The effect on the general public’s mental health is among the gravest effects of war. Prolonged stress has detrimental effects, one of which is a rise in anxiety. Students are one of the social groups that are most at risk in this regard.

96% of Ukrainian university students, who were subjects to a Spielberger State-Trait Anxiety Inventory during the war, exhibited high trait anxiety, which led us to the conclusion that it was crucial to address the detrimental impacts of high anxiety in academic contexts.

The analyses of the effects of anxiety and the most efficient strategies for overcoming it allowed identifying the areas of activity for addressing...
the detrimental effects of high levels of student anxiety in university settings in war conditions:
creation of recommendations by psychologists, with the help of which students can independently diagnose the level of anxiety, monitor situations or triggers that provoke an increase in anxiety, understand the typical ways they react and behave when they become anxious, and choose suitable ways to combat anxiety;
patriotic education with an emphasis on each student’s understanding their role in society, the formation of an active life position, and engagement in volunteering;
team work on collaborative tasks or projects will be beneficial for students who seek solace from anxious thoughts through cognitive techniques and real-world problem solving, as well as those who have a strong need for affiliation and mutual support;
engagement in physical activity proved to be protective for anxiety symptoms and disorders and physical inactivity has been found to pose a risk for the emergence of anxiety as well as for other conditions like depression. Sporting events, the active work of sports departments and clubs, quick hikes or trips to learn about local history, civil safety events organized by higher educational institutions can be very helpful;
implementation of healthy lifestyle principles, the acquisition of time management skills will help students to organize their daily routine. Free time management deserves special attention;
the development of interpersonal communication skills will help students with high anxiety in overcoming a variety of communication barriers (cultural, gender, physical, emotional, perceptual, and interpersonal).

Keywords: university students; institutions of higher education; war; anxiety; Spielberger State-Trait Anxiety Inventory; overcoming anxiety.

1. INTRODUCTION

Problem statement. The war brought death and destruction to all corners of Ukraine. Since its beginning in 2014 people have lost and continue to lose their relatives, loved ones; homes, enterprises, infrastructure facilities are being destroyed; the welfare of the nation and its people is steadily declining. However, after Russia launched a full-scale invasion of Ukraine
in 2022, the effects of the conflict grew more widespread, striking, and evident.

The effect of war on civilians' mental health is one of the most important aftereffects, according to the researchers. The most vulnerable groups are children, the elderly, the disabled and women. Research on the general public demonstrates a discernible rise in the frequency and prevalence of mental illnesses. The degree of trauma and the access to physical and emotional support determine their prevalence rates [1].

Studies have shown that conflict situations result in more mortality and disability than any major disease, destroys communities and families, and frequently thwarts the growth of a country's social and economic fabric. War has a catastrophic impact on the health and well-being of nations. War has many unrecorded effects, such as long-term physical and psychological harm to children and adults, reduction in material and human capital, and so on; death is only the "tip of the iceberg" in terms of the effects of war. The development of coherent and effective strategies to address such issues requires a deeper comprehension of conflicts and the diverse range of mental health issues they can give rise to [1, p. 27].

Feelings of fear, panic, helplessness, uncertainty, and oppression are inevitable during war. They lead to constant stress, which significantly affects physical and mental state of people. Long-term stress does not allow the body to return to its normal state and therefore leads to different physical and mental disorders.

And, if the short-term load that occurs as a result of acute stress is mostly overcome by the body of a healthy person, chronic stress often leaves noticeable negative consequences, among which a significant increase in anxiety can be noted.

One of the vulnerable social groups in this regard is university students. After entering the university, young people find themselves in new conditions, involved in constant testing of their abilities, such as establishing relations with a new social environment, passing exams, speaking at conferences, participating in sports competitions, solving financial and household problems, falling in love, worrying about the future employment. All this requires adult approaches to life and increases anxi-
ety. This especially applies to first-year students: finding themselves in an unfamiliar environment, separated from parents and friends, deprived of the usual environment and rhythm of life, forced to make decisions and manage time independently, they often experience difficulties that cause anxiety.

This problem becomes even more urgent in wartime, when teaching and learning have to be done in extreme, unpredictable, and often extremely dangerous conditions. Of course, everyone can seek help in overcoming anxiety from psychologists who are now working quite actively. However, not all students are aware that they have a high level of anxiety, and even if they do, they are in no hurry to get professional help for certain objective or subjective reasons. That’s why the problem of dealing with harmful influence of high levels of students’ anxiety in university environment is of particular interest nowadays.

**Analysis of recent research and publications.** The aim of the study is to investigate anxiety in university students in the conditions of war. The specific objectives of the present study are to analyze the signs and effects of anxiety and determine the university students’ anxiety levels in war conditions to justify the necessity of dealing with harmful influence of high anxiety levels in university settings; to outline the appropriate areas of activity for dealing with harmful influence of high levels of students’ anxiety in university settings.

The phenomenon of anxiety is penetrating the life of modern humanity, which causes researchers to be significantly interested in it. The American Psychological Association defines anxiety as “an emotion characterized by apprehension and somatic symptoms of tension in which an individual anticipates impending danger, catastrophe, or misfortune. The body often mobilizes itself to meet the perceived threat: muscles become tense, breathing is faster, and the heart beats more rapidly. Anxiety may be distinguished from fear both conceptually and physiologically, although the two terms are often used interchangeably. Anxiety is considered a future-oriented, long-acting response broadly focused on a diffuse threat, whereas fear is an appropriate, present-oriented, and short-lived response to a clearly identifiable and specific threat” [2].
Anxiety is also characterized as the future-oriented mood state of a person that arises in the conditions of probable unexpected situations that “consists of a complex cognitive, affective, physiological, and behavioral response system associated with preparation for the anticipated events or circumstances perceived as threatening” [3].

Robinson et al. [4] regard anxiety as a response to a prolonged, unpredictable threat that encompasses physiological, emotional, and cognitive changes. According to this definition, anxiety differs from fear as responses to acute perceived threats. Fear and anxiety differ at behavioral, neural, and pharmacological levels. Anxiety states acquire adaptive value. In particular, in an unfamiliar and uncertain environment, careful avoidance while maintaining heightened vigilance and readiness to act on signs of imminent danger improves the chances of survival. However, if this behavior is observed constantly, it can become maladaptive.

Experts note that anxiety manifests at different levels. At the physiological level, anxiety reactions manifest in such symptoms as increased heart rate, palpitations; shortness of breath, rapid breathing; chest pain or pressure; choking sensation; dizzy, light-headed; sweaty, hot flashes, chills; nausea, upset stomach, diarrhea; trembling, shaking; tingling or numbness in arms and legs; weakness, unsteadiness, faintness; tense muscles, rigidity; and dry mouth [3].

Cognitive symptoms of anxiety include “fear of losing control; fear of physical injury or death; fear of "going crazy"; fear of negative evaluation by others; frightening thoughts, mental images, or memories; perception of unreality or detachment; poor concentration, confusion, distractible; narrowing of attention, hypervigilance for threat; poor memory; and difficulty speaking” [3].

Intolerance of uncertainty, optimistic views about worry, negative problem orientation, and cognitive avoidance are components of a cognitive model of anxiety [5].

Individuals with elevated anxiety are unable to inhibit threatening distractions as compared to neutral stimuli during a cognitive function; they also fail or take a long time to switch from one cognitive set to another during the performance of a working memory task. Anxiety affects all of the
specific cognitive processes that are responsible for carrying out the multi-component tasks of working memory. Working memory tasks are multi-component sets of tasks, so the ability to switch between them quickly and correctly is essential to performing the task. The functions of monitoring and updating are disrupted by impairments in attention, inhibition, and shifting. Constant updating of subtasks during the performance of any learning and goal-oriented task prevents awareness of errors [6].

However, several studies show that the level of anxiety-induced impairment depends on the quantity of information stored in working memory while completing a task. When the load is low to medium, anxiety significantly impairs working memory capacity because the cognitive processes that are not necessary for carrying out the task are available for processing threat distractors. However, when the workload is high, anxiety has a much smaller impact on working memory capacity because all of the resources are used to process the heavy information load, leaving little to no working memory for the distracting threats [7].

This idea, in our opinion, explains why the data concerning the impact of anxiety on academic performance is controversial. According to some writers, there is a strong link between a particular kind of anxiety known as "study anxiety" and academic achievement; students who experience high levels of anxiety also perform poorly academically [8].

Others claim that anxiety is associated with lower academic performance, however, the relationship ended after accounting for the students’ abilities [9].

There are also results indicating that anxiety affects performance efficiency but not performance effectiveness [7].

At the behavioral level such symptoms of anxiety as “avoidance of threat cues or situations; escape, flight; pursuit of safety, reassurance; restlessness, agitation, pacing; hyperventilation; freezing, motionless; and difficulty speaking” [3] are mentioned. They lead a person to being irritable, unable to sit still and remain calm, getting tired easily, having difficulty concentrating, getting to sleep or staying asleep, unable to properly meet responsibilities at home, work, or school, having difficulty performing normal activities of daily life, usage of drugs or alcohol to get some relief [10].
Anxiety shows up socially as an overwhelming fear of rejection, humiliation, or embarrassment when one is taking part in a public performance or social interaction and exposed to the possibility of receiving a negative evaluation from others [11]. The phenomenon is known as social phobia, which may lead to social withdrawal and isolation.

According to research on the direct relationship between social phobia and its impact on quality of life among Ethiopian university students, students with social phobia scored lower than those without it in all categories of life quality, including relationships with others, the environment, and their physical and psychological well-being. The study revealed a high prevalence of social phobia among university students and its significant detrimental effects on quality of life; these results call for increased efforts to identify and treat social anxiety disorder in higher educational settings in order to lessen the negative effects of this common condition [12].

To substantiate the necessity of dealing with harmful influence of high anxiety levels in Ukrainian university environments in war conditions we determined the university students’ anxiety levels.

Testing was conducted from November, 2022 to March, 2023 in Khmelnytskyi National University (Ukraine) and Yuriy Fedkovych Chernivtsi National University (Ukraine). 50 students (first, second and fifth years of study) agreed to take part in it. The age of the respondents ranged from 18 to 23 years old.

We conducted testing using the Spielberger State-Trait Anxiety Inventory (STAI). According to numerous studies it is widely used in both clinical and non-clinical studies with different categories of subjects: students, adults, military personnel, prisoners [13].

The reliability and validity of State Trait Anxiety Inventory for university students is evidenced by its re-testing among Engineering Students, which showed its suitability and acceptability for this category of subjects. “The STAI was established with the reliability at .850. In addition, the construct validity of the STAI, as measured by factor analysis were found, the correlation between items (KMO) score .824 (> .30) and p = .000. Where, the State shows KMO = .818, p = .000, and Cronbach alpha
found .797. Meanwhile, Trait proved KMO=.783, p=.000, and Cronbach alpha found .781. The results show that the reliability and validity of State Trait Anxiety Inventory was suitable and acceptable. Consistently, strong correlations between State and Trait scale scores provided supportive evidence for the instrument. The results are evident and it can be recommended as an instrument to measure anxiety level for similar studies [8].

State Trait Anxiety Inventory has two scales: State anxiety – the situational anxiety scale and Trait anxiety – the personal anxiety scale. State anxiety scale assesses the current state of anxiety by measuring how respondents feel right now using subjective feelings of fear, tension, nervousness, restlessness, and arousal of the autonomic nervous system. The second, trait anxiety scale, assesses the tendency to worry, a sense/state of calmness, confidence, and security [14].

2. RESEARCH RESULTS

As an emotional response to a stressful situation, state anxiety, also known as situational or reactive anxiety, is characterized by subjectively experienced emotions such as tension, anxiety, preoccupation, and nervousness. Its intensity and dynamics can change over time. Trait anxiety is understood as a persistent individual characteristic that reflects the subject’s tendency to anxiety and implies the presence of a tendency for them to perceive a fairly wide range of situations as threatening, responding to each of them with a certain reaction. If the STAI shows a high level of trait anxiety in the respondent, this gives reason to assume the emergence of a state of anxiety in various common situations.

High state anxiety, in our opinion, is a normal reaction of the body considering that the study was conducted in conditions of war, when students frequently experienced enemy missile attacks, loss or injury of relatives, sudden and long-term blackouts, and other terrible wartime events. Therefore, we focused our attention on trait anxiety, which could reach high levels during the war and lead to different anxiety disorders. As a result of the testing 96 % of students were found to have high levels of anxiety, 4 % have an average level. No students with a low level were found. The obtained results are shown in Figure 1.
Figure 1. Trait Anxiety in University Students during the Full-scale Invasion of Ukraine (2022–2023)

We compared our results with the results of similar studies conducted in the 12 year period before the Russian full-scale invasion of Ukraine. A 2019 study revealed that 60 % of students have high trait anxiety, 38 % – average, and 2 % – low trait anxiety [15]. The results are shown in Figure 2.

Figure 2. Trait Anxiety in University Students in Ukraine (2019)

A 2016 study found that 49 % of students have high trait anxiety, 46 % – average, and 5 % – low trait anxiety [16]. The results are shown in Figure 3.
The results are shown in Figure 4.

As we can conclude from the results of the above-mentioned studies, students are the category, which has an increased level of anxiety even in peacetime. In addition to this it is almost impossible to avoid feelings of fear and uncertainty during war. This provokes a chronic stress state that prevents students from returning to a normal state and causes a significant
increase in anxiety. A share of students with high anxiety predominates – 96% according to our study – which, influences students’ well-being, relationships and study, and in the long run can lead to different disorders and illnesses.

Comparing the results of the above-mentioned studies allowed us to conclude about the urgent need for dealing with harmful influence of high anxiety in Ukrainian university students during the war. Universities must provide active and immediate support to their students. It should cover all students, since the share of those with high anxiety is extremely great. Moreover, many of them are unaware of the problem and its possible negative effects. Consequently, they do not turn to specialists for help.

A 2002 study carried out in Israel, where the populace was continuously targeted by terrorist attacks, attests to the latter. In the telephone survey, most participants reported feeling insecure about themselves (307 out of 509 [60.4%]) and their relatives (345 out of 507 [67.9%]), but very few indicated they needed professional assistance (27 out of 506 [5.3%]). The most popular coping strategies for anxiety were actively searching for the information about their family and social support [18].

The results of this study show that most rely on themselves and their social environment. Therefore, social support of students is an important task of Ukrainian institutions of higher education in wartime.

Investigating the factors that mitigate war-induced anxiety and mental distress [19] justified a focus on social support with emotional support at the core. Cognitive and material supports are considered to be of relative importance and may be expected to vary according to study site and population, if not individual characteristics and resources.

The administration of the university, the instructors, and the students themselves should all take a proactive role in fostering an environment that offers each student emotional support, comfort, and attention during the learning process. The ability of each learner to independently diagnose and reduce anxiety to a manageable level, as well as their awareness that they are a part of a community of people who respect, value, and care for them, are signs that this task has been successfully completed. Purposeful and systematic work of psychologists, university managements, teachers
and, what is extremely important, members of student groups in this direction will allow communication and cooperation at a completely new level, which will help to preserve the health of the student youth and contribute to the unity of the nation and effective work for the benefit of our state.

Psychologists have observed that people cope with anxiety and stress in a variety of ways. Some people find comfort in their faith, beliefs, and values; others prefer to express their feelings out loud; those who have a dominant social channel tend to belong to social groups that support one another; rather often people rely on their imagination; they lose themselves in pleasant memories or dreams, which lessen the negative effects of the horrific realities of war; and still others prefer cognitive techniques, while many benefit from physical activity and crafts [20].

When choosing the most optimal areas of activity for overcoming high anxiety in students, we used the research data of Morgan et al. [21], who, after offering two groups of experts – consumers and clinicians/researchers, to evaluate the effectiveness of 324 strategies for overcoming anxiety, found that the endorsed 66 strategies fit most frequently into the category of cognitive change. Subsequent techniques included additional psychological approaches, interpersonal tactics, physical stress reduction, and lifestyle strategies.

The analysis of the above-mentioned strategies allowed us to identify the main areas of activity of higher education institutions of Ukraine to overcome high anxiety in students:

1. Creation of recommendations by psychologists, with the help of which students can independently diagnose the level of anxiety, monitor situations or triggers that provoke an increase in anxiety, understand the typical ways they react and behave when they become anxious, and choose suitable ways to combat anxiety.

2. Patriotic education with an emphasis on each student’s understanding their role in society, the formation of an active life position, and engagement in volunteering. Activities organized in this direction will contribute to the formation of the students’ confidence in their abilities, the belief that with the efforts of everyone, it is possible to change at least partially, if not completely, the negative course of events.
3. Team work on collaborative tasks or projects will be beneficial for students with a strong need for affiliation and mutual support, as well as for those who try to distract themselves from anxious thoughts through cognitive strategies and practical problem solving. It will balance the level of their demands and abilities; improve their social relationships, expand the circle of people who are ready to help in a crisis situation, which greatly contributes to the formation of their confidence and adequate self-esteem, the necessary prerequisites for overcoming high anxiety.

4. Physical activity and sports, green tourism, breathing gymnastics will help those who seek to use the body’s resources. Engagement in physical activity proved to be protective for anxiety symptoms and disorders and physical inactivity has been identified as a risk factor for the development of anxiety as well as for other conditions like depression [22]. Sports competitions, active work of sports sections and clubs, short hikes or local history excursions, civil safety events organized by higher educational institutions can be very helpful.

5. Implementation of healthy lifestyle principles, the acquisition of time management skills will help students to organize their daily routine. Free time management deserves special attention. Encouraging students to spend their free time in creativity allows students to either realize their negative emotions and fears and get rid of them by expressing them in drawings, short literary works, choreography, music, photography, cooking or feel moments of happiness by creatively reflecting their dreams or pleasant memories of past. These activities also help to shift the focus from external demandingness, categoricalness, high significance in setting tasks, which are characteristic of students with high anxiety, to immersion in a creative process itself.

6. The development of interpersonal communication skills will help students with high anxiety in overcoming a variety of communication barriers (cultural, gender, physical, emotional, perceptual, and interpersonal).

The findings can be applied to the development of specific strategies within the suggested areas of activity in Ukrainian universities as well as globally, since surveys carried out in various parts of the world revealed that war anxiety is on the rise. Collier notes, that “war anxiety, sometimes known as nuclear anxiety, is a surprisingly common reaction to the news and images
about conflict. News about the war in Ukraine, arriving on the heels of a two-year pandemic, seems to be hitting us particularly hard. This may be related to our already high levels of fatigue, worries, and a fragile sense of control. In a poll from the American Psychological Association, 80% of respondents reported significant stress as a result of the Russian invasion of Ukraine” [23]. Assessment of anxiety in Polish students during the Russian-Ukrainian War showed that 52% of survey participants feared an armed attack on Poland by Russia. Among them, one in four were creating stocks of items like food, gasoline, water, power banks, PPE, and medications [24].

3. CONCLUSIONS AND PROSPECTS FOR FURTHER RESEARCH

Investigating anxiety in university students of Ukraine in the conditions of war we came to the following conclusions:

1. Analyses of the signs and effects of anxiety showed that it gains adaptive value in combat situations by maintaining heightened vigilance and readiness to act on signs of impending danger, but if this behavior is consistently displayed, it can become maladaptive. High anxiety students perform worse than low anxiety students in every area of life quality, including social interactions, physical and mental health, and the environment.

2. Assessment of anxiety in Ukrainian university students in war conditions with the help of STAI revealed that 96% of respondents have high state anxiety, which led us to the conclusion that it was important to address the negative effects of high anxiety in academic settings.

3. The analyses of the effects of anxiety and the most efficient strategies for overcoming it allowed identifying the proper areas of activity for addressing the detrimental effects of high levels of student anxiety in university settings in war conditions – creating psychological recommendations for students, patriotic education, team work on collaborative tasks and projects, physical activity and sports, implementation of healthy lifestyle principles, acquisition of time management skills, creative free time activities, and development of interpersonal communication skills.

Prospects for further research are development of relevant strategies and techniques helpful for overcoming anxiety in the above mentioned areas for addressing the detrimental effects of high levels of student anxiety in...
university settings in war conditions, which are relatively easy to carry out by students and faculty.

References


Соболь Н., Шиба А. ПОДОЛАННЯ НЕГАТИВНОГО ВПЛИВУ ТРИВОЖНОСТІ У СТУДЕНТІВ ПІД ЧАС ВІЙНИ
Вплив на психічне здоров'я цивільного населення є одним із най-серйозніших наслідків війни. Тривалий стрес має згубні наслідки, одним із яких є підвищення тривожності. Студентство є однією із соціальних груп, яка в цьому відношенні є найбільш вразливою. 96 % українських студентів вищих навчальних закладів, які під час війни брали участь в експерименті з оцінювання тривожності за шкалою Спілбергера, демонстрували високу тривожність, що привело нас до висновку про важливість усунення згубного впливу високої тривожності в академічному контексті.

Аналіз наслідків тривожності та найбільш ефективних стратегій її подолання дозволив визначити напрями діяльності щодо усунення згубних наслідків високого рівня тривожності студентів в умовах ВНЗ під час війни:

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створення психологами рекомендацій, за допомогою яких студенти можуть самостійно діагностувати рівень тривожності, відстежувати ситуації чи тригери, що провокують підвищення тривожності і вибирати відповідні способи її подолання;

патріотичне виховання з акцентом на розуміння кожним студентом своєї ролі в суспільстві, формування активної життєвої позиції, за-лучення до волонтерської діяльності;

командна робота над спільними завданнями чи проєктами буде корисною для студентів із сильною потребою в афіліації та взаємній підтримці, а також для тих, хто намагається відволіктися від три-
важних думок за допомогою когнітивних стратегій та практичного вирішення проблем;
фізична активність дозволяє подолати симптоми тривоги, а відсутність фізичної активності було визначено як фактор ризику розвитку тривоги, а також інших станів, таких як депресія. Дуже корисними можуть бути спортивні змагання, активна робота спортивних секцій і клубів, короткі походи чи краєзнавчі екскурсії, заходи із цивільної безпеки, які проводять вищі навчальні заклади;
реалізація принципів здорового способу життя, набуття навичок тайм-менеджменту допоможе студентам організувати свій розпорядок дня. Окремої уваги заслуговує організація вільного часу; розвиток навичок міжособистісного спілкування допоможе особам з високою тривожністю подолати різноманітні комунікативні бар’єри (культурні, гендерні, фізичні, емоційні, перцептивні, міжособистісні).

Ключові слова: студенти ВНЗ; заклади вищої освіти; війна; тривожність; шкала тривожності Спілбергера; подолання тривожності.

Список використаних джерел


20. Коли світ на межі змін: стратегії адаптації. Психологічна підтримка вчителів та дітей у часи війни. GG prostir. web-site. URL: https://drive.google.com/file/d/1r0qbJVj-lXsJLtvzmJDeicK5YFI6wZL/view (дата звернення 1.03.2023).


