Academic Stress and Pedagogical Adaptation in Ukrainian Higher Education During Prolonged War

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Annotation. This article examines the evolution of academic stress amongst Ukrainian university students during prolonged war through a comparative analysis of survey data from 2024 (270 respondents) and 2025 (372 respondents) at the State University of Trade and Economics. The study investigates how stress levels, coping strategies, and emotional wellbeing have transformed over time, and how these changes affect learning activities, academic performance, and professional development.

The findings reveal three critical pedagogical challenges. First, the nature of student stress has fundamentally shifted from procedural concerns (deadlines decreased from 46.7% to 21.5%) towards uncertainty about the future (39.7% citing future uncertainty as primary stressor), with 54.4% reconsidering their career and educational plans. Second, students' capacity for sustained academic engagement is diverging rather than converging: whilst 38.5% feel better adapted to wartime learning, severe concentration difficulties increased from 8.1% to 12.1%, demonstrating that some students develop resilience whilst others experience progressive deterioration. Third, formal psychological support systems fail to reach those who need them: 84.9% have not sought psychological support since the war began, despite elevated stress levels and available services.

The study demonstrates that universities cannot maintain traditional pedagogical approaches under wartime conditions. Rather than treating disruption as temporary, institutions must fundamentally redesign educational experiences to equip students for navigating radical uncertainty: embedding psychological support within everyday student activities, creating flexible pathways that accommodate changing career trajectories, and developing differentiated pedagogical responses that recognise divergent student experiences within the same classroom. The research contributes to understanding how higher education institutions can adapt to sustained crisis conditions whilst maintaining educational quality and supporting student wellbeing.

Keywords: student resilience, wartime education, student adaptation, online learning, stress coping strategies, mental health support, educational redesign, student wellbeing.

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Академічний стрес та педагогічна адаптація в українській вищій освіті під час тривалої війни

Анотація. У статті досліджено еволюцію академічного стресу та педагогічної адаптації українських студентів під час тривалої війни через порівняльний аналіз двох хвиль опитування (270 респондентів у 2024 році та 372 у 2025 році) у Державному торговельно-економічному університеті.

Результати виявляють три критичні педагогічні виклики. По-перше, природа студентського стресу змістилася від процедурних питань (дедлайни знизилися з 46,7% до 21,5%) до невизначеності майбутнього (39,7%), при цьому 54,4% переглядають кар'єрні плани. По-друге, здатність студентів до навчання стає неоднорідною: 38,5% краще адаптувалися, проте серйозні труднощі з концентрацією зросли з 8,1% до 12,1%. По-третє, формальна психологічна підтримка не досягає тих, хто її потребує: 84,9% не звертаються по допомогу, що свідчить про значні бар'єри доступу.

Дослідження обґрунтовує необхідність редизайну освіти: інтеграцію психологічної підтримки в навчальний процес, гнучкі освітні траєкторії для зміни кар'єрних планів, та диференційовані педагогічні підходи для різних груп студентів.

Ключові слова: стійкість студентів, освіта в умовах війни, адаптація студентів, дистанційне навчання, стратегії подолання стресу, психологічна підтримка, редизайн освіти, благополуччя студентів.

Introduction

The phenomenon of academic stress among university students has emerged as one of the most pressing pedagogical challenges in contemporary higher education. Modern educational environments are characterised by intensified academic demands, competitive learning atmospheres, and rapidly evolving technological requirements that significantly impact students' psychological wellbeing and learning outcomes.

This issue becomes particularly acute in Ukraine, where the fourth year of ongoing war with russia has created unprecedented challenges for the higher education system. Ukrainian students face additional stressors beyond traditional academic pressures, including displacement, economic hardship, safety concerns, and disrupted learning environments. The war has fundamentally altered the pedagogical landscape, forcing educational institutions to adapt their approaches while maintaining academic standards under extraordinary circumstances.

From a pedagogical perspective, academic stress represents a critical factor that directly influences the effectiveness of teaching and learning processes. Educational practitioners increasingly recognise that traditional pedagogical approaches, primarily focused on knowledge transmission, may inadvertently contribute to elevated stress levels among learners. In the Ukrainian context, this situation is further complicated by trauma-informed educational needs and the necessity to provide psychological support alongside academic instruction.

The relevance of addressing academic stress within pedagogical frameworks becomes evident when considering its multifaceted impact on educational outcomes. Excessive stress levels can impair cognitive functioning, reduce academic motivation, and hinder the development of critical thinking skills that are essential for professional competence. Furthermore, chronic academic stress may lead to decreased student engagement, higher dropout rates, and compromised learning quality.

Contemporary pedagogical research emphasises the importance of creating supportive learning environments that promote both academic achievement and psychological well-being. This paradigm shift requires educators to adopt holistic approaches that integrate stress management principles into curriculum design, assessment practices, and student-teacher interactions. The development of pedagogy-informed interventions for stress reduction has

become essential for maintaining educational quality and ensuring sustainable learning processes in modern universities, particularly in conflict-affected regions or countries like Ukraine.

Understanding the Ukrainian context requires first examining how academic stress manifests across different educational settings and student populations worldwide. As academic stress has gained recognition as a critical pedagogical concern, researchers worldwide have investigated its causes, manifestations, and the coping strategies students employ. This body of research provides valuable insights into the multifaceted nature of student stress and its implications for higher education pedagogy.

Joseph et al. conducted a study of 400 medical students, finding that over three-quarters experienced moderate academic stress whilst 95% demonstrated only average coping capacity. The researchers identified worrying about the future and poor self-esteem as key factors independently associated with academic stress. They emphasise that addressing this requires systemic institutional responses: organised counselling, career guidance, stress management education, and teacher involvement in mentoring students towards healthier coping strategies [1].

Examinations represent one of the most significant sources of academic stress, with students experiencing peak stress levels during examination periods that intensify both psychological and physical strain [2; 3]. Research demonstrates that academic stress is not experienced uniformly but varies significantly based on individual circumstances and social contexts. Students with lower academic performance, those facing imminent exams, and those living alone report significantly higher stress levels. Critically, living circumstances shape students' coping capacity: those living alone rely more heavily on avoidance strategies and significantly less on social support compared to students living with family or friends [3]. These findings underscore that academic stress is shaped not only by institutional demands — such as examination structures and academic workloads — but also by the social environment and support systems available to students [2; 3].

Gadiyaram highlighted that 91 % of surveyed high-stress students reported sleep deprivation and negative social effects due to academic competition, with 73 % sleeping under seven hours nightly and over half reporting impacts on friendships [4].

The consequences of academic stress extend across multiple dimensions, affecting students' physical health, mental wellbeing, and academic functioning. A comprehensive meta-analysis by Ansari & Iqbal, reviewed global studies on stress and resilience, concluding that higher resilience was consistently related to lower academic stress levels. The authors noted that emotional and behavioural reactions to academic pressures led to symptoms like headaches, sleep disturbance, and lowered academic achievement [5, p. 2].

Recent educational research conceptualizes academic stress as closely linked to academic anxiety, describing it as a sustained condition that progressively depletes students' motivational and cognitive resources, thereby undermining their capacity for reflective and goal-directed learning [6; 7]. These studies emphasize that academic stress often manifests in subtle, less visible ways — not through overt behavioural changes, but through gradual cognitive exhaustion, reduced concentration, and emotional withdrawal from learning activities [8].

During the COVID-19 pandemic, Ren et al. examined coping mechanisms among university students in New Zealand and found that proactive coping strategies were associated with greater coping effectiveness, whilst avoidance coping strategies correlated with poorer outcomes. The authors emphasise the importance of institutional support in fostering adaptive coping mechanisms, recommending targeted interventions such as resilience training and structured learning support [9, p. 314]. In a study of international students in the Netherlands, Misirlis et al. found that social isolation and pandemic-related anxieties strongly influenced academic satisfaction, revealing clear associations between university satisfaction and

students' mental wellbeing. The authors stress that universities should organise better academic environments to provide students with high-quality education and safe learning conditions, particularly for those studying far from home [10, p. 5].

Finally, Morake & Xue's qualitative research of international students in China identified anticipatory anxiety, language barriers, financial strain, and cultural adaptation as key stressors. They suggested resilience-building design interventions to enhance support, noting that "themes related to the causes of stress... will help understand... and guide the development of targeted interventions" [11, p. 2].

Whilst international research has documented academic stress across diverse educational contexts — from pandemic disruptions to cultural transitions — the Ukrainian experience presents distinct challenges that intensify and transform the nature of academic stress. Since the full-scale russian invasion on 24 February 2022, Ukrainian higher education has operated under conditions of sustained armed conflict, fundamentally altering the parameters within which students learn and educators teach. Ukrainian researchers have responded to this unprecedented situation by investigating how prolonged war affects academic stress, with studies consistently revealing elevated stress levels compared to pre-war conditions. This body of research provides critical insights into how academic stress manifests when educational disruption is not temporary but chronic, and when the sources of stress extend beyond traditional academic pressures to include threats to safety and life, displacement, and ongoing uncertainty.

Research indicates that Ukrainian students were unable to recover from pandemic-related restrictions before being thrust into even more severe wartime conditions, with many lacking the opportunity to return to in-person learning crucial for personal development before facing displacement and safety concerns [12]. Students confronted difficult choices about whether and how to continue their education — whether to remain in Ukraine or relocate abroad, and whether distance learning could adequately support their academic and professional development. Savelyuk emphasises that understanding how higher education students specifically experience stress during war is critical for providing targeted psychological support to this population [12]. Investigating the psychological mechanisms underlying war-related stress, Pavlova and Rogowska conducted a network analysis examining the relationships between exposure to war, nightmares, insomnia, and post-traumatic stress disorder among Ukrainian university students. Their findings revealed that the overwhelming majority of students reported direct exposure to war-related events, with war-related PTSD acting as a central factor that significantly influences both the frequency of nightmares and the severity of sleep disturbances. The researchers emphasized that multidisciplinary integrative intervention programs addressing these interconnected symptoms would be most effective for supporting students' mental health during wartime [13].

Potop et al. conducted a comparative study examining Ukrainian students alongside their peers from neighbouring countries in peaceful conditions. The researchers found that military conflict significantly affects students' psycho-emotional state, with Ukrainian students experiencing markedly elevated stress levels compared to students in non-conflict regions. The study identified younger students and women as particularly vulnerable groups, highlighting that wartime stress manifests with a more pronounced impact on negative emotions, which undermines students' learning motivation and capacity for academic engagement. These findings emphasize the need for targeted support programs specifically designed for students in conflict zones [14, p. 58].

One manifestation of this stress can be seen in academic procrastination patterns. Research indicates that stress caused by military operations, lack of motivation, and various disturbances in the motivational-volitional sphere can be significant factors contributing to academic procrastination among students. Cherepiekhina et al. found that forced online learning during the COVID-19 pandemic and wartime in Ukraine intensifies procrastination

patterns – the highest levels were observed among students studying exclusively online compared to those in a blended format [15, p. 52]. In her study, Stupkevych draws attention to the fact that during wartime, these factors may also be associated with the postponed life syndrome [16, p. 65].

Korda et al. surveyed medical students and found that 62.5 % reported elevated stress, 59.6 % anxiety, and 58.8 % depression. They noted that nearly 44 % showed PTSD symptoms, and that academic performance declined sharply compared to pre-war levels [17].

Polovko et al. studied displaced and resident students. They found widespread anxiety, depression, and identity disruption among both groups, exacerbated by reduced institutional mental support due to the war [18].

While Lavrysh et al.'s primary focus was on faculty experiences — including mental health disturbances, limited access to educational resources, and the disruption of constant air raids and sirens that interrupted virtual classes — the researchers also noted significant challenges affecting students. Teachers reported struggling to motivate students who were experiencing difficult circumstances, such as displacement and broken families. Additionally, the study found that many faculty members were combining their teaching responsibilities with volunteer work and supporting displaced colleagues, which further strained the educational environment. These compounding factors created a learning context where both instructors and students faced unprecedented challenges in maintaining educational continuity and engagement [19, p. 197].

In a broader national sample of 1,398 students, Pinchuk et al. reported that 85.8 % experienced depressive symptoms, 66.1 % anxiety, 56.9 % sleep issues, and 48.1 % PTSD symptoms. Regression modelling showed that severe depression, anxiety, and poor sleep were associated with performance drops of 17.4 %, 12.2 %, and 11.0 % respectively [20, p. 2505].

The aim of this article is to investigate the impact of academic stress on the quality of the educational process and professional training of students at the State University of Trade and Economics during the prolonged war. Based on a comparative analysis of empirical data from 2024 and 2025, the study examines how stress levels, coping strategies, and emotional wellbeing have evolved over time, and how these changes affect students' learning activities, academic performance, and professional development. The findings aim to identify pedagogical strategies for supporting students and developing effective educational support systems under wartime conditions.

Results

To achieve this, we surveyed students at the State University of Trade and Economics using Google Forms. The aim was to assess how their stress levels, coping strategies, and emotional wellbeing have evolved over time, providing valuable data on the long-term psychological impact of the war.

A total of 372 respondents participated in the 2025 survey, compared to 270 in the previous year. Demographic data showed that the majority of respondents were 18 years old (65.6%), followed by 19 (22.8%), 20 (6.7%), and 21+ (4.8%). In terms of gender distribution, 59.1% were female and 40.9% were male. Most respondents were first-year students (55.9%), followed by second-year (34.9%), with smaller proportions from the third, fourth, and fifth years.

The mode of education continues to vary under unstable wartime conditions. While 61.6% reported studying in a hybrid format, 31.7% studied entirely online, and only 6.7% attended in person.

Academic stress levels showed a slight but notable increase compared to the previous year. In 2025, 16.1% of respondents reported very high stress (rating 5), up from 10.4% in 2024. Similarly, the proportion selecting rating 4 increased from 18.5% to 20.2%. Although the

largest group remained in the moderate range (rating 3), the overall trend suggests a gradual escalation in perceived academic stress.

This upward trajectory aligns with contemporary research on academic stress under prolonged crisis conditions, which demonstrates that sustained exposure to instability progressively depletes students' motivational and cognitive resources [6; 7]. From a pedagogical perspective, this finding suggests that stress accumulation under wartime conditions is not static but dynamic — students do not simply "adapt" to chronic stress, but rather experience a gradual wearing down of their psychological reserves. This has direct implications for curriculum design and assessment practices, as educators must account for declining stress tolerance over time rather than assuming students will maintain consistent coping capacity throughout extended periods of conflict.

When asked about the primary sources of academic stress, significant shifts emerged between the two survey periods. In 2024, among 270 participants, deadlines were overwhelmingly the most cited stressor at 46.7% (126 respondents), followed by offline learning challenges at 24.4% (66 respondents), and online learning challenges at 22.6% (61 respondents). Communication with faculty accounted for 6.3% (17 respondents).

By 2025, the stress landscape had fundamentally transformed. Uncertainty about the future emerged as the dominant stressor at 39.7%, despite not being separately tracked in 2024. Deadlines, while still significant, dropped dramatically to 21.5% — less than half their previous prominence. Offline learning challenges remained relatively stable at 22.1%, whilst online learning challenges decreased to 8.2%. Communication with faculty declined to 3%, and financial difficulties appeared as a distinct category at 5.5%.

This fundamental reorientation of stress sources reveals a clear migration from immediate academic pressures (deadlines, workload) towards deeper existential anxieties (uncertainty about future success). Joseph et al. identified worrying about the future as a key factor independently associated with academic stress, noting that this form of anxiety requires different institutional responses than traditional academic pressures [1]. The dramatic decline in deadline-related stress — from nearly half of all respondents to just over one-fifth — does not suggest that academic workload has decreased, but rather that it has been overshadowed by deeper, more intractable anxieties. When the future itself becomes uncertain, immediate academic pressures feel less pressing, yet the overall burden intensifies. This pattern resonates with Stupkevych's findings on the postponed life syndrome in wartime contexts, where students' stress shifts from managing current tasks to questioning the value of their educational investment amid uncertainty [16].

The relative stability of offline learning challenges (24.4% to 22.1%) alongside the sharp decline in online learning difficulties (22.6% to 8.2%) suggests a pedagogical adaptation effect. After nearly two years of war, both students and educators have developed more effective strategies for distance education, as evidenced by Cherepiekhina et al.'s research showing differential procrastination patterns between learning formats [15]. Yet the physical disruptions of in-person learning — air raids, power outages, infrastructure damage — remain intractable. This distinction between adaptable pedagogical challenges and structural barriers beyond institutional control has important implications for educational support strategies.

The emergence of financial difficulties as a tracked category (5.5%) and the persistent concern with offline learning point to a compounding effect where students face not only academic challenges but also mounting practical obstacles. Martin emphasises that academic resilience requires managing academic pressures and personal difficulties while maintaining engagement and goal-directed behaviour [21]. The combined effect creates a stress profile that is qualitatively different from pre-war conditions: students are less concerned with mastering specific academic tasks and more preoccupied with whether their educational investment will yield meaningful returns in an uncertain future. This finding reflects Potop et al.'s observation

that wartime stress manifests with a more pronounced impact on negative emotions, which undermines students' learning motivation and capacity for academic engagement [14].

When asked "How has the war affected your ability to focus on your studies?" using a 5-point scale (1 = not very much, 5 = very much), the distribution revealed both continuity and concerning shifts. In 2024, responses were distributed as follows: 15.6% rated the impact as minimal (1), 19.3% selected rating 2, 37% indicated moderate impact (3), 20% chose rating 4, and 8.1% reported severe impact (5). By 2025, the pattern had shifted: 11% rated the impact as minimal (1), 20% selected rating 2, 37.2% indicated moderate impact (3), 19.7% chose rating 4, and 12.1% reported severe impact (5).

Whilst the moderate impact group remained remarkably stable (37% to 37.2%), the movement at the extremes reveals a troubling trend. The proportion of students experiencing minimal disruption to concentration decreased from 15.6% to 11% — a 29% relative decline — whilst those reporting severe impact increased from 8.1% to 12.1%, representing a 49% relative increase. This polarisation suggests that prolonged wartime conditions do not uniformly affect all students, but rather create a divergence between those maintaining resilience and those experiencing progressive deterioration.

This pattern aligns with contemporary research demonstrating that sustained academic stress progressively depletes students' cognitive resources and undermines their capacity for reflective and goal-directed learning [6]. The near-doubling of severely affected students (from 8.1% to 12.1%) indicates that for a significant subset, the cumulative burden of war has crossed a threshold beyond which concentration becomes profoundly impaired. From a pedagogical perspective, this finding challenges the assumption that students will gradually "adapt" to chronic disruption. Instead, it suggests that educators must account for a growing cohort whose cognitive capacity for sustained academic engagement is significantly diminished.

The stability of the moderate group (37%) alongside the erosion of minimal impact and growth of severe impact points to what Sabaliauskas et al. describe as gradual cognitive exhaustion [8]. Students are not simply learning to cope; rather, some are maintaining tenuous equilibrium whilst others are experiencing measurable decline. This has direct implications for assessment design and learning expectations: traditional pedagogical approaches that assume consistent cognitive capacity across the student population may fail to recognise the divergent realities of wartime learning.

Regarding coping strategies, the 2024 and 2025 surveys employed different methodologies that must be acknowledged when interpreting results. In 2024, participants were asked to select all methods they use to cope with stress, recognising that students typically employ multiple strategies simultaneously. From 270 respondents, the results revealed a complex coping landscape: talking with friends/family was used by 206 respondents (76.6%), music by 200 (74.3%), sleeping by 186 (69.1%), hobbies by 161 (59.9%), physical activity or exercise by 131 (48.7%), computer or board games by 120 (44.6%), reading by 98 (36.4%), cooking by 95 (35.3%), humour such as stand-ups and comedies by 74 (27.5%), studying by 75 (27.9%), and seeking professional psychology services by 68 (25.3%).

In 2025, the survey methodology shifted to asking respondents to identify their primary coping method, yielding a different distribution: talking with friends/family remained prominent at 33.8%, followed by music at 19.7%, physical activity or exercise at 14.4%, walks at 14.1%, sleeping at 10.3%, caring for someone (person or pet) at 5%, seeking professional psychological support at 1.7%, and cooking at 1%.

The methodological difference makes direct statistical comparison problematic, yet the data reveal critical pedagogical insights about how students navigate wartime stress. The 2024 results demonstrate that students rely on multiple coping strategies simultaneously — three-quarters used both social support and music, whilst over two-thirds turned to sleep. This multiplicity suggests students are drawing on diverse resources to manage stress, yet a closer examination reveals a more troubling reality.

The prominence of sleep as a coping mechanism — used by 69.1% of students in 2024 and identified as the primary strategy by 10.3% in 2025 — must be understood not as a restorative practice but as a symptom of profound exhaustion and psychological retreat. In the context of prolonged war, sleep represents not merely rest but an escape from an uncontrollable reality: air raid sirens, bombardments, constant uncertainty, and the accumulated weight of decisions that cannot be made and problems that cannot be solved. Sleep becomes the only available means of "switching off" from relentless stress, a temporary reprieve from a situation over which students have no agency. This reflects the challenges Martin identifies when students face personal difficulties that exceed their available resources — when external conditions overwhelm all capacity for meaningful control, withdrawal into sleep becomes less a choice than a psychological necessity [21].

When forced to identify their primary strategy in 2025, social connection (talking with friends/family at 33.8%) emerged as the anchor coping mechanism. This finding aligns with research demonstrating that social support serves as a critical protective factor: Alkhawaldeh et al. found that students living alone relied significantly less on social support compared to those living with family or friends, with direct implications for their stress levels and coping capacity [3]. The prominence of social connection as the primary strategy underscores its fundamental importance in managing wartime stress. Music (19.7%) and physical movement — whether structured exercise (14.4%) or walks (14.1%) — collectively account for 48.2% of primary strategies, suggesting students are actively seeking ways to regulate their emotional and physiological states.

However, the near-complete absence of professional psychological support as a primary coping method — dropping from 25.3% using it within their repertoire in 2024 to only 1.7% in 2025 — reveals a concerning pedagogical reality. This is not because professional support became less relevant, but rather because it remains inaccessible, stigmatised, or peripheral to students' daily survival strategies. Students are managing wartime stress primarily through informal, peer-based networks and individual practices, rather than institutionalised support systems. Ren et al. emphasised that institutional support plays a crucial role in fostering adaptive coping mechanisms, recommending targeted interventions such as resilience training and structured learning support [9]. The gap between students' need for support and their actual access to professional services highlights a critical failure in institutional response.

From a pedagogical perspective, these findings carry urgent implications. The reliance on sleep as a coping mechanism signals that a substantial portion of the student body is operating in a state of chronic exhaustion and psychological overwhelm. Educators cannot simply "motivate" students out of this exhaustion through pedagogical technique; rather, they must recognise that cognitive capacity itself is fundamentally compromised by unrelenting stress. The diversification of coping strategies — music, walking, physical activity, caring for others — demonstrates resilience and resourcefulness, yet these student-initiated adaptations are compensating for the absence of systematic institutional support. As Pérez-Jorge et al. demonstrate, when sustained stress progressively depletes students' cognitive resources, traditional educational approaches that assume consistent capacity become increasingly inadequate, and educational processes risk becoming barriers rather than pathways to learning [6].

When asked "Have you sought psychological support since the war began?" the responses revealed a concerning pattern. In 2024, among 270 respondents, 210 (77.8%) indicated they had not sought psychological support, whilst 26 (9.6%) used private counselling services, 25 (9.3%) turned to online services, and only 5 (1.9%) sought support through university services.

By 2025, the pattern persisted: 84.9% of students stated they had not sought psychological support since the beginning of the war — an increase of 7.1 percentage points. Among those who did seek support, only 0.8% utilised university services, 7.3% accessed private counselling, 3.8% used online services, and 3.2% participated in peer support groups.

These figures must be interpreted within the specific context of wartime higher education. The predominance of online learning — necessitated by air raids, power outages, and security concerns — means that students are physically absent from campus for extended periods, limiting their natural access to university-based psychological services that traditionally operate through in-person appointments. The low utilisation of university services (0.8%) does not necessarily indicate an absence of institutional support, but rather reflects structural barriers created by the disrupted learning environment itself.

Recognising that students will not proactively seek formal psychological support whilst managing chronic stress and physical displacement, universities have begun fundamentally rethinking how support is integrated into the educational experience. Rather than relying solely on traditional counselling services, institutions are shifting towards embedded, normalised interventions that reach students within their existing routines. Student councils have become particularly active in organising extracurricular events — master classes, competitions, concerts, theatrical performances, choirs, and sports competitions — that serve dual pedagogical purposes: maintaining social connection and providing informal emotional support through collective engagement. These activities create what might be termed "support without stigma," where students experience community, inspiration, and mutual encouragement without needing to identify themselves as requiring help.

The decline in online psychological services — from 9.3% to 3.8% — alongside the rise in music, physical activity, and peer conversation as coping strategies suggests that students are gravitating towards communal and embodied forms of stress management rather than individualised therapeutic interventions. This may reflect both practical constraints (financial limitations, as evidenced by private counselling decreasing from 9.6% to 7.3%) and a preference for support that feels integrated into daily life rather than formalised and separate.

From a pedagogical perspective, these findings highlight a transition from optional external services to integrated support ecosystems. Universities are recognising that in prolonged crisis conditions, psychological wellbeing cannot be treated as a separate domain addressed through specialist services alone. Instead, it must be woven into the fabric of educational experience — through peer networks, creative activities, physical engagement, and community-building initiatives that meet students where they are rather than requiring them to seek help whilst already overwhelmed. This approach aligns with Ren et al.'s finding that proactive coping strategies are associated with greater coping effectiveness whilst avoidance strategies correlate with poorer outcomes [9], while also acknowledging that 'seeking support' may look less like formal counselling appointments and more like participating in a university choir or sports team, attending a theatrical performance or concert, or engaging in student-organised master classes and competitions.

When asked "Have you experienced any of the following emotional or psychological symptoms more frequently since the war began?" participants were invited to select all applicable symptoms. In 2024, among 270 respondents, increased anxiety was reported by 79 (29.3%), sadness or depression by 80 (29.6%), difficulty sleeping by 42 (15.6%), feelings of isolation by 31 (11.5%), and increased irritability by 38 (14.1%). By 2025, the symptom profile had shifted notably: anxiety increased to 33.8%, whilst sadness/depression decreased substantially to 17.4%, difficulty sleeping fell to 7.4%, feelings of isolation dropped to 3.8%, and increased irritability declined to 4.9%. New response categories emerged: lack of motivation at 13.6%, difficulty concentrating at 6.9%, and 12.1% reported experiencing none of the listed symptoms.

The rise in anxiety — from 29.3% to 33.8% — alongside the decline in depressive symptoms, sleep disturbances, and feelings of isolation presents a complex picture that resists simplistic interpretation. On the surface, one might conclude that students are "adapting" to wartime conditions, as several acute symptoms have diminished. However, this interpretation requires careful scrutiny. The persistent elevation of anxiety suggests that whilst students may

have developed strategies to manage certain symptoms, the underlying condition of chronic uncertainty and threat has intensified rather than resolved.

The substantial drop in sadness/depression — from 29.6% to 17.4% — warrants particular attention. This does not necessarily indicate improved mental health; rather, it may reflect what psychologists term "emotional numbing" or normalisation of distress. When crisis becomes chronic, acute emotional responses often give way to a flattened baseline where students no longer register their own sadness as abnormal because it has become constant. Similarly, the decline in reported sleep difficulties (from 15.6% to 7.4%) may indicate either genuine adaptation in sleep hygiene or, more concerningly, a shift in perception where disrupted sleep is no longer considered noteworthy because it has become the norm.

The decrease in feelings of isolation — from 11.5% to 3.8% — likely reflects the effectiveness of the social coping strategies discussed earlier, particularly the 33.8% of students who identify talking with friends and family as their primary stress management method, as well as the university's intensified efforts to maintain community through student council activities, performances, and collective events.

This finding aligns with research demonstrating that living circumstances and social support networks significantly shape students' coping capacity: Alkhawaldeh et al. found that students living alone relied significantly less on social support compared to those living with family or friends, with direct implications for their stress levels [3]. The prominence of peer networks and institutional community-building appears to have successfully counteracted isolation even as physical displacement from campus continues.

However, the emergence of "lack of motivation" as a distinct reported symptom at 13.6% carries significant pedagogical implications. This was not tracked as a separate category in 2024, making direct comparison impossible, yet its prominence in 2025 suggests that as acute emotional distress somewhat stabilises, a deeper form of exhaustion is becoming visible — one that undermines students' fundamental drive to engage with their studies. This pattern reflects what Pérez-Jorge et al. describe as the progressive depletion of students' motivational and cognitive resources under sustained stress conditions [6]. Students may be experiencing fewer acute symptoms not because they are thriving, but because they have entered a state of depleted persistence where even the energy required for anxiety or sadness feels inaccessible.

The fact that 12.1% of students reported experiencing "none of the above" symptoms warrants careful consideration. After four years of ongoing war, these students may be experiencing concerns that were not captured by the survey's predetermined categories. This group reminds us that students need more than support for managing emotional symptoms like anxiety or depression. They also need practical help navigating fundamentally changed realities: How do they build careers when the labour market has been completely restructured? Will there be jobs in their field after the war? How should they adapt their education to new circumstances? What skills will actually be needed in the future? From a pedagogical perspective, universities must do more than address student stress — they must practically prepare students for a transformed world by revising curricula, showing new opportunities, and helping students understand how their education will remain valuable under changed conditions.

When asked "How would you describe changes in your academic performance compared to before the war?" students' responses in 2025 revealed a tripartite distribution. The largest group, 42.6%, reported no change in their academic performance. However, 35.9% indicated deterioration — 29% slightly worsened and 6.9% significantly worsened. Conversely, 21.5% reported improvement — 13.3% slightly improved and 8.2% significantly improved.

This distribution reveals that wartime conditions do not affect all students uniformly. The 42.6% maintaining stable performance might initially appear reassuring, yet this stability must be understood in context: these students are sustaining their academic work despite elevated stress (16.1% reporting very high stress), declining concentration ability (12.1% rating war's

impact on focus as "5"), and pervasive uncertainty about the future (39.7% identifying this as their primary stressor). Their "unchanged" performance likely represents significant effort to maintain baseline functioning under deteriorating conditions, rather than effortless continuity.

The 35.9% experiencing worsening performance aligns closely with earlier findings about concentration difficulties and lack of motivation. These students are facing a compounding effect: chronic stress erodes their cognitive capacity, repeated disruptions (air raids, power outages) fragment their study time, and uncertainty about future prospects undermines their motivation to invest effort. From a pedagogical perspective, this group requires more than traditional academic support — they need flexible assessment structures, extensions that account for disrupted circumstances, and recognition that their declining grades reflect external conditions rather than reduced capability or commitment.

Perhaps most intriguing is the 21.5% whose performance improved. This contradicts assumptions that wartime universally impairs academic achievement. Several explanations emerge: some students may be channelling anxiety into intensified focus on studies as a means of maintaining control and purpose; others may have fewer competing obligations (reduced social activities, cancelled part-time work) that allow greater concentration on academics; still others may find that their education has gained new meaning as preparation for post-war reconstruction, thereby increasing motivation. This group demonstrates that adversity does not universally diminish performance — for some students, it catalyses renewed commitment to their studies.

These findings carry direct pedagogical implications. Universities cannot adopt a single approach to "wartime students" because students are experiencing three fundamentally different trajectories. Those maintaining stability need support systems that help them sustain effort without burning out. Those experiencing decline need flexible structures and reduced pressure that account for compromised circumstances. Those experiencing improvement need opportunities to channel their motivation productively whilst recognising that their heightened focus may itself be a stress response requiring monitoring. The data challenge the assumption that all students are struggling equally and demand differentiated pedagogical responses that recognise divergent experiences within the same educational environment.

When asked "How adapted do you feel to studying under wartime conditions now compared to last year?" students' responses in 2025 revealed a distribution suggesting gradual adjustment. The largest group, 47.4%, reported no change in their sense of adaptation, whilst 38.5% felt much better adapted, and 14.1% felt much worse adapted.

These findings present an intriguing counterpoint to the academic performance data. Whilst 38.5% of students feel significantly better adapted to wartime studying, only 21.5% reported improved academic performance. Conversely, whilst 35.9% experienced worsening performance, only 14.1% felt their adaptation had deteriorated. This disconnect reveals that psychological adaptation and academic outcomes do not move in lockstep: students can feel more accustomed to wartime conditions whilst still experiencing declining grades, or they can maintain stable performance despite not feeling particularly well-adapted.

The 38.5% who feel much better adapted likely reflects accumulated experience with disrupted learning: after multiple academic terms navigating air raids, power outages, and shifting between online and offline formats, students have developed practical strategies for managing these interruptions. They know how to study during blackouts, how to quickly transition to bomb shelters during lectures, and how to maintain academic momentum despite fragmented schedules. This represents genuine resilience — not the absence of difficulty, but the acquisition of skills for functioning within difficulty.

However, this improved adaptation does not eliminate the underlying challenges. Students may feel better equipped to handle disruptions, yet the disruptions themselves continue to exact a toll on their concentration, motivation, and overall academic capacity. The relative stability of moderate stress levels (37.2% in 2025 vs 37% in 2024) alongside improved

adaptation suggests that students have learned to operate within chronic stress rather than eliminating it.

The 47.4% reporting no change in adaptation warrant particular attention. These students are neither improving their ability to cope nor experiencing deterioration — they are simply persisting in a stable state of partial adjustment. From a pedagogical perspective, this group may be at risk of stagnation: they have reached an equilibrium that allows them to continue but not to thrive, and without targeted support, they may remain in this holding pattern indefinitely.

The 14.1% feeling worse adapted despite a year of additional experience raises concern. These students are not developing coping strategies over time but rather experiencing progressive erosion of their capacity to manage wartime learning conditions. This aligns with earlier findings about the 12.1% reporting severe concentration difficulties and the 13.6% experiencing lack of motivation. For this subset, time is not healing but deepening the challenge.

From a pedagogical standpoint, these findings suggest that universities cannot rely on students simply "getting used to" wartime conditions. Whilst many students do develop adaptive strategies (38.5%), a substantial portion remains stuck in unchanged patterns (47.4%) or experiences deterioration (14.1%). Educational institutions must therefore provide ongoing, differentiated support rather than assuming that students will naturally adjust over time. The disconnect between feeling adapted and maintaining academic performance further suggests that universities need to reassess whether current learning structures — designed for pre-war conditions — remain appropriate even for students who subjectively feel they have adapted to the new reality.

When asked "Have your plans regarding your future career / education changed due to the ongoing war?" the responses revealed a near-even split: 54.4% indicated that their plans had changed, whilst 42.6% reported no change.

This finding directly connects to the earlier observation that uncertainty about the future emerged as the dominant academic stressor in 2025 (39.7%). More than half of students are not simply anxious about an unclear future — they are actively reconfiguring their educational and career trajectories in response to fundamentally altered circumstances. This is not abstract worry but concrete decision-making: students are changing their specialisations, reconsidering geographic plans, reevaluating which skills will be marketable, and questioning whether their chosen fields will exist in post-war Ukraine.

The scale of this shift carries profound pedagogical implications. When 54.4% of students are revising their future plans, universities cannot treat curricula as fixed pathways leading to predetermined outcomes. Students are navigating moving targets: industries that existed before the war may not survive it, whilst new sectors are emerging that were unimaginable in peacetime. The education programmes students began in 2022 may no longer prepare them for the reality they will face upon graduation. This creates a fundamental mismatch between what universities are designed to deliver and what students actually need.

From a pedagogical perspective, this demands more than career counselling or updated course content. It requires universities to fundamentally reconceptualise their role: not as institutions that train students for known professions, but as spaces that equip students to navigate radical uncertainty. This means teaching adaptability alongside expertise, helping students develop transferable skills rather than narrow specialisation, and creating opportunities for students to explore multiple potential futures rather than committing to a single predetermined path.

The 42.6% whose plans have not changed deserve equal attention. These students are either remarkably resilient — maintaining clear goals despite upheaval — or they may be in fields less affected by wartime disruption (healthcare, IT, engineering). Alternatively, some may be avoiding the difficult work of reconsidering their plans, preferring to continue with familiar trajectories even when circumstances suggest recalibration would be prudent. Universities

must support both groups: helping those revising their plans to do so thoughtfully whilst ensuring those maintaining their original plans are making informed decisions rather than simply resisting change.

These findings reinforce the earlier observation that the 12.1% reporting "none of the above" emotional symptoms may be experiencing concerns not captured by traditional stress categories. When over half of students are fundamentally rethinking their futures, their primary need is not stress management but practical guidance for navigating transformed realities. Universities must provide: updated information about emerging career fields, connections to restructured labour markets, flexibility in degree requirements that allows students to pivot without starting over, and honest conversations about which educational investments remain viable and which require reconsideration. The question is not whether students feel stressed about the future, but whether their education is genuinely preparing them for the future that actually awaits them.

Conclusions

The comparative analysis of 2024 and 2025 data reveals three key pedagogical challenges facing Ukrainian higher education during prolonged war.

First, the nature of student stress has fundamentally changed. Students are no longer primarily concerned with managing coursework and deadlines but with whether their education will remain relevant in a transformed post-war reality. Over half have reconsidered their career and educational plans. This demands that universities move beyond traditional curriculum delivery to actively help students understand how their education connects to emerging opportunities, which skills will transfer across changing circumstances, and how degree programmes can accommodate necessary pivots without requiring students to start over.

Second, students' capacity for sustained academic engagement is diverging, not converging. Some are adapting successfully whilst others experience progressive deterioration in concentration and motivation. Universities cannot assume all students will naturally adjust to wartime conditions or that a single pedagogical approach will serve all equally. Flexible assessment structures, varied learning formats, and differentiated support systems are not optional accommodations but necessary responses to genuinely different student realities within the same classroom.

Third, formal psychological support systems are failing to reach students who need them. With over 84% not seeking help despite elevated stress, universities must embed support within everyday student life rather than treating it as separate specialist services. Student councils organising community events, creative activities, and peer networks serve dual purposes: maintaining social connection whilst providing informal emotional support. This represents a necessary shift from optional external services to integrated support ecosystems where wellbeing is woven into educational experience rather than positioned as additional assistance for those who struggle.

From a pedagogical standpoint, these findings demonstrate that maintaining "normal" academic standards and traditional teaching methods under abnormal conditions is neither realistic nor appropriate. The question is not how to help students cope with temporary disruption so they can return to pre-war learning patterns, but rather how to redesign higher education for students navigating ongoing uncertainty. This requires universities to prioritise adaptability over narrow specialisation, create flexible pathways rather than fixed curricula, honestly address which educational investments remain viable under changed conditions, and recognise that student resilience manifests not in unchanged performance but in continued engagement despite fundamentally compromised circumstances.

Ukrainian higher education is charting new territory without established frameworks. The resilience students demonstrate — continuing their studies, maintaining community,

planning futures — coexists with genuine struggle. Both are true simultaneously. Effective pedagogical responses must account for this complexity: supporting students not by pretending conditions are normal, but by redesigning education to meet students where they actually are.

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