced, compared to 11.6% among female students.

Interestingly, male students are forced to exert more effort to work, while female students more frequently recall unpleasant and difficult events. Female students are also noticeably more likely to take medication without a clear reason (36.6% versus 13.5% among male students).

Female students are more "grateful" for their own fate (70.75% compared to 47.2% among male students).

A moderate statistically significant correlation is observed between gender and memory problems ( $T = 0.32$ ;  $Tcs = 0.46$ ;  $r = -0.24$ ). Female students report greater issues in this area. Among them, 48.8% often or very often forget things, whereas only 17.7% of male students experience the same. Additionally, nearly three times as many male students do not consider forgetting things to be characteristic of them (20.2% versus 7.3% among female students). This finding is supported by another indicator that also suggests memory issues. A statistically significant correlation was found between the student's gender and forgetting what they intended to say ( $T = 0.22$ ;  $Tcs = 0.31$ ;  $r = -0.26$ ). Female students notably experience this issue more frequently (51.2% compared to 22.5% among male students).

Thus, while gender has a weak effect, it does influence some aspects of mental health. Female students are somewhat more emotional, more stressed, and anxious, and they have more pronounced memory problems. However, it is important to note that these differences do not significantly impact the overall results. Therefore, the conclusions drawn at the end of the analysis should be considered as equally relevant to all student respondents and not skewed due to any gender imbalance in the sample.

Authors find it necessary to emphasize that the correlation analysis for the group of respondents who are not students revealed a large number of statistically significant relationships (including notable and moderate) between gender and indicators of subjective well-being, neuropsychological stress, and post-traumatic stress. A detailed examination of these gender differences is covered in another scientific publication [44]. Comparing this data with the aforementioned data related to students, a significant difference is observed: the gender of students has almost no effect on mental health indicators, whereas the gender of non-student respondents noticeably affects their mental health indicators. This discrepancy is likely related to the age characteristics of the two mentioned samples. The student group consists of respondents whose age does not exceed 28 years, with a significant majority being in the traditional (for Ukraine) student age range of 18-22 years. In contrast, the non-student respondents are predominantly in the mature age range of 36-45 years. Authors do not attempt to analyze and explain this difference within the scope of this article, as it merits a separate scientific inquiry and publication.

The vast majority of surveyed students lived in Kharkiv at the time of the survey (73.85%), while a significant portion resided in the Kharkiv region (26.15%).

Students predominantly assess their level of material well-being as one where money is spent only on the essentials (39.2%) or where money is generally sufficient (33.1%). Approximately 7% are on the brink of poverty, meaning they lack enough money even for the essentials.

Regarding marital status, the vast majority of students who participated in the study are unmarried and have never been married (92.3%), and do not have and have never had children (95.4%).

Respondents were asked about the losses they experienced during the full-scale invasion. Among students, the most common losses were the loss of peace (26.9%) and friends (24.6%). The research instrument did not specify how these losses occurred. However, concerning friends, we can assume that it does not necessarily mean loss due to death or casualty; it is quite likely that it refers to losing friends due to relocation to another country or city within Ukraine. Inability to communicate directly and without obstruction might be perceived by respondents as a break in friendships and a loss of friends. In 13.1% of cases, students reported losing relatives, and there are also relatively high percentages indicating that students lost their homes or property (10.7% each).

When comparing the data from the student subset with the results from the entire dataset, similar trends are evident, with one notable difference: among non-student respondents, losses

related to physical health are significantly more pronounced. Only 9.2% of students reported losing physical health due to the war, whereas among non-student respondents, this figure is substantially higher at 24.25%. This difference can be explained by the younger age of students. As noted earlier, the age of the majority of students ranges from 18 to 22 years. At this age, health reserves and resources are significantly greater compared to those of middle-aged or elderly individuals. Therefore, students, being relatively young, may not perceive the impact of war stress on their physical health. It is possible that due to their younger age and corresponding lesser experience with illness, they are less sensitive to their own physiology and body.

Before moving on to the indicators of mental health, it is important to note that the research instrument included a total of 175 indicators (questions), of which 164 pertained to three psychodiagnostic methodologies (described in the second section of this article), while the rest concerned various general socio-demographic characteristics of the sample (age, gender, level of material well-being, etc.) and traumatic experiences of respondents (losses due to war, experiences in occupation, etc.). Consequently, the dataset is vast, and it is impossible to present it in full within a single article. Therefore, in presenting the results here, authors focus on key, most indicative indicators of mental health among the student community, including those that highlight the specific characteristics of this group compared to other civilian populations.

First, let's present the data regarding the subjective well-being of students. The vast majority are moderately or highly satisfied with their physical health (45.4% and 36.15%, respectively). A comparative analysis was conducted to strengthen these results. Using SPSS operations, authors created another dataset (n2 = 130) that randomly included respondents who are not students. Among the total dataset (n = 730), there were 600 such individuals. However, to enable a comparative analysis, authors also randomly selected 130 respondents from the 600, thus equating the sizes of both subsets (n1 – "Students" and n2 – "Non-Students"), which facilitated the comparative analysis.

Comparing the data from n1 – "Students" with the data from n2 – "Non-Students," it is evident that "Non-Students" rate their physical health worse. Among them, there are noticeably more individuals who are either dissatisfied with their health overall or only slightly satisfied (6.1% among students versus 19.3% among "Non-Students").

Approximately half of the students are moderately or highly satisfied with the quality of their sleep. These results significantly differ from those obtained for the subset of respondents who are not students. The comparison of results for both subsets is visualized in Figure 1.

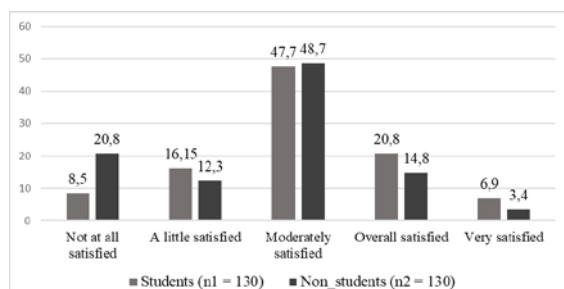


Figure 1. Degree of Satisfaction with Sleep Quality Among Members of the Student Community and Respondents Who Are Not Students (Percentage for Each Group)

Despite the dire conditions of the war, the vast majority of students experience a moderate or strong ability to enjoy life (42.3% and 33.85%, respectively). These figures also exceed the results obtained from the other sub-group—non-students (Figure 2).

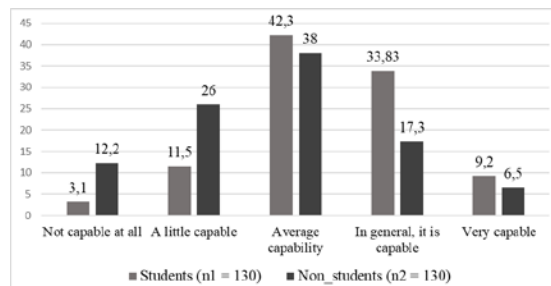


Figure 2. Ability to Enjoy Life Among Students and Non-Students (in % for Each Group)

It should also be noted that students are significantly more optimistic about the future compared to non-student respondents (see Figure 3).

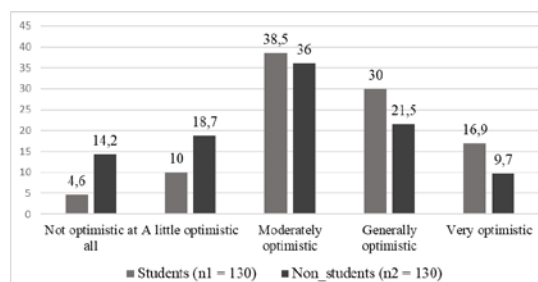


Figure 3. Degree of optimism about the future among students and non-student respondents (in % for each group)

Since the article length requirements do not allow to present the data in full, it notes that according to the methodology measuring subjective well-being, students generally report high levels of well-being (indicating greater well-being) and exceed similar measures from the non-student respondents' sub-sample in almost every scale. For instance, the majority of student respondents believe they can control their lives, rating this ability at an average level or higher (80%). Specifically, 34.6% rate this ability as high, and 12.3% as very high. About 55% of students are very or extremely satisfied with themselves as individuals, with no respondents expressing dissatisfaction. Additionally, 88% of students are at least moderately satisfied with their appearance. Just over 80% believe they can live their lives as they wish, and approximately 94% feel they have the opportunity to grow and develop (with 44.6% and 19.23% feeling this strongly and very strongly, respectively).

Although authors did not calculate the level of each respondent's subjective (psychological) well-being, the generalized analysis of the data from the student sub-sample, compared with the non-student sub-sample, indicates that the overall level of subjective well-being among students from Kharkiv can be characterized as aiming towards high levels.

Now, let's examine some of the most significant data obtained from the questionnaire on neuro-psychic stress. These results align with those presented earlier. For example, more than a third of students (35.4%) report not experiencing any physical discomfort, which is twice as many as among non-student respondents. The vast majority of students (56.9%) experience only slight physical discomfort. Among students, only 7.7% experience a significant amount of physical discomfort (Figure 4).

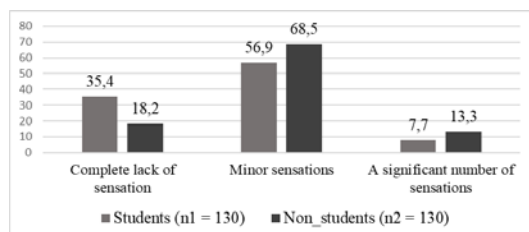


Figure 4. Perception of Physical Discomfort Among Student Respondents and Non-Student Respondents (in % for each group)

It should be noted that the trend observed regarding the perception of physical discomfort, its presence or absence, is characteristic of all scales in the corresponding questionnaire that indicate somatic manifestations of nervous-psychic tension.

The vast majority of students assess the following as entirely normal: temperature sensations (78.5%), muscle tone (73.1%), movement coordination (88.5%), motor activity (85.4%), sensations related to the cardiovascular system (83.85%), gastrointestinal manifestations (74.6%), respiratory symptoms (85.4%), urinary system manifestations (88.5%), and sweating (86.2%), among others. It is evident that all indicators fall within the range corresponding to a normal state of nervous-psychic tension. In comparison with data from the cluster of respondents who are not students, a clear difference emerges: responses from this group are clustered at an average level of nervous-psychic tension, with some indicators suggesting a high level of nervous-psychic tension.

A similar trend is observed regarding sensitivity to external stimuli. For example, 88.5% of students report normal reactions to external stimuli and do not perceive them as overly sensitive. In contrast, among non-student respondents, there are 1.5 times fewer individuals who report normal sensitivity, and three times more who report moderate sensitivity (see Figure 5).

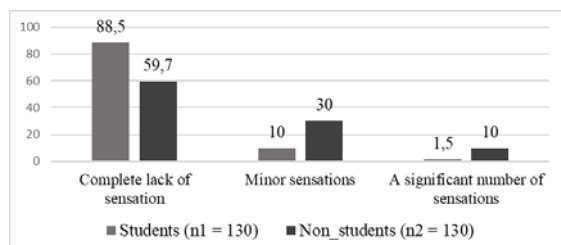


Figure 5. Sensitivity to External Stimuli Among Members of the Student Community and Non-Students (in % for each group)

On an emotional level, students demonstrate relative stability, with the overwhelming majority not experiencing either anxiety or fear (76.15%). Only about 7% of students report feeling fear. These figures differ significantly from those in the second subsample, which includes non-student respondents. Among them, there are three times as many who experience fear and twice as many who feel anxiety (Figure 6).

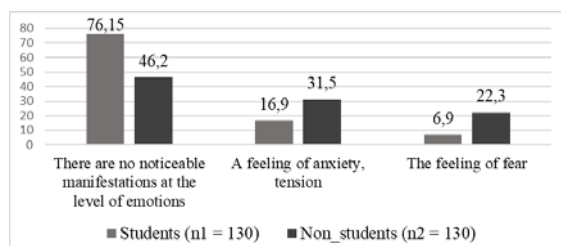


Figure 6. Emotional Responses Among Students and Non-Students (as % within each group)

At the level of cognitive processes, the group of student respondents also shows more positive than negative trends. For instance, the vast majority (80.8%) report that their memory has not changed and they assess it as normal. Memory improvement is noted by 8.5% of respondents, while 10.8% report a decline. It is important to highlight that among non-student respondents, those observing a decline in memory are almost four times more numerous—42% (Figure 7).

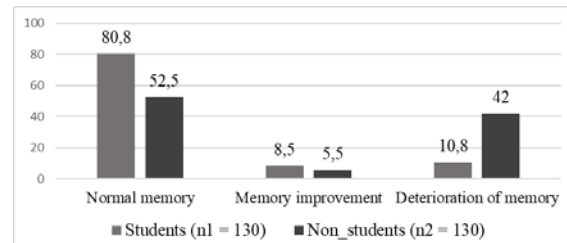


Figure 7. Memory Characteristics Among Student Respondents and Non-Student Respondents (in % for each group)

A similar trend is observed regarding the attentiveness of student respondents: 80% report that their attentiveness has not changed, 8% feel that they have become more attentive, and 11.5% feel that they have become less attentive. Among non-student respondents, approximately 20% fewer believe their attentiveness has remained the same, and nearly three times more believe their attentiveness has worsened. Regarding alertness, 82.3% of students believe their alertness has not changed, with only 4.6% reporting a decline in alertness. Among non-student respondents, nearly four times more—18%—report a decline. A similar situation is observed with cognitive performance: 85.4% of students assess it as normal, 10.8% report improved cognitive performance, and 3.85% report a decline. Among non-student respondents, those who notice a decline in cognitive performance are five times more—19.3%.

The overall assessment of their mental state by students is relatively high: 76.15% rate their state as normal, 10.8% report increased focus, and 13.1% feel fatigued. Interestingly, among non-student respondents, those who feel fatigued are three times more—39.8%. Compared to non-students, students exhibit a significantly lower prevalence of stress indicators (Figure 8).

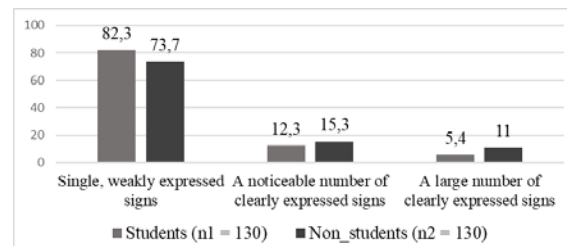


Figure 8. Prevalence (Generality) of Stress Among Student Representatives and Non-Students (in % for each group)

Students exhibit significant differences in the frequency of experiencing stress. Specifically, 62.3% of students report that the frequency of stress is minimal. About one-third of students (32.3%) note that stress only occurs when there is an objective reason (e.g., bombing in the area where the student lives, informational threats regarding enemy advances, etc.). Only 5.4% of students indicate that stress occurs frequently and can arise without an apparent cause. Among non-student respondents, there are twice as few who report minimal frequency of stress, and at the same time, twice as many who experience stress when there are objective reasons, as well as those who experience stress without any apparent cause.

The data on the duration of stress also shows significant differences. The vast majority of students report that their stress dissipates very quickly (81.5%), 14.6% note that stress lasts as long as the situation that caused it and then disappears



immediately, while only 3.85% state that stress lasts for a very long time and does not depend on the current situation. Among non-student respondents, there are more than 2.5 times as many who link the duration of stress to the length of the situation that caused it, and twice as many who experience stress that does not depend on any particular situation.

The overall level of stress among students is generally close to normal (78.5%). 19.2% rate their stress as moderately pronounced, while only 2.3% consider it to be strongly pronounced. This distribution differs significantly from that observed in the group of non-student respondents. In this group, the majority of respondents (51.8%) report moderate stress levels, 42.7% describe their stress as normal with no pronounced symptoms, and 5.5% report strongly pronounced stress.

Thus, it can be concluded that the generalized indicators of neuropsychological stress among Kharkiv students tend to be at the first (normal) stage.

Turning to the results obtained using the methodology for detecting post-traumatic stress disorder (PTSD) symptoms, it should be noted that this methodology is the most comprehensive and includes more than 100 scales. Due to the constraints of a single article, the results can only be presented in a very condensed and generalized form, focusing on the most prominent indicators of PTSD.

For example, about 57% of students feel either completely normal or relatively normal and do not startle at sudden noises. Among non-students, this figure is significantly lower, at 29.5% (see Figure 9).

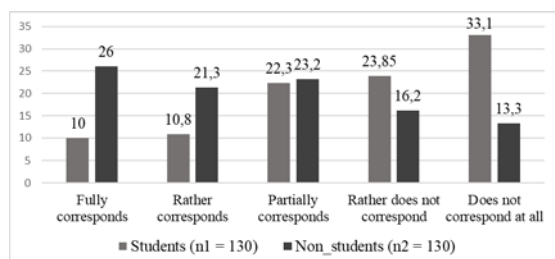


Figure 9. Responses of student community members and non-student respondents to the question "To what extent do you experience startle reactions to sudden noise?" (in % for each group)

Student irritability can be described as generally moderate but tending towards lower levels. Specifically, 30% of students consider themselves "somewhat irritable," while more than 55% do not perceive themselves as irritable. In this regard, students and non-students are quite similar.

Students are not prone to uncontrolled outbursts of anger. Most (42.3%) report that they are not at all prone to uncontrolled outbursts of anger without any apparent reason. About 27% report a very low tendency towards this. A somewhat different trend is observed among non-student respondents. These differences are detailed in Figure 10.

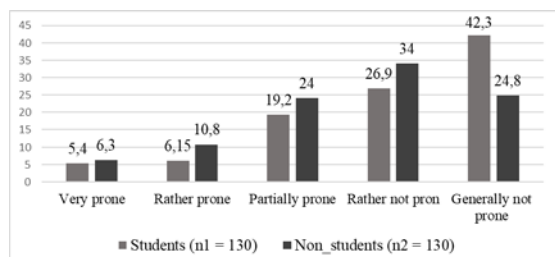


Figure 10. Responses of students and non-student respondents to the question "To what extent are you prone to displaying uncontrolled anger without any reason?" (as a % for each group)

Students show a strong desire to help others. Specifically, 61.6% of students rate this desire as very strong or strong, while 33.85% consider it moderately strong. Only 4.6% of students report feeling this desire to a minimal extent or not at all. A similar trend is observed among non-student respondents.

It is important to note students' perceptions of dangerous situations. All surveyed students reside in Kharkiv or the Kharkiv region, areas that are subjected to hostile bombings almost daily, resulting in severe negative consequences such as civilian casualties, destruction of critical infrastructure, and damage to residential buildings. Despite this, more than half of the surveyed students (52.3%) believe they have not recently encountered a very dangerous situation, while only 10% acknowledge having done so. Interestingly, responses from non-student respondents differ noticeably, with these individuals being more likely to perceive situations as life-threatening (Figure 11).

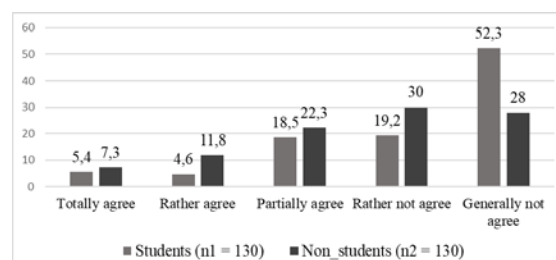


Figure 11. Responses of student and non-student respondents to the question "To what extent do you agree that you recently had to face a very dangerous situation?" (in % for each group)

It is important to emphasize that a relatively large proportion of students (23.85%) experience loneliness at a high or very high level. Additionally, 23.1% of students feel some degree of loneliness. This means that nearly half of the surveyed students experience loneliness at a moderate level or higher. A similar trend is observed among non-student respondents, but it is more pronounced among students. This is likely related to the fact that students are studying exclusively online. Many have lost friends and companions who have moved to other cities in Ukraine or abroad. Entertainment venues, shopping centers, and other places where students could socialize and enjoy themselves are closed for most of the day in Kharkiv and the surrounding area due to the threat of bombings. All these factors contribute to feelings of sadness and loneliness. However, based on the results obtained from the subjective well-being and neuropsychological stress methodologies, it can be concluded that the existing feelings of loneliness do not, at least for now, lead to depression or other negative states.

Interestingly, the overwhelming majority of students feel they are undergoing a transformation and believe they are "becoming a new person." About 30% of students experience this transformation very strongly or strongly, while 40% feel it to a moderate extent. A similar trend is observed in the non-student group, with the main difference being that there are 10% fewer individuals who partially experience this transformation and approximately 7% more who feel little to no transformation.

Despite all the hardships of war, students have not lost hope and believe in a bright future. Approximately 60% strongly or very strongly believe in a happy future, while 34.6% partially believe in it. Only one student (0.8%) does not believe at all. A similar distribution is observed among non-student respondents, although there is a slightly higher proportion who do not believe in a happy future at all (5.9%) or believe very weakly (9.3%).

Furthermore, it can be noted that, in general, students have largely retained their ability to enjoy life, believe in the triumph of justice, are confident they have good friends, consider themselves to be balanced individuals who prefer to resolve conflicts peacefully, and feel secure. For all these aspects, students' responses largely align with those of non-students.

However, it should be noted that among students, there are twice as many who feel confident at the highest level, whereas among non-student respondents, those who feel confidence as "somewhat" predominant.

#### 4 Conclusion

Based on the conducted research, the following key conclusions can be drawn:

- gender influence: although weak, the gender of students does impact some indicators of their mental health. Female students tend to be somewhat more emotional, more stressed and anxious, and exhibit more pronounced memory issues.
- subjective well-being: the subjective (psychological) well-being indicators of students are sufficiently high, despite the ongoing stress factors related to the proximity of combat operations and constant bombings by the Russian aggressor.
- nervous-psyche tension: the overall indicators of nervous-psyche tension among students generally lean towards the first (normal) level. When comparing these results with data from a cluster of non-student respondents, a clear difference is observed: responses from this group tend to be at the medium level of nervous-psyche tension, with some indicators showing a high degree of tension.
- post-traumatic stress: It is not possible to provide a generalized picture of post-traumatic stress due to the nature of the methodology and the complexity of the mechanism and principles for calculating results. However, based on specific indicators, it can be hypothesized that severe consequences and manifestations of post-traumatic stress are not characteristic of students.
- hope and resilience: Despite the hardships of war, students do not lose hope and believe in a happy future, which is an important indicator and resource of psychological resilience.
- loneliness: nearly half of the surveyed students experience loneliness at medium and above-average levels. A similar trend is observed among non-student respondents, but it is more pronounced among students. This is likely primarily due to the specifics of remote learning (with universities in Kharkiv conducting classes exclusively online) and the fact that entertainment venues, shopping centers, etc., where students could socialize, are closed for most of the day due to the threat of bombing.

Thus, the results of this study indicate that the most pronounced issue for students in wartime conditions is loneliness. Although, based on the results obtained using the subjective well-being and nervous-psyche tension methodology, it can be concluded that the current feeling of loneliness has not yet led to serious mental health issues, the prolonged nature of the war, extended complex security situation, and continued remote learning may contribute to deepening the feeling of loneliness and result in the spread of depressive and other negative states among the student population.

Given the problem of loneliness, it is necessary to highlight some potential solutions:

- hybrid learning: implement a mixed learning format, allowing students to choose between attending university in person and participating in classes remotely.
- reducing isolation: eliminate isolation by creating conditions to establish, maintain, and activate social connections (e.g., setting up safe communication spaces, introducing new programs to engage youth in community initiatives, etc.).
- promoting psychological support services: increase awareness of psychological support services, including those provided by mental health support services operating in universities. Encourage students to use these services, potentially by conducting mandatory sessions for all

students to identify those who are particularly vulnerable and provide them with regular psychological support.

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**Primary Paper Section: A****Secondary Paper Section: AN, AO, AQ**