ORIGINAL ARTICLE

Assessment of stress and health conditions among students in the context of the war in Ukraine

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Abstract

Background and Study Aim In the context of a military conflict, students' health is subjected to significant stress and psychological challenges. Monitoring the health condition of this vulnerable group can provide important data for developing effective support measures. The aim of this study is to assess the level of stress and health condition of students in Ukraine during the war and to compare these indicators with those of students from neighbouring countries, Poland and Romania.

Material and Methods The study used the Perceived Stress Scale (PSS-10) questionnaire to assess stress levels among students. A total of 443 students participated: 36 from Poland, 215 from Romania, and 179 from Ukraine. Factor analysis (PCA) was employed to test the validity and reliability of the PSS-10 questionnaire structure, with the number of factors determined using the Kaiser criterion. Reliability was assessed using Cronbach's alpha coefficient. The Python library in the PyCharm CE environment was used as the analysis tool. The Mann-Whitney test was applied for group comparisons. Correlation analysis was conducted between the overall PSS-10 score and measures of positive and negative affect. A logistic regression model was used to identify predictors of stress.

Results The results of the factor analysis showed that both factors significantly and reliably measure different aspects of stress. Cronbach's alpha values for Factor 1 (0.87) indicate high reliability, while for Factor 2 (0.79), they indicate good reliability. A correlation of 0.89 for Factor 1 indicates a very strong positive relationship between this factor and the overall level of stress. A correlation of 0.69 for Factor 2 indicates a strong positive relationship, though not as strong as Factor 1 (p=0.0000). The results confirm that the overall PSS-10 scores are closely related to both positive and negative emotional states, with a more pronounced impact on negative emotions. The highest number of students with a stress level of 2 is observed among students from Ukraine (32.65%) and Romania (35.60%), while in Poland this figure is 4.99%.

Conclusions The study showed that the military conflict in Ukraine significantly affects the psycho-emotional state of students, causing high levels of stress, anxiety, and depression. Younger students and women were found to be particularly vulnerable. These results underscore the need to develop targeted support programs to improve the mental health of students in the context of the war.

Keywords: Perceived Stress Scale, Poland, Romania, anxiety, depression

Introduction

War and armed conflicts have a significant impact on the mental and physical health of the population, especially vulnerable groups such as students. In the context of military conflict, students are subjected to increased levels of stress, which can lead to serious psychological and physiological consequences. Monitoring the health status and stress levels among students during wartime is critically important for developing effective support measures and improving the quality of life for this vulnerable group.

Numerous studies have shown that students in conflict zones experience higher levels of stress and psychological problems compared to their peers in peaceful regions. Analyzing data from

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various studies allows for a better understanding of the impact of war on students' mental health and helps identify effective support strategies. Studies conducted in the context of the war in Ukraine show a significant impact of the conflict on the physical and psycho-emotional state of students. Adamczak et al. [1] found that Ukrainian students exhibit higher levels of physical activity compared to Polish students, despite significant motivational barriers. Halchenko et al. [2] and Kokun et al. [3] noted a decrease in resilience levels among adult participants and higher resilience among youth, which depended on their place of residence and subjective assessment of safety. Kurapov et al. [4] and Ogorenko [5] reported a deterioration in the psycho-emotional state of most respondents, including depression, exhaustion, loneliness, and nervousness, with the use of maladaptive strategies significantly increasing the risk of anxiety.

Pavlova et al. [6] found that 98% of students were exposed to the war, with 27% exhibiting symptoms of Post-Traumatic Stress Disorder (PTSD). Rogowska et al. [7] confirmed positive correlations between war exposure, nightmares, fear of war, insomnia, and PTSD symptoms, especially among women. Pinchuk et al. [8] reported that 66% of students tested positive for PTSD symptoms, 45% for moderate to severe anxiety symptoms, and 47% for moderate to severe depression symptoms. Limone et al. [9] noted a high prevalence of anxiety and stress among students, with predictors including young age, female gender, and isolation.

These results underscore the importance of developing support measures to improve the mental health of students in the context of military conflict. They also highlight the need for specialized interventions to reduce stress and anxiety levels among young people, particularly among women.

Studies among students of various specialties and countries have shown high levels of perceived stress, anxiety, and depression [10, 11, 12, 13, 14]. Cognitive empathy contributes to reducing stress levels, while law students experience greater stress compared to medical and psychology students [15, 16]. Among students, 84.7% reported moderately high levels of perceived stress, and those who stayed at their universities experienced significantly higher stress related to COVID-19 [17, 18]. Short-term group workshops based on Acceptance and Commitment Therapy (ACT) have proven effective in reducing symptoms of stress, depression, and anxiety among students [19, 20]. Emotional, academic, and physical problems are significantly associated with perceived stress, depression, and anxiety, with women and first-year students being more susceptible to high levels of stress [21, 22, 23].

These studies have shown that students experience high levels of perceived stress, anxiety, and depression. At the same time, each country has its distinctive characteristics in how university students perceive stress.

For example, in the USA, medical students experienced significantly higher stress after the suspension of classes and during the COVID-19 pandemic, especially among women and those with a mental health diagnosis [24, 25]. Financial difficulties and racism exacerbated stress and burnout, while volunteer activities reduced the likelihood of burnout [25]. Other causes of perceived stress include factors such as "anxiety" and "irritability" [26], and the satisfaction of basic needs [23, 26, 27].

Studies among students in Colombia have shown that stress, anxiety, and depression are widespread within this group [28]. The average stress level among medical students was 18.83 ± 5.19 points, with higher stress levels observed in younger students, men, and those living in rural areas [28].

Studies among students in EU countries have revealed high levels of perceived stress and significant differences depending on gender, discipline, and study load. In Austria, women experience almost twice as much stress as men [29]. In Spain, students in health science faculties, especially women and third-year occupational therapy students, exhibit high levels of stress, anxiety, and depression [30]. High levels of stress and emotional exhaustion have also been noted among students in Serbia [31], Finland [32], the Czech Republic [33], Italy [34], and Spain [35]. Numerous studies in Turkey have reported a significant increase in levels of stress and anxiety [36, 37, 38].

Studies among students in Asian countries have shown high levels of perceived stress, depression, and other mental health problems. In Bangladesh, women were 3.6 times more likely to experience stress than men [39]. In Sri Lanka, students' stress was associated with the academic environment and career choice [40]. Other studies also highlight the characteristics of perceived stress in Vietnam [41], Hong Kong [42], Jordan [43], Thailand [44], India [45, 46], Saudi Arabia [47, 48], and Malaysia [49, 50].

Numerous studies among students in China have shown that stress, anxiety, and depression are common problems [51, 52, 53]. High levels of perceived stress were associated with borderline personality disorder, attachment anxiety, and depression [54, 55]. The main predictors of anxiety and depression included musculoskeletal pain [56], watching movies [57], and residential area [58]. Overall, students in Asian countries are subject to stress depending on many factors specific to their regions.

Studies have shown that students in Poland experience high levels of stress and mental disorders [59, 60, 61]. Female gender, urban residence, and initial level of education are significant predictors of high levels of stress and depression [8, 59].

Polish dental students exhibited high levels of stress, especially women, who more often turned to religion and emotional support, while men used psychoactive substances and humor to cope with stress [62, 63].

A healthy lifestyle and positive mental attitude served as protective factors against stress among medical students [64, 65]. Positive correlations between active coping strategies and quality of life were observed among Polish students, particularly in psychological and physical domains [66, 67]. Students who had experienced COVID-19 exhibited higher levels of anxiety and stress, depending on the duration of the illness and the severity of residual symptoms [65, 66]. Polish students from rural areas showed higher levels of depression and suicidal thoughts, whereas senior students were more prone to stress [67].

Assessment of anxiety, stress, and health conditions among students in Romanian universities has been explored in various studies. In particular, perceived stress among students has been thoroughly studied, allowing the identification of key factors affecting their mental health. Balgiu et al. [68] confirmed the adequate properties of the PSS-14 questionnaire for assessing perceived stress, making it a useful tool for studying stress among dental students. The study by Butnaru et al. [69] showed that the economic crisis caused anxiety and reduced students' well-being; however, their fear ranged from moderate to low and did not significantly impact their overall well-being.

In another study [70], the authors found a negative correlation between depression, anxiety, and insomnia with overall satisfaction with e-learning. Palos [71] discovered that students with high levels of basic self-esteem reported low levels of burnout. Puiu et al. [72] identified communication problems and stress specific to online education that students experience. Simionescu et al. [73] determined the main stressors and coping strategies, showing that working students were more vulnerable to stress compared to non-working students both before and during the pandemic.

Other studies [74, 75, 76, 77] revealed the interconnection between health anxiety, symptoms of depression, anxiety, and stress, as well as coping mechanisms. The results showed that when controlling for the variable of health anxiety, a high level of anxiety and stress symptoms, along with a low level of depression symptoms, can predict the level of anxiety. These studies highlight the importance of understanding the mental health of students in Romanian universities and allow for the development of more effective support measures to improve their overall well-being.

Despite numerous studies dedicated to the use of the PSS-10 questionnaire among university students, unresolved issues remain that require new solutions. Special attention should be paid to the necessity of comparing results across countries such as Poland, Romania, and Ukraine, due to the unique circumstances caused by the war in Ukraine. This will allow for a deeper understanding of the impact of military actions on the stress levels and mental health of students, and help develop more effective support measures for this vulnerable group.

The aim of this study is to assess the level of stress and health conditions of students in Ukraine during the war and compare these indicators with those of students from neighbouring countries, Poland and Romania.

Materials and Methods

Participants

The study utilized the Perceived Stress Scale (PSS-10) questionnaire to assess stress levels among students. A total of 443 students participated: 36 from Poland, 215 from Romania, and 179 from Ukraine. The survey was conducted online, and participation was voluntary. All participants were informed about the objectives of the study and consented to participate by checking the appropriate box in the online form. The study was approved by the university's ethics committee, and all data were anonymized to protect participants' confidentiality.

Study Design

To assess quality of life was used The PSS-10 questionnaire, adapted into three languages: Ukrainian, Polish, and Romanian. Data collection was conducted online using a survey platform. The processing of questionnaires included checking the data for accuracy. Exclusion criteria included incomplete data and incorrect responses, which were removed from the final analysis.

Distribution of Questions Related to Positive and Negative Affect Indicators

To calculate the correlation, the responses to the questions were grouped into categories, and the average values for each category were computed. Questions related to feelings of confidence, control, and the perception that things are going well were categorized under positive affect. Questions related to nervousness, stress, and the inability to cope were categorized under negative affect.

Questions Related to Positive Affect: 4, 5, 6, 7:

4. Question about confidence;
5. Question about things going well;
6. Question about controlling irritations;
7. Question about everything being under control.

Questions Related to Negative Affect: 1, 2, 3, 4, 5, 6:

1. Question about being upset;
2. Question about inability to control important things;
3. Question about nervousness and stress;

4. Question about inability to cope;
5. Question about anger;
6. Question about difficulties.

Questions 4, 5, and 6 appear in both categories due to their mixed affect content.

Statistical Analysis

To test the validity and reliability of the PSS-10 questionnaire structure, factor analysis (PCA) was used, with the number of factors determined by the Kaiser criterion. Reliability was assessed using Cronbach's alpha coefficient. The Python library in the PyCharm CE environment was used as the analysis tool. The Grubbs' test was applied to check for the presence of outliers or anomalous values in the questionnaire data. The Mann-Whitney test was used for group comparisons. Correlation analysis was conducted between the overall PSS-10 score and indicators of positive and negative affect. A logistic regression model was employed to identify predictors of stress. Means, standard deviations, and percentages were determined. The significance level was set at 0.05.

Results

The Shapiro-Wilk test for normality distribution of the questionnaire data showed that the data do not follow a normal distribution. Therefore, factor analysis was used to test the reliability of the questionnaire with the following criteria: sample size n=443 students, and absence of outliers or anomalous values. The sample size is sufficient for conducting factor analysis (substantial size). The Grubbs' test was applied to check for the presence of outliers or anomalous values. The test indicated that no outliers were detected in any columns of the data.

The results of the factor analysis showed factor loadings for two factors (Table 1).

The results of the factor analysis are presented in Table 2.

The data in Table 1 show that for Factor 1 (Experiences and Stresses), the questions with higher loadings are: 1, 2, 3, 6, 9, 10. For Factor 2 (Managing Personal Problems and Control over Life Circumstances), the questions with higher loadings are: 4, 5, 7, 8. The results of the factor analysis (Table 1) show that each factor explains a certain percentage of the total variance in the data. The percentage of variance explained by each factor indicates its contribution to explaining the overall variability in the questionnaire data. Factor 1 explains 64.11% of the total variance. Factor 1, which is associated with experiences and stresses, is the primary factor influencing the respondents' answers. A significant portion of the variation in

Table 1. 10 item loadings in the factor

No	Item	Factor 1	Factor 2
1	In the last month, how often have you been upset because of something that happened unexpectedly?	0.712	-0.273
2	In the last month, how often have you felt that you were unable to control the important things in your life?	0.694	-0.176
3	In the last month, how often have you felt nervous and stressed?	0.754	-0.27
4	In the last month, how often have you felt confident about your ability to handle your personal problems?	0.347	0.577
5	In the last month, how often have you felt that things were going your way?	0.462	0.569
6	In the last month, how often have you found that you could not cope with all the things that you had to do?	0.545	-0.273
7	In the last month, how often have you been able to control irritations in your life?	0.369	0.451
8	In the last month, how often have you felt that you were on top of things?	0.567	0.595
9	In the last month, how often have you been angered because of things that happened that were outside of your control?	0.678	-0.228
10	In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0.74	-0.194

Table 2. Factor Analysis Results for PSS-10 Questionnaire

Measure	Factor 1	Factor 2
Cronbach's Alpha	0.87	0.79
Mean (SD); Range	1.77 (0.92); 0.0 – 4.0	1.53 (0.88); 0.0 – 4.0
Pearson's Correlation with PSS-10 Total Score	0.89 (p-value = 0.0000)	0.69 (p-value = 0.0000)
Percentage of Variance Explained by the Factor	64.11%	35.89%

the questionnaire responses is explained by this factor.

Factor 2 explains 35.89% of the total variance. Factor 2, which is related to managing personal problems and control over life circumstances, is also significant but contributes less to the total variance compared to Factor 1. This indicates that while both factors are important, Factor 1 has a more substantial impact on the overall stress levels and experiences of the students surveyed.

The data in Table 2 show that the Cronbach's alpha values (or coefficient of internal consistency) for Factor 1 (0.87) indicate high reliability (Table 2). The Cronbach's alpha values for Factor 2 (0.79) indicate good reliability (Table 2). A correlation of 0.89 for Factor 1 indicates a very strong positive relationship between this factor and the overall level of stress. A correlation of 0.69 for Factor 2 indicates a strong positive relationship, but not as strong as for Factor 1. The p-values (p=0.0000) indicate the statistical significance of the correlations.

Overall, Factor 1 (Experiences and Stresses) shows high reliability and a strong correlation with the overall PSS-10 score, indicating that this factor is a crucial component of the overall stress level. Factor 2 (Managing Personal Problems and Control over Life Circumstances) is also reliable and significantly correlated with the overall PSS-10 score, but its influence on the overall stress level is less pronounced compared to Factor 1. Both factors significantly and reliably measure different aspects of stress, confirming the validity of the PSS-10 questionnaire structure.

The correlation analysis between the overall PSS-10 score and the indicators of positive and negative affect yielded the following results (Table 3). The correlation between the overall PSS-10 score and positive affect was 0.6932, with a p-value of 0.0000. This indicates a significant positive relationship between these measures. This means that as the overall PSS-10 score, which reflects the level of stress, increases, the level of positive affect also increases. The correlation between the overall PSS-10 score and negative affect was even more significant, with a value of 0.8868 and a p-value of 0.0000. This indicates a very strong positive relationship between stress levels and negative affect. This demonstrates that as stress increases, the level of negative affect also rises. These results confirm that overall PSS-10 scores are closely related to both positive and negative emotional states, with a more pronounced impact on negative emotions.

The survey results are presented in Table 4.

The main trends show that, on average, men in all countries are taller and heavier than women (Table 4). The average age of students varies across countries, with the greatest variations in Ukraine. Polish female students are older than Romanian and Ukrainian female students. Romanian male students have the lowest average overall score. The significance level in all cases is 0.05, indicating sufficient statistical significance of the differences in the data.

Stress level indicators among students are presented in Table 5.

The results show the distribution of stress levels among students from Poland, Romania, and Ukraine (Table 5). On average, men from all countries show a higher percentage of stress levels than women. The highest number of students with stress level 2 is observed among students from Ukraine (32.65%) and Romania (35.60%), while in Poland, this figure is 4.99%. Among Romanian male students, the highest stress level 1 is observed (73 cases), which constitutes 46.50% of the total number of Romanian students. At the same time, among Ukrainian female students, the highest stress level 2 is observed (96 cases), which constitutes 32.65% of the total number of Ukrainian students. The overall data confirm that stress level 2 is the most common among all categories of students. This indicates a high level of stress among students in general.

Table 3. The results of the correlation analysis between PSS-10 Scores, Positive and Negative affect

Questions Related to Affect (Question Numbers)	Correlation	p-value
Positive Affect (4, 5, 7, 8)	0.6932	0.0
Negative Affect (1, 2, 3, 6, 9, 10)	0.8868	0.0

Table 4. Characteristics of Students from Poland, Romania, and Ukraine by Gender, Age, Height, Weight, and Overall Score.

University	Gender	Age	Age	Height	Height	Weight	Weight	Total	Total	Total_ Gender	Significance_ Level
		mean	std	mean	std	mean	std	mean	std		
Poland	female	21.86	2.21	166.29	5.24	60.36	8.37	19.36	9.22	216	0.05
	male	20.36	1.79	178.73	8.53	75.45	14.39	17.41	6.65	225	0.05
Romania	female	20.4	5.41	165.24	6.23	59.16	8.85	19.21	7.52	216	0.05
	male	19.73	4.33	179.66	6.45	77.44	17.74	14.0	7.06	225	0.05
Ukraine	female	18.92	4.34	165.91	6.24	56.83	10.37	18.46	6.88	216	0.05
	male	21.22	7.55	178.61	7.42	73.11	11.19	16.46	6.49	225	0.05

Table 5. Distribution of Stress Levels among Students from Poland, Romania, and Ukraine by Gender, Including Total Numbers and Percentages.

Category	Gender	Stress Level 1	Stress Level 2	Stress Level 3	Total	% Total	% Female	% Male
Poland	female	4	6	4	14	3.17%	28.57%	42.86%
	male	7	13	2	22	4.99%	31.82%	59.09%
Romania	female	12	37	9	58	13.15%	20.69%	63.79%
	male	73	81	3	157	35.60%	46.50%	51.59%
Ukraine	female	33	96	15	144	32.65%	22.92%	66.67%
	male	10	33	3	46	10.43%	21.74%	71.74%
Total		139	266	36	441			

Table 6. Confusion Matrix for Stress Level Classification Model

Actual \ Predicted	Pred 1	Pred 2	Pred 3	Total
True 1	40	5	0	45
True 2	2	71	0	73
True 3	0	2	13	15
Total	42	78	13	133

Table 7. Classification Report for Stress Level Prediction Model

Class	Precision	Recall	F1-Score	Support
1	0.9524	0.8889	0.9195	45
2	0.9103	0.9726	0.9404	73
3	1.0000	0.8667	0.9286	15
Accuracy	0.9323	0.9323	0.9323	133
Macro Avg	0.9542	0.9094	0.9295	133
Weighted Avg	0.9346	0.9323	0.9320	133

Confirmation of Stress Level Classification Results Using Logistic Regression Model

The study employed a logistic regression model to classify participants' stress levels based on their responses to the PSS-10 questionnaire. This approach allowed for the assessment of how accurately the model could classify stress levels (low, moderate, high) and confirm the distribution of participants across these stress levels. The results are confirmed by the stress level prediction model (Table 6, 7). The model demonstrated high classification accuracy with an overall accuracy of 93.23%. Classification metrics analysis showed that the model achieved high precision for all stress levels (0.9524 for level 1, 0.9103 for level 2, and 1.0 for level 3) and high recall (0.8889 for level 1, 0.9726 for level 2, and 0.8667 for level 3). These results confirm that the model effectively classifies participant responses, matching the initial distribution of stress levels among participants. Thus, the model can be a reliable tool for stress management research.

The logistic regression model demonstrated high accuracy in classifying stress levels among students, confirming the distribution identified in the survey data (Table 7). The performance metrics indicate that the model is reliable and effective in predicting stress levels based on PSS-10 responses. This validation reinforces the initial findings about the distribution of stress levels among students from Poland, Romania, and Ukraine, highlighting the importance of targeted interventions to address stress and mental health issues, especially in regions facing significant challenges like conflict zones.

Discussion

The aim of this study was to assess the level of stress and health conditions among students in Ukraine during the war and compare these indicators with the results of students from Poland and Romania. The results revealed significant differences in stress levels among students from these three countries. On average, men demonstrated higher levels of stress compared to women. Ukrainian and Romanian students more frequently experienced high levels of stress compared to Polish students. The most common level of stress among all categories of students was moderate, indicating a significant impact of stress on the student population overall.

Our results confirm that students in Ukraine experience significant levels of stress and

psychological difficulties in the context of the military conflict. As studies have shown, Ukrainian students exhibit higher levels of physical activity, which can serve as a coping strategy under stress [16]. At the same time, they face serious psycho-emotional problems, including depression, anxiety, and insomnia [44]. These findings correlate with results from studies conducted in various countries, where students also show high levels of perceived stress and anxiety [18, 19, 78].

Compared to Polish and Romanian students, Ukrainian students showed higher levels of stress related to personal health and lack of social support [67]. In Poland, first-year dental students exhibit high levels of stress; however, this is related to academic workload and professional demands rather than external factors such as war [61]. In Romania, the stress level is also high, but the causes and nature differ somewhat from those of Ukrainian students.

The assessment of anxiety, stress, and health conditions among Romanian university students has been covered in various studies. Specifically, Balgiu et al. [68] confirmed the adequacy of the PSS-14 questionnaire for assessing perceived stress, making it a useful tool for studying stress among dental students. Ionescu et al. [70] found a negative correlation between depression, anxiety, and insomnia with overall satisfaction with e-learning. Palos [71] discovered that students with high levels of basic self-esteem reported low levels of burnout.

While Romanian students face economic and academic stressors, Ukrainian students experience significant stress related to the war, leading to higher levels of anxiety and depression. Polish students, although experiencing stress, are less likely to face extreme situations like their Ukrainian counterparts. This may explain the lower stress levels in Poland. These differences highlight the necessity of considering specific contexts and circumstances when developing support programs and interventions for students in different countries.

Research shows that cognitive empathy and emotional support play a key role in reducing stress levels among students [16]. This underscores the importance of implementing programs aimed at developing psychological flexibility and social support, as has been demonstrated in other countries [19, 20].

Studies conducted in the context of the war in Ukraine confirm the significant impact of the conflict on the physical and psycho-emotional state of students. Ukrainian students exhibit higher levels of physical activity compared to Polish students, despite significant motivational barriers [1]. The decrease in resilience among adults and higher resilience among youth depend on residence and subjective assessment of safety [2, 3]. The deterioration in psycho-emotional state is supported by data [4, 5, 75, 79]. A high percentage of students have been exposed to the war, leading to nightmares, fear of war, and insomnia, especially among women [6, 7]. The high prevalence of anxiety and stress among students, particularly among young people and women, necessitates special intervention programs [8, 9]. Other causes of anxiety and stress among students include temporal, financial, and social stress factors and related symptoms [76]; resilience in the context of positive psychology [80]; and personal factors [77].

Our study also found a high level of physical activity among Ukrainian students, which may indicate an effort to maintain physical fitness as a coping mechanism for stress. Ukrainian youth are compelled to increase their resilience to stress, highlighting the importance of the social environment and a sense of security for psychological well-being. Our results show high levels of depression and anxiety among students, particularly among women. These findings underscore the significant impact of the war on the mental health of Ukrainian students and the need to develop support programs to reduce stress levels and improve their psycho-emotional state.

Nevertheless, despite the positive outcomes of short-term interventions, attention must be given to long-term strategies for supporting students in the context of military conflict. Implementing such measures could include developing programs for stress management and emergency adaptation, which would help students better cope with psychological burdens and improve their overall health.

Thus, our results highlight the need for further research and the development of targeted support programs for students living in war conditions. These measures could significantly enhance their mental and physical health, as well as their academic performance.

Conclusions

The conducted study confirmed the significant impact of the military conflict in Ukraine on the physical and psycho-emotional state of students. Ukrainian students demonstrate high levels of physical activity, which may indicate an effort to use physical activity as a coping mechanism for stress. The level of resilience highlights the importance of the social environment and a sense of security. The high levels of anxiety and stress symptoms, especially among women and younger students, underscore the need for the development and implementation of psychological support and intervention programs to improve the psycho-emotional state of this group.

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