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*ORIGINAL RESEARCH*

# Psychological Distress and Healthy Lifestyle among University Students in Wartime

**Authors' Contribution:**
**A** – Study design;
**B** – Data collection;
**C** – Statistical analysis;
**D** – Data interpretation;
**E** – Manuscript preparation;
**F** – Literature search;
**G** – Funds collection

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**Abstract**

**Background and Aim of Study:** *The war in Ukraine, which is still ongoing, has a significant impact on the mental state of each individual. The same applies to university students forced to seek refuge inside or outside the country.*
*The aim of the study: to identify the characteristics of psychological distress experienced by university students in a war context and the role of a healthy lifestyle in overcoming it.*

**Material and Methods:** *The study was conducted by Uzhhorod National University (Ukraine) in February 2025, involving the administration of adapted DASS-21 and HPLP-II psychological tests via the Google Forms platform. The respondents, aged between 18 and 35, were divided into two groups: those who were forced to relocate to other regions (European Union and Ukraine) and those who did not change their place of residence (Ukraine). Psychological distress and healthy lifestyle behaviours among students in wartime were identified using the DASS and HPLP-II. These tools demonstrated high internal consistency, with values ranging from 0.916 to 0.951. There was a statistically significant negative correlation between psychological distress and health-promoting lifestyles.*

**Results:** *The levels of depression and anxiety were significantly higher among students in Group 1 than among those in Group 2. The study revealed the following gender-related findings: high average scores on the Depression and Anxiety scales (13.4 and 12.3 points, respectively) among women in Group 1; high average scores on the Stress scale (12.4 and 12.1 points, respectively) among men in all groups. The following healthy lifestyle practices play an important role in helping both groups to overcome the symptoms of psychological distress: interpersonal relationships (2.8 / 3.0 points), spiritual growth (2.8 / 2.9 points), and stress management (2.6 / 2.7 points). They had high and moderate HPLP-II scores. Students in Groups 1 and 2 demonstrated poor use of practices such as taking responsibility for their health (2.15 and 2.23 points), being physically active (2.2 and 2.3 points) and eating healthily (2.3 and 2.4 points). They had low HPLP-II scores.*

**Conclusions:** *The high levels of depression and anxiety experienced by university students during the war were caused by a combination of psychogenic factors and their own behaviour. It does not promote mental health. The study results indicate the need to introduce measures that increase motivation for personal health and physical activity among university students, tailored to their specific requirements and needs.*

**Keywords:** *psychological distress, anxiety, depression, stress, healthy lifestyle students, war*

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## Introduction

Full-scale war has been raging in Ukraine for four years, affecting the psychological well-being of every Ukrainian citizen. People were forced to save their lives and those of their loved ones. They had to leave their homes and move to a safer city, which meant changing their lifestyle and experiencing losses: loved ones, homes and their way of life. Like all Ukrainians, students are trying to adapt to the war. Some have fled to safer regions of Ukraine or European Union (EU) countries, while others have remained in their homes.

Current research (Blanco et al., 2021; Chao et al., 2023; Morais et al., 2020; Pypenko et al., 2020) shows that adapting to new conditions and reducing distress involves changing to a particular lifestyle to a more appropriate one that promotes health.

*The aim of the study.* To identify the characteristics of psychological distress experienced by university students during wartime and the role of a healthy lifestyle in overcoming it.

## Materials and Methods

The study was conducted among students aged between 18 and 35 at Uzhhorod National University in February 2025.

All respondents were divided into two groups:

Group 1 comprised 109 university students who were forced to change their residence during the war, moving to other regions of Ukraine or EU countries. Of these students, 28 (25.7%) were men and 81 (74.3%) were women.

Group 2 comprised 117 university students who did not leave their usual place (Ukraine) of residence during the war. Of these students, 18 (15.4%) were men and 99 (84.6%) were women.

Due to the war in Ukraine, the study was conducted by sharing psychological techniques via Google Forms with potential participants. In addition, all groups were observed during both remote and face-to-face classes. Individual interviews were conducted as required.

*The Depression Anxiety Stress Scales* (DASS-21, Lovibond et al., 1995; Ukrainian adaptation by Melnyk & Stadnik, 2023) are used to collect data on the level of distress and its content. The DASS-21 is a shortened version of the 21-question DASS designed to measure negative emotional states such as depression, anxiety and stress. The number of students displaying normal, mild, moderate, severe or extremely severe manifestations is assessed. On the Depression/Anxiety/Stress scales, the scores are as follows: normal manifestations: 0–3/0–4/0–7 points; mild manifestations: 5–6/4–5/8–9 points; moderate manifestations: 7–10/6–7/10–12 points; severe manifestations: 11–13/8–9/13–16 points; extremely severe manifestations: 14+ / 10+ / 17+. The average score on each scale is calculated using the arithmetic mean. The DASS-21 is a quick and effective way of assessing psychological distress and its components. It is widely used in scientific and clinical research.

The DASS-21 scores showed good internal consistency. The Cronbach's alphas were 0.916 and 0.951 for Group 1 students (who had been temporarily displaced) and Group 2 students (who had not left their usual place of residence), respectively.

*The Health Promotion Lifestyle Profile-II* (HPLP-II, Walker et al., 1987; Ukrainian adaption by Melnyk & Stadnik, 2025) questionnaire assesses health-promoting behaviours and lifestyles. The questionnaire assesses health-promoting behaviours. The HPLP-II is a widely used tool for evaluating health-promoting behaviours and lifestyles. It has been shown to be valid and reliable in numerous studies. The questionnaire contains 52 statements about attitudes towards healthy lifestyles. These statements are classified into six subscales: health responsibility (HR), physical activity (PA), nutrition (Nu), spiritual growth (SG), interpersonal relationships (IR) and stress management (SM). Taking responsibility for one's health means recognising the importance of improving one's health and the health of others. Physical activity includes regular physical exercise. Eating habits involve establishing a nutritional routine and making informed food choices. Spiritual growth involves achieving self-realisation. Interpersonal relationships are about fostering intimacy and closeness with others. Stress management involves recognising the sources of stress and taking steps to control it and achieve relaxation. The frequency of each behaviour was determined using a 4-point Likert response scale consisting of the following options: 1 – "Never"; 2 –

"Sometimes"; 3 – "Often"; 4 – "Regularly". The average score for each subscale is obtained by adding the scores for each item and dividing by the number of items. HPLP-II subscale mean scores below 2.5 are considered low; between 2.5 and 3.0, moderate; and above 3.0, high (Dhiman & Chawla, 2017). The total HPLP-II score is obtained by taking the average of all 52 responses. According to the guidelines (Lim et al., 2016; Walker et al., 1987), the overall HPLP II score is categorised as one of the following four levels: poor (52–90), moderate (91–129), good (130–168) or excellent (169–208). Higher scores indicate a higher frequency of health-promoting behaviours.

The data were collected and analysed using the Statistical Package for the Social Sciences (SPSS), version 30.0.

The Cronbach's alphas for the HPLP-II scores in the present study were 0.918 and 0.926 for Group 1 students (who had been temporarily displaced) and Group 2 students (who had not left their usual place of residence), respectively.

## Results

We examined the characteristics of psychological distress among university students using the DASS-21 questionnaire, which enables us to evaluate levels of depression, anxiety and stress.

Mean scores for all item measures were calculated. The general results of psychological distress for two groups of university students by the scales of depression, anxiety, and stress during wartime are shown in Table 1. Figure 1 illustrates how psychological distress manifests in the two groups, as measured by the Depression, Anxiety and Stress Scales (DASS).

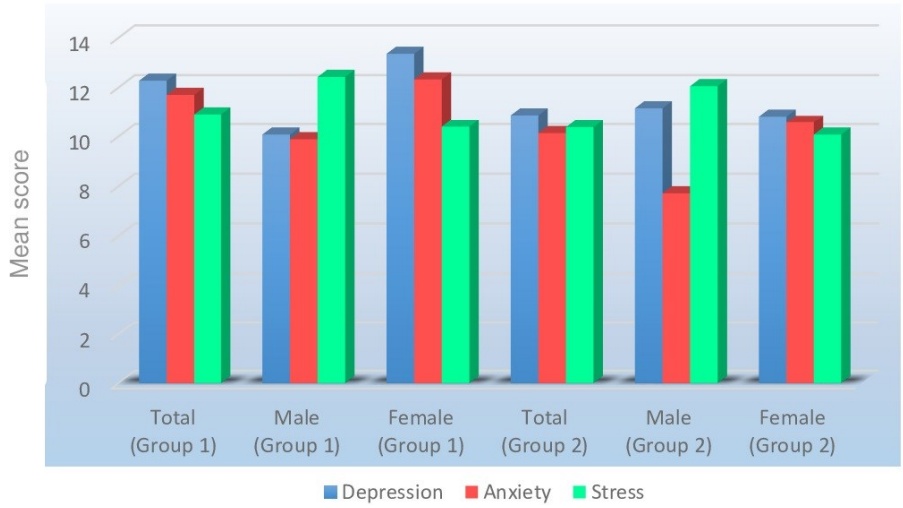
**Table 1**

*The Scores for the Assessment of Psychological Distress by the Scales (Depression, Anxiety, and Stress) among Students in Wartime*

| Scales | Group 1, points | | | Group 2, points | | |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female |
| Depression | 12.3 | 10.1 | 13.4 | 10.9 | 11.2 | 10.8 |
| Anxiety | 11.7 | 9.9 | 12.3 | 10.1 | 7.7 | 10.6 |
| Stress | 10.9 | 12.4 | 10.4 | 10.4 | 12.1 | 10.1 |

**Figure 1**

*Comparative Characteristics of the Manifestations of Depression, Anxiety and Stress among Students in Both Groups*




Among Group 1 students who are internally displaced, we observe high average scores on the Depression and Anxiety scales (12.3 and 11.7 points, respectively). It indicates an increase in neurotic symptoms among university students as the war in Ukraine continues, as evidenced by an increase in reports of low mood, low self-esteem, pessimism, apathy, lethargy, fatigue, constant dissatisfaction, and hopelessness. Students in Group 2 had significantly lower scores on the Depression and Anxiety scales (10.9 and 10.1 points, respectively), indicating that they had adapted better to the current conditions. The scores on the Stress scale are almost identical across all groups, indicating a consistent level of acute stress among students.

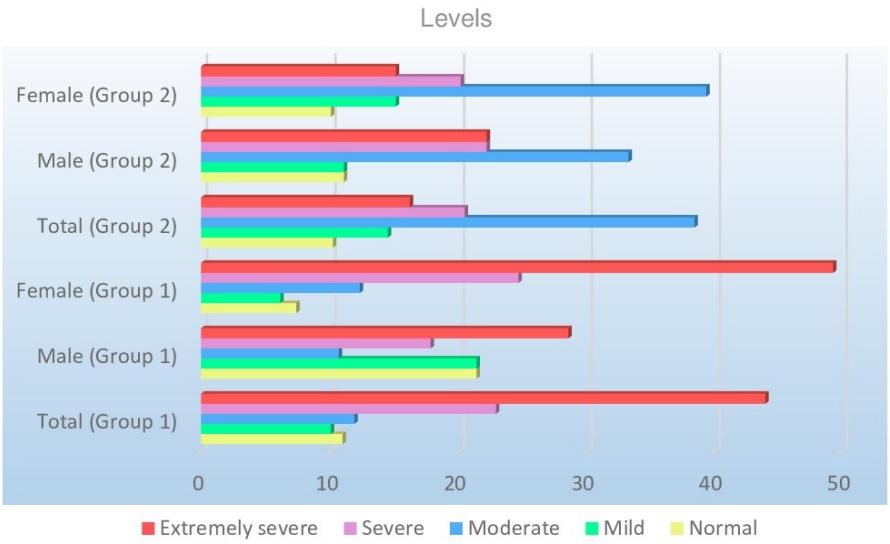
It should be noted that the women in Group 1 scored highly on the Depression and Anxiety scales, with scores of 13.4 and 12.3 points, respectively. We believe this is due to their heightened emotional response to Ukraine's uncertain military and humanitarian situation. It manifested as increased helplessness, uncertainty, powerlessness, insecurity, loneliness, a sense of failure, and an inability to make decisions. On average, men in Groups 1 and 2 have higher scores on the Stress scale (12.4 and 12.1 points, respectively). These scores are

associated with acute psychogenic factors related to possible mobilisation, unemployment, and a lack of funds.

Figure 2 presents further details on the manifestations of depression among university students in wartime.

**Figure 2**

*Levels of Depression Severity among Students in Wartime*




The profile of depression among Group 1 students exhibits certain peculiarities. The highest rates of depression are observed: 44.04% are extremely severe, and 22.94% are severe. At the same time, no manifestations (19.6%), mild and moderate manifestations of depression were significantly lower (11.0%, 10.1% and 11.9%, respectively). It suggests that, despite being in a safe place, there is a significant psychogenic burden. The rate of extremely severe depression among students in Group 2 (who did not leave their usual place of residence during the war) was almost three times lower (16.2%) than in Group 1. This group shows the highest prevalence of moderate depression (38.5%), with smaller percentages for severe (20.5%) and mild (14.5%) manifestations. It suggests that this group of students has adapted well to war conditions.

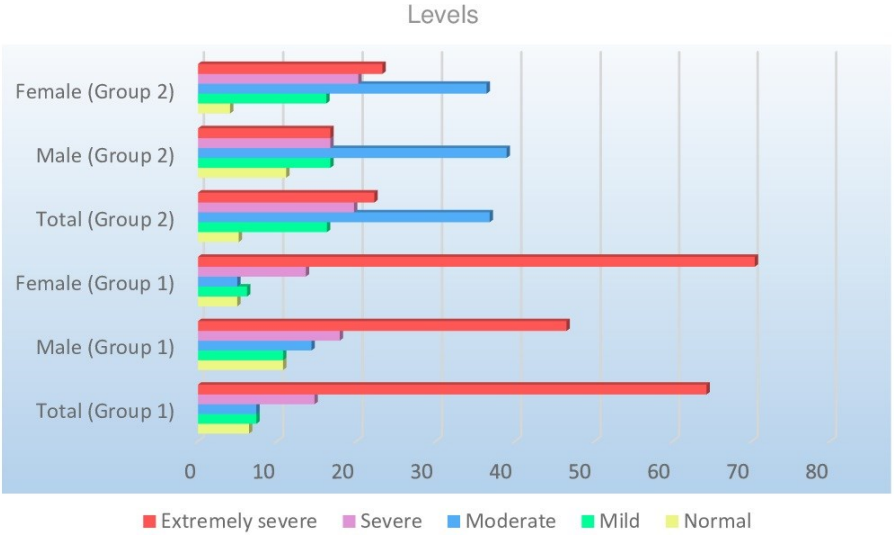
The absence of depressive symptoms was most prevalent among men in Group 1 (21.4%), which was more than twice as high as in other gender groups. It may indicate latent depression, which can manifest as substance abuse, somatic vegetative disorders, and deviant behaviour.

Additionally, we found that women in Group 1 (49.4%) exhibited the most severe symptoms of depression, indicating significant mental distress.

Figure 3 shows the manifestations of anxiety among students in wartime.

**Figure 3**

*Levels of Anxiety among Students in Wartime*



Among the students who did not change their place of residence during the war (Group 2), 5.1% showed no signs of anxiety, 16.2% showed mild symptoms, 19.7% showed severe symptoms, and 22.2% showed extremely severe symptoms.

The moderate level of anxiety was the most prevalent in this group (36.8%). The highest rates of severe and extremely severe anxiety were observed among students of Group 1 (14.7% and 64.2%, respectively), indicating a significant deterioration in their psychological state and the presence of neurotic disorders and maladjustment in the fourth year of the war.

These symptoms included heart palpitations, pain behind the sternum, rapid breathing, excessive sweating, trembling, weakness, fatigue, dizziness, frequent urination and sleep problems.

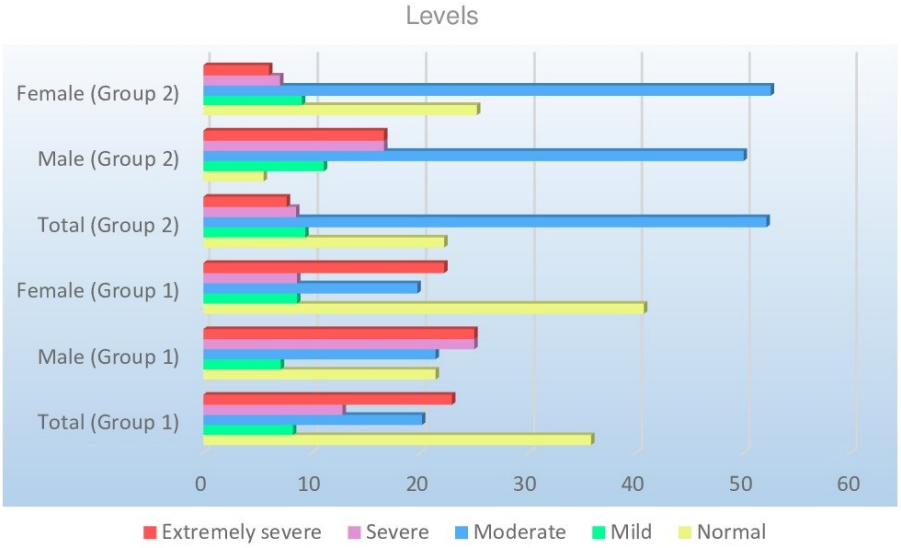
According to the results of the gender study, the highest rates of extremely severe anxiety were found among women in Group 1 (70.4%), which was significantly higher than the rate found among men in Group 1 (46.4%). In Group 2, the highest rates of moderate anxiety were observed in both men and women (36.4% and 36.4%, respectively).

Severe and extremely severe anxiety was more prevalent in women (20.2% and 23.2%, respectively) than in men (16.7%), indicating greater maladjustment in women.

Figure 4 shows the manifestations of stress among students in wartime.

**Figure 4**

*Levels of Stress among Students in Wartime*




Among students who are internally displaced persons (Group 1), manifestations on the Stress scale showed that 35.8% had no stress, 8.3% had mild stress, 20.2% had moderate stress, 12.8% had severe stress, and 22.9% had extremely severe stress.

The manifestations of stress were slightly lower in Group 2 students.

Mild manifestations of stress were observed in 9.4% of people, moderate manifestations in 52.1%, severe manifestations in 8.6%, and extremely severe manifestations in 7.7%. It indicates a stabilisation of acute stress symptoms among Group 2 students in wartime conditions.

Gender-specific stress manifestations among students are severe and extremely severe among men in Groups 1 and 2 (25.0% and 16.7%, respectively), which is higher than the corresponding figures for women (8.6% and 7.1%, respectively, for severe stress; 22.2% and 6.1%, respectively, for extremely severe stress). It indicates that male students have a worse ability to adapt to stress.

The general characteristics of psychological distress among students in wartime are shown in Table 2, as measured by the Depression, Anxiety and Stress Scales.

Table 3 summarises the descriptive and correlational statistics obtained for the total DASS-21 scale and its three subscales. The results showed that the subscales of Stress and Depression were more strongly associated with each other than with Anxiety. Meanwhile, Group 2 has a higher level of subscale connectivity than Group 1 (0.853 and 0.764, respectively).

Cronbach's alpha coefficients were calculated to study internal consistency (coefficients for Group 1 / Group 2). The total DASS scale showed a high internal consistency (*alpha* = 0.916 / 0.951.

The Depression subscale had the highest measure of internal consistency (*alpha* = 0.893 / 0.905), followed by the Anxiety subscale (*alpha* = 0.851 / 0.893), and finally, the Stress subscale (*alpha* = 0.808 / 0.833).

The subscales demonstrate convergent validity with other measures of depression (Crawford & Henry, 2003) and anxiety (Bedford & Deary, 1999). For the present study, composite and individual scale scores were calculated for each respondent.

It was hypothesised that there would be a negative correlation between the total and subscale (Depression, Anxiety and Stress) scores of the DASS and the HPLP-II scores.

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**Table 2**

*General Characteristics of Psychological Distress among Students in Wartime, as Measured by the Depression, Anxiety and Stress Scales*

| Manifestation level | Group 1 (N=109, including 28 males and 81 females) | | | | | | Group 2 (N=117, including 18 males and 99 females) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | total | % | male | % | female | % | total | % | male | % | female | % |
| Normal | 7 | 6.4 | 3 | 10.7 | 4 | 4.9 | 6 | 5.1 | 2 | 11.1 | 4 | 4.0 |
| Mild | 8 | 7.3 | 3 | 10.7 | 5 | 6.2 | 19 | 16.2 | 3 | 16.7 | 16 | 16.2 |
| Moderate | 8 | 7.3 | 4 | 14.3 | 4 | 4.9 | 43 | 36.8 | 7 | 38.9 | 36 | 36.4 |
| Severe | 16 | 14.7 | 5 | 17.9 | 11 | 13.6 | 23 | 19.7 | 3 | 16.7 | 20 | 20.2 |
| Extremely severe | 70 | 64.2 | 13 | 46.4 | 57 | 70.4 | 26 | 22.2 | 3 | 16.7 | 23 | 23.2 |
| Average score (Anxiety) | 11.71 | | 9.89 | | 12.33 | | 10.14 | | 7.72 | | 10.58 | |
| Normal | 12 | 11.0 | 6 | 21.4 | 6 | 7.4 | 12 | 10.3 | 2 | 11.1 | 10 | 10.1 |
| Mild | 11 | 10.1 | 6 | 21.4 | 5 | 6.2 | 17 | 14.5 | 2 | 11.1 | 15 | 15.2 |
| Moderate | 13 | 11.9 | 3 | 10.7 | 10 | 12.3 | 45 | 38.5 | 6 | 33.3 | 39 | 39.4 |
| Severe | 25 | 22.9 | 5 | 17.9 | 20 | 24.7 | 24 | 20.5 | 4 | 22.2 | 20 | 20.2 |
| Extremely severe | 48 | 44.0 | 8 | 28.6 | 40 | 49.4 | 19 | 16.2 | 4 | 22.2 | 15 | 15.2 |
| Average score (Depression) | 12.28 | | 10.08 | | 13.36 | | 10.88 | | 11.17 | | 10.83 | |
| Normal | 39 | 35.8 | 6 | 21.4 | 33 | 40.7 | 26 | 22.2 | 1 | 5.6 | 25 | 25.3 |
| Mild | 9 | 8.3 | 2 | 7.1 | 7 | 8.6 | 11 | 9.4 | 2 | 11.1 | 9 | 9.1 |
| Moderate | 22 | 20.2 | 6 | 21.4 | 16 | 19.8 | 61 | 52.1 | 9 | 50.0 | 52 | 52.5 |
| Severe | 14 | 12.8 | 7 | 25.0 | 7 | 8.6 | 10 | 8.5 | 3 | 16.7 | 7 | 7.1 |
| Extremely severe | 25 | 22.9 | 7 | 25.0 | 18 | 22.2 | 9 | 7.7 | 3 | 16.7 | 6 | 6.1 |
| Average score (Stress) | 10.92 | | 12.43 | | 10.40 | | 10.38 | | 12.06 | | 10.08 | |

**Table 3**

*Descriptive Statistics and Pearson Correlation Coefficients of the Subscales and Total DASS Score*

| Subscales | Mean | | Standard Deviation | | Correlation Coefficients | | | |
|---|---|---|---|---|---|---|---|---|
| | Group 1 | Group 2 | Group 1 | Group 2 | Depres-sion | Anxiety | Stress | DASS-total |
| Depression | 3.60 | 3.44 | 3.67 | 4.56 | - | 0.711** | 0.764** | 0.887** |
| Anxiety | 4.58 | 5.23 | 4.62 | 4.82 | 0.828** | - | 0.714** | 0.893** |
| Stress | 8.11 | 6.67 | 4.14 | 4.50 | 0.853** | 0.747** | - | 0.860** |
| DASS-total | 16.28 | 15.34 | 10.94 | 12.96 | 0.955** | 0.922** | 0.925** | - |

*Note.* **Correlation is significant at the 0.01 level; correlations for Group 1 are presented above the diagonal and correlations for Group 2 below the diagonal; DASS-total – the DASS-21 scale in total.

The study of students' health-promoting behaviour and lifestyle was conducted using the Health Promotion Lifestyle Profile-II questionnaire.

Table 4 presents the results of calculating the total healthy lifestyle indicator among university students in a war context.

**Table 4**

*Overall Score for the General Indicator of a Healthy Lifestyle among University Students in Wartime*

| Indicator | Group 1, points | | | Group 2, points | | |
|---|---|---|---|---|---|---|
| | Total | Male | Female | Total | Male | Female |
| General indicator of a healthy lifestyle | 126.3 | 122.0 | 127.7 | 132.2 | 136.1 | 131.4 |

According to the overall HPLP II score, Group 1 has a moderate health-promoting lifestyle (126.3 points), while Group 2 has a good one (132.2 points). It suggests that Group 2 is better able to adopt health-promoting behaviours. At the same time, men in Group 1 were less concerned about leading a healthy lifestyle than women, achieving the lowest overall score (122.0 points) of all the gender groups.

Meanwhile, men in Group 2 achieved the highest score (136.1 points).

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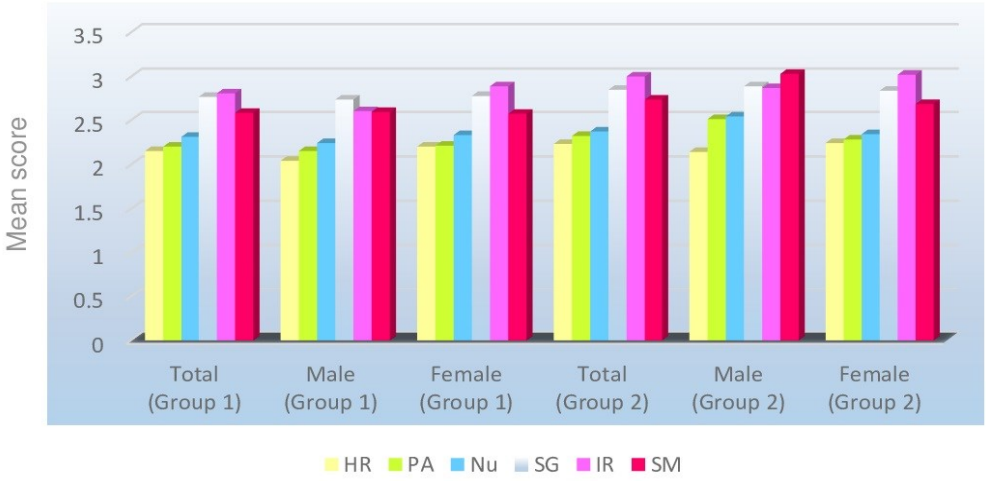
We believe that it is mainly because they are financially insecure and lack support from relatives who are also in difficult circumstances.

Figure 5 shows the grouping of healthy lifestyle indicators by subscales and the assessment of their manifestation.

**Figure 5**

*Assessing Healthy Lifestyle Indicators Grouped by Subscales*




Students in Group 1 achieved moderate mean scores on the interpersonal relationships (IR) (2.81), spiritual growth (SG) (2.77 points) and stress management (SM) (2.58 points) subscales and low mean scores on the health responsibility (HR) (2.15 points), physical activity (PA) (2.20 points) and nutrition (Nu) (2.31 points) subscales. It demonstrates how important it is for them to deal with personal uncertainty (e.g. how long will the war last, and what should I do?) and psychological pressure (e.g. academic pressure, family pressure, peer pressure, etc.) daily. Personal health, purposeful physical activity, and good nutrition are often neglected.

The mean scores were higher for Group 2. They achieved high scores on the interpersonal relationships (IR) subscale (3.00 points) and moderate scores on the spiritual growth (SG) (2.85 points) and stress management (SM) (2.74 points) subscales. Group 2 students had the lowest mean score on the health responsibility (HR) subscale (2.23 points), which indicates their stability, the ability to spend more time with family and friends, and the lack of opportunity to care about personal health when people are killed and injured during the war.

The gender-specific characteristics of the students in Group 1 were as follows: the highest mean scores were in the spiritual growth (SG) subscale for men (2.74 points) and in the interpersonal relationships (IR) subscale for women (2.89 points). The lowest scores were in the health responsibility (HR) subscale for both men and women in Groups 1 and 2 (2.04 and 2.20 points for Group 1 and 2.14 and 2.24 points for Group 2). It should be noted that men in Group 1 achieved lower scores than women on the physical activity (PA) subscale (2.15 and 2.21 points, respectively). For group 2, men had a higher mean score on the stress management subscale (3.03 points) than women, who had a higher mean score on the interpersonal relationships subscale (3.02 points).

Table 5 summarises the descriptive and correlational statistics obtained for the total HPLP-II scale and its six subscales.

**Table 5**

*Descriptive Statistics and Pearson Correlation Coefficients of the HPLP-II Subscales and Total HPLP-II Score*

| Sub-scales | Mean | | Standard Deviation | | Correlation Coefficients | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | G1 | G2 | G1 | G2 | HR | PA | Nu | SG | IR | SM | HPLP-total |
| HR | 2.15 | 2.23 | 0.36 | 0.48 | – | 0.474** | 0.426** | 0.499** | 0.491** | 0.447** | 0.706** |
| PA | 2.20 | 2.32 | 0.41 | 0.62 | 0.533** | – | 0.621** | 0.570** | 0.407** | 0.522** | 0.795** |
| Nu | 2.31 | 2.37 | 0.39 | 0.49 | 0.633** | 0.795** | – | 0.549** | 0.483** | 0.515** | 0.772** |
| SG | 2.77 | 2.85 | 0.62 | 0.56 | 0.575** | 0.448** | 0.461** | – | 0.491** | 0.635** | 0.833** |
| IR | 2.81 | 3.00 | 0.34 | 0.43 | 0.625** | 0.476** | 0.456** | 0.762** | – | 0.420** | 0.630** |
| SM | 2.29 | 2.45 | 0.36 | 0.54 | 0.499** | 0.436** | 0.495** | 0.870** | 0.667** | – | 0.787** |
| HPLP-total | 14.52 | 15.24 | 1.98 | 2.34 | 0.798** | 0.745** | 0.704** | 0.875** | 0.837** | 0.772** | – |

*Note.* **Correlation is significant at the 0.01 level; correlations for Group 1 (G1) are presented below the diagonal and correlations for Group 2 (G2) above the diagonal; HR – health responsibility subscale of the HPLP-II scale; PA – physical activity subscale of the HPLP-II scale; Nu – nutrition subscale of the HPLP-II scale; SG – spiritual growth subscale of the HPLP-II scale; IR – interpersonal relationships subscale of the HPLP-II scale; SM – stress management subscale of the HPLP-II scale; HPLP-total – the HPLP-II scale in total.

Cronbach's alpha coefficients were calculated to study internal consistency (coefficients for Group 1 / Group 2). The total HPLP-II scale showed a high internal consistency (*alpha* = 0.918 / 0.926). The SG, SN, and IR subscales had the highest measure of internal consistency: the SG subscale (*alpha* = 0.914 / 0.931), the SM subscale (*alpha* = 0.905 / 0.924), the IR subscale (*alpha* = 0.872 / 0.898), followed by the PA (*alpha* = 0.845 / 0.881) and Nu (*alpha* = 0.841 / 0.874) subscales, and finally, the HR subscale (*alpha* = 0.806 / 0.842).

Table 6 shows the correlations between the total DASS-21, its subscales and the total HPLP-II scale.

**Table 6**

*Bivariate Correlations with Validation Measures for the DASS and HPLP Subscales and Total Score*

| Validity measure | DASS (D) | DASS (A) | DASS (S) | DASS Total | HPLP (HR) | HPLP (PA) | HPLP (Nu) | HPLP (SG) | HPLP (IR) | HPLP (SM) | HPLP Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| DASS (D) | - | 0.59 | 0.71 | 0.87 | -0.06 | -0.18 | -0.17 | -0.52 | -0.28 | -0.29 | -0.35 |
| DASS (A) | 0.60 | - | 0.69 | 0.84 | -0.09 | -0.16 | -0.18 | -0.39 | -0.24 | -0.28 | -0.31 |
| DASS (S) | 0.73 | 0.71 | - | 0.92 | -0.03 | -0.17 | -0.13 | -0.33 | -0.16 | -0.37 | -0.27 |
| DASS Total | 0.89 | 0.85 | 0.94 | - | -0.07 | -0.19 | -0.18 | -0.46 | -0.25 | -0.26 | -0.34 |
| HPLP (HR) | -0.04 | -0.08 | -0.01 | -0.05 | - | 0.38 | 0.43 | 0.41 | 0.43 | 0.42 | 0.72 |
| HPLP (PA) | -0.15 | -0.14 | -0.15 | -0.17 | 0.39 | - | 0.57 | 0.30 | 0.15 | 0.39 | 0.66 |
| HPLP (Nu) | -0.15 | -0.16 | -0.11 | -0.16 | 0.45 | 0.58 | - | 0.32 | 0.18 | 0.33 | 0.67 |
| HPLP (SG) | -0.50 | -0.37 | -0.31 | -0.44 | 0.43 | 0.32 | 0.34 | - | 0.65 | 0.57 | 0.77 |
| HPLP (IR) | -0.26 | -0.22 | -0.14 | -0.23 | 0.45 | 0.17 | 0.20 | 0.67 | - | 0.39 | 0.67 |
| HPLP (SM) | -0.28 | -0.26 | -0.35 | -0.24 | 0.44 | 0.41 | 0.34 | 0.59 | 0.41 | - | 0.70 |
| HPLP Total | -0.33 | -0.29 | -0.25 | -0.32 | 0.74 | 0.68 | 0.69 | 0.79 | 0.69 | 0.72 | - |

*Note.* Correlation is significant at the 0.001 level; correlations for Group 1 are presented above the diagonal and correlations for Group 2 below the diagonal; DASS (D) – Depression subscale of the DASS-21 scale; DASS (A) – Anxiety subscale of the DASS-21 scale; DASS (S) – Stress subscale of the DASS-21 scale; DASS Total – the DASS-21 scale in total; HPLP (HR) – Health responsibility subscale of the HPLP-II scale; HPLP (PA) – Physical activity subscale of the HPLP-II scale; HPLP (Nu) – Nutrition subscale of the HPLP-II scale; HPLP (SG) – Spiritual growth subscale of the HPLP-II scale; HPLP (IR) – Interpersonal relationships subscale of the HPLP-II scale; HPLP (SM) – Stress management subscale of the HPLP-II scale; HPLP Total – the HPLP-II scale in total.

As expected, the depression, anxiety, stress subscales and the total DASS scale were negatively correlated with the total score of the HPLP and its subscales.

Significant negative correlations were found between the total DASS scale and the spiritual growth subscale of the HPLP-II scale (-0.44 and -0.46 for Group 1 and 2, respectively).

## Discussion

Depression, anxiety and stress are common among students (Melnyk et al., 2024; Mykhaylyshyn et al., 2024). These factors are exacerbated by the peculiarities of university life, such as independence from parental control, the use of psychotropic substances (alcohol, tobacco and drugs), peer pressure, the need for social recognition and the desire to develop one's personality (Dhiman & Chawla, 2017; Kegler, 1999; Stadnik et al., 2022; 2023).

An analysis of scientific publications on mental health disorders during the pandemic shows that the prevalence of depression, anxiety and stress varied among students in different countries. For instance, the prevalence of depression among university students in Greece was reported to be between 74.3% and 80.7% (Kaparounaki et al., 2020), while in Uganda it was found to be 51.2% (Sazakli et al., 2021). In India, 58% of students suffered from depression during the pandemic, whereas in Bangladesh, this figure was 80.2% (Biswas, 2022). It is estimated that the prevalence of anxiety among university students in different regions during the pandemic was 60%, 71.5% and 87.7% (Safa et al., 2021; Siddik et al., 2024). The main reasons for the high prevalence of depression and anxiety among university students are unemployment, financial insecurity, and poverty (Islam et al., 2020).

Some scholars (Hope & Henderson, 2014; Melnyk & Stadnik, 2020; Melnyk et al., 2022) have noted the prevalence of depression, anxiety, and stress among students in different countries. They have pointed to the following variations: depression occurs in 7.7–65.5% of students; anxiety in 6.0–66.5%; and psychological distress in 12.2–96.7%.

Recent empirical studies have revealed an overall decline in the physical and emotional well-being of migrants and internally displaced individuals (Agudelo-Suárez et al., 2009). It is due to discrimination experienced in everyday life and perceived discrimination at work and home.

Several studies have found (Kang et al., 2012; Kurt et al., 2021; Leiler et al., 2019; Vrabel et al., 2023) that the prevalence of depression and anxiety symptoms among migrants is 3-5 times higher than in the general population.

In addition, migrants are affected by additional stressors (Jasinskaja-Lahti et al., 2007), such as instability, fewer desirable employment opportunities, and discrimination based on potential language and ethnic restrictions, as well as low socioeconomic status.

The present study has shown that even staying in a secure environment abroad can be stressful. University students who were forced to move during the war experienced significantly higher levels of depression and anxiety. The scores for extremely severe depression and anxiety were 2–3 times higher for Group 1 students (44.0 and 64.2 points, respectively) than for Group 2 students who did

not change residence (16.2 and 22.2 points, respectively). The high average scores of Group 1 students on the Depression and Anxiety scales (12.3 and 11.7 points, respectively) suggest an increase in neurotic symptoms among university students in the context of the ongoing war in Ukraine. It manifests as an increase in complaints of low mood, low self-esteem, pessimism, apathy, lethargy, fatigue, constant dissatisfaction and hopelessness.

Further analysis of academic research on the role of healthy lifestyles in overcoming psychological distress shows that many publications (Bi et al., 2014; Mohamed et al., 2022; Wei et al., 2012; Yahia et al., 2014) assess the impact of health-promoting behaviours on the mental health of university students in Japan, Africa, China, etc. A healthy lifestyle includes taking responsibility for one's health, being physically active, eating healthily, growing spiritually, developing good interpersonal relationships, and managing stress. A healthy lifestyle is key to maintaining and improving health (Blanco et al., 2021; Morais et al., 2020). There is sufficient evidence to show that a healthy lifestyle significantly impacts physical and mental health.

We found a statistically significant inverse correlation between health-promoting behaviour and psychological distress. This finding aligns with previous studies (Castillo-Díaz et al., 2024; Safaie et al., 2020; Slonim et al., 2015; Sousa et al., 2015). Adopting a healthier lifestyle appears to enhance students' mental well-being. Several studies (Chao, 2023; Du et al., 2022; Nazik et al., 2015; Ors, 2024) have found a negative correlation between healthy lifestyles and mental distress in different population groups, including teachers, postpartum women, senior citizens and students. In addition, Basharpoor et al. (2015) found that lifestyles emphasising spiritual growth, stress management, and interpersonal relationships are inversely related to symptoms of depression and anxiety.

Much research has also been conducted into the gender-specific aspects of a healthy lifestyle (Johnson, 2005; Li et al., 2022; Zheng, 2023). These studies show that men perform better in physical activity and stress management. In contrast, women perform better in interpersonal relationships and health responsibilities.

The present study confirms the important role of healthy lifestyle practices, such as maintaining positive interpersonal relationships (mean score: 2.8 / 3.0 points), fostering spiritual growth (mean score: 2.8 / 2.9 points), and managing stress (mean score: 2.6 / 2.7 points), in alleviating symptoms of depression and anxiety. Medium to high mean scores were recorded for both groups. At the same time, we found low mean scores for all groups on the responsibility for health, physical activity and nutrition subscales (2.15, 2.23, 2.20, 2.32 and 2.31, 2.37 points respectively), indicating that students neglect their personal health, physical activity and nutrition in the context of war. Unlike previous studies, we also found that men in Group 1 (internally displaced) had lower mean scores than women in the areas of physical activity (2.15 vs. 2.21 points) and nutrition (2.24 vs. 2.33 points). We believe that it is due to a substantial psychogenic load and the limitations of war, such as possible mobilisation, unemployment and lack of funds.

Promoting healthy lifestyles and mental health is a crucial public health priority, involving educational policies and initiatives that ensure the overall well-being of university students.

## Conclusions

Our research in February 2025 revealed that staying in an unfamiliar environment, even abroad, can be stressful. University students who were forced to move during the war experienced significantly higher levels of depression and anxiety. Thus, the indicators of extremely severe depression and anxiety were 2-3 times higher among students in Group 1 (44.0 and 64.2 points, respectively) than among students in Group 2 who did not change their place of residence (16.3 and 22.2 points, respectively). The high average scores among Group 1 students on the Depression and Anxiety scales (12.3 and 11.7 points, respectively) suggest that their neurotic symptoms are worsening in the context of the ongoing war in Ukraine. It is evident through increased reports of low mood, low self-esteem, pessimism, apathy, lethargy, fatigue, constant dissatisfaction, and hopelessness. The study revealed that women in Group 1 scored higher than men on the Depression and Anxiety scales (13.4 and 12.3 points, respectively). This can be explained by their greater emotional sensitivity to the uncertainty of the military and humanitarian situation in Ukraine. On average, men in all groups scored highly on the stress scale (12.4 and 12.1 points, respectively), indicating the presence of acute psychogenesis associated with possible mobilisation, unemployment, and a lack of funds.

Our study found that healthy lifestyle practices such as maintaining good interpersonal relationships, spiritual growth and stress management played an important role in alleviating symptoms of depression and anxiety for both groups, for which we recorded medium to high mean scores. At the same time, we found that the average scores in all groups were low in the following areas: responsibility for health (2.2 and 2.23 points), physical activity (2.2 and 2.3 points), and nutrition (2.3 and 2.4 points). It indicates that, in the context of war, students neglect their personal health, physical activity, and the quality of their nutrition. It should be noted that, in contrast to those who did not change their place of residence, men of Group 1 (internally displaced) had lower average scores than women in the areas of physical activity (2.15 and 2.21 points, respectively) and nutrition (2.2 and 2.3 points, respectively). It may be due to the high psychogenic load and restrictions imposed by the war, such as possible mobilisation, unemployment and lack of funds.

Thus, the high levels of depression and anxiety experienced by university students during the war are due not only to numerous psychogenic factors, but also to behaviours that hinder the preservation of mental health. The study results indicate the need to introduce health and physical activity programmes into the educational process of university students based on their specific requirements and needs.

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## Ethical Approval

The psychological methods and research procedure used in the study were approved by the Committee on Ethics and Research Integrity of the Scientific Research Institute KRPOCH (protocol No. 025-3/SRIKRPOCH dated 10.08.2024).

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## References

Agudelo-Suárez, A., Gil-González, D., Ronda-Pérez, E., Porthé, V., Paramio-Pérez, G., García, A. M., & Garí, A. (2009). Discrimination, work and health in immigrant populations in Spain. *Social Science & Medicine, 68*(10), 1866–1874. https://doi.org/10.1016/j.socscimed.2009.02.046

Basharpoor, S., Heydarirad, H., Atadokht, A., Daryadel, S. J., & Nasiri-Razi, R. (2015). The role of health beliefs and health promoting lifestyle in predicting pregnancy anxiety among pregnant women. *Journal of Health Education and Health Promotion, 3*(3), 171–180. https://journal.ihepsa.ir/article-1-260-en.html

Bedford, A., & Deary, I. J. (1999). The Delusions-Symptoms-States Inventory (DSSI): Construction, applications and structural analyses. *Personality and Individual Differences, 26*(3), 397-424. https://doi.org/10.1016/S0191-8869(98)00118-4

Bi, J., Huang, Y., Xiao, Y., Cheng, J., Li, F., Wang, T., Chen, J., Wu, L., Liu, Y., Luo, R., & Zhao, X. (2014). Association of lifestyle factors and suboptimal health status: a cross-sectional study of Chinese students. *BMJ Open, 4,* Article e005156. https://doi.org/10.1136/bmjopen-2014-005156

Biswas, P. R., Ahammed, B., Rahman, M. S., Nirob, B. M., & Hossain, M. T. (2022). Hossain prevalence and determinants of internet addiction among adults during the COVID-19 pandemic in Bangladesh: An online cross-sectional study. *Heliyon, 8*(7), Article e09967. https://doi.org/10.1016/j.heliyon.2022.e09967

Blanco Naranjo, E. G., Chavarría Campos, G. F., & Garita Fallas, Y. M. (2021). Estilo de vida saludable en diabetes mellitus tipo 2: Beneficios en el manejo crónico [Healthy lifestyle in type 2 diabetes mellitus: Benefits in chronic management]. *Revista Medica Sinergia*, *6*(2), Article e639. https://doi.org/10.31434/rms.v6i2.639

Castillo-Díaz, M. A., Martínez, M. C., Periañez, C. A. H., & Sauceda-Acosta, D. (2024). Psychological distress, health-promoting lifestyle and sociodemographic factors in Honduran university students: a structural equation model. *Health Promotion International*, 39(4), Article daae082. https://doi.org/10.1093/heapro/daae082

Chao, D. P. (2023). Health-promoting lifestyle and its predictors among health-related and non-health-related university students in Taiwan: A cross-sectional quantitative study. *BMC Public Health 23*, Article 827. https://doi.org/10.1186/s12889-023-15760-2

Crawford, J. R., & Henry, J. D. (2003). The Depression Anxiety Stress Scales (DASS): Normative data and latent structure in a large non-clinical sample. *The British Journal of Clinical Psychology*, *42*(Pt 2), 111–131. https://doi.org/10.1348/014466503321903544

Dhiman, S., & Chawla, G. K. (2017). A study on health promoting lifestyle of university students. *International Journal of Research in Engineering and Applied Sciences, 7*(6), 142–151. https://euroasiapub.org/a-study-on-health-promoting-lifestyle-of-university-students/

Du, M., Kong, H., Ran, L., Ran, Y., Bai, L., Du, Y., Guan, H., Dong, Y., & Zhao, Y. (2022). Associations among health-promoting lifestyle, self-care agency and health-related quality of life in Bai older adults with hypertension in Yunnan China. *BMC Geriatrics, 22*(1), Article 942. https://doi.org/10.1186/s12877-022-03608-0

Jasinskaja-Lahti, I., Liebkind, K., & Perhoniemi, R. (2007). Perceived ethnic discrimination at work and well-being of immigrants in Finland: The moderating role of employment status and work-specific group-level control beliefs. *International Journal of Intercultural Relations, 31*(2), 223–242. https://doi.org/10.1016/j.ijintrel.2006.02.003

Johnson, R. L. (2005). Gender differences in health-promoting lifestyles of African Americans. *Public Health Nursing, 22*(2), 130–13 7. https://doi.org/10.1111/j.0737-1209.2005.220206.x

Henry, J. D., & Crawford J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British Journal of Clinical Psychology, 44*(2), 227–239. https://doi.org/10.1348/014466505X29657

Hope, V., & Henderson, M. (2014). Medical student depression, anxiety and distress outside North America: A systematic review. *Medical Education in Review, 48*(10), 963–979. https://doi.org/10.1111/medu.12512

Islam, M. S., Sujan, M. S. H., Tasnim, R., Sikder, M. T., Potenza, M. N., & van Os, J. (2020). Psychological responses during the COVID-19 outbreak among university students in Bangladesh. *PLoS One, 15*(12), Article e0245083. https://doi.org/10.1371/journal.pone.0245083

Kang, Y. S., Ha, Y. M., & Eun, Y. (2012). Health status and health-promoting lifestyle profile ii of North Korean immigrants. *Journal of Korean Academy of Community Health Nursing, 23*(3), 231–243. https://doi.org/10.12799/jkachn.2012.23.3.231

Kaparounaki, C. K., Patsali, M. E., Mousa, D. V., Papadopoulou, E. V. K., Papadopoulou, K. K. K., & Fountoulakis, K. N. (2020). University students' mental health amidst the COVID-19 quarantine in Greece. *Psychiatry Research, 290,* Article 113111. https://doi.org/10.1016/j.psychres.2020.113111

Kegler, M. C., Kingsley, B., Malcoe, L. H., Cleaver, V., Reid, J., & Solomon, G. (1999). The functional value of smoking and nonsmoking from the perspective of American Indian youth. *Family and Community Health*, *22,* 31–42. https://doi.org/10.1097/00003727-199907000-00005

Kurt, G., Ilkkursun, Z., Javanbakht, A., Uygun, E., Karaoglan-Kahilogullari, A., & Acarturk, C. (2021). The psychological impacts of COVID-19 related stressors on Syrian refugees in Turkey: The role of resource loss, discrimination, and social support. *International Journal of Intercultural Relations, 85,* 130–140. https://doi.org/10.1016/j.ijintrel.2021.09.009

Leiler, A., Bjarta, A., Ekdahl, J., & Wasteson, E. (2019). Mental health and quality of life among asylum seekers and refugees living in refugee housing facilities in Sweden. *Social Psychiatry and Psychiatric Epidemiology, 54*(5), 543–551. https://doi.org/10.1007/s00127-018-1651-6

Li, H., Liu, X., Zheng, Q., Zeng, S., & Luo, X. (2022). Gender differences and determinants of late-life depression in China: A cross-sectional study based on CHARLS. *Journal of Affective Disorders, 309*, 178–185. https://doi.org/10.1016/j.jad.2022.04.059

Lim, B. C., Kueh, Y. C., Arin, W. N., & Ng, K. H. (2016). Validation of health-promoting lifestyle profile-II: a confirmatory study with a Malaysian Undergraduate Students sample. *Education in Medicine Journal, 8*(2), 65–77. https://doi.org/10.5959/eimj.v8i2.438

Lovibond, S. H., & Lovibond, P. F. (1995). *Depression Anxiety Stress Scales (DASS-21, DASS-42)* [Database record]. APA PsycTests. https://doi.org/10.1037/t01004-000

Melnyk, Yu. B., & Stadnik, A. V. (2020). Medical and psychological support to specialists under conditions of pandemic COVID-19. *Minerva Psichiatrica, 61*(3), 109–112. https://doi.org/10.23736/S0391-1772.20.02083-X

Melnyk, Y. B., Stadnik, A. V., Mykhaylyshyn, U. B., Vveinhardt, J., De Frias, C. M., & Pypenko, I. S. (2024). Mental health and life satisfaction of university students influenced by war. *International Journal of Science Annals, 7*(2), 35–45. https://doi.org/10.26697/ijsa.2024.2.6

Melnyk, Yu. B., Stadnik, A. V., Pypenko, I. S., Kostina, V. V., & Yevtushenko, D. O. (2022). Impact of COVID-19 on the Social and Psychological State of Athletes. *The Journal of Sports Medicine and Physical Fitness, 62*(2), 297–299. https://doi.org/10.23736/S0022-4707.21.12401-6

Melnyk, Yu. B., & Stadnik, A. V. (2025). *Profil zdorovoho sposobu zhyttia (versiia dlia doroslykh) [Health-Promoting Lifestyle Profile (Adult Version)]*. KRPOCH. https://doi.org/10.26697/sri.krpoch/melnyk.stadnik.4.2025

Melnyk, Yu. B., & Stadnik, A. V. (2023). *Shkala depresii, tryvohy ta stresu [Depression, Anxiety and Stress Scale]*. KRPOCH. https://doi.org/10.26697/sri.krpoch/melnyk.stadnik.4.2023

Mohamed, S. H., Altunkurek, S. Z., Eker, H. H., Ozcoban, K., Hacimustafaoglu, F., & Abdi, I. A. (2022), Health-promoting lifestyle and its determinants among university students in Mogadishu, Somalia. *African Journal of Health, Nursing and Midwifery, 5*(4), 71–86. https://doi.org/10.52589/AJHNM-MLRW8SUI

Morais, C., Amorim, I., Viana, C., & Ferreira, S. (2020). Estilos de vida e bem-estar de estudantes do ensino superior [Higher education students' lifestyles and welfare]. *Revista Portuguesa de Enfermagem de Saúde Mental, 7*, 57–64. https://doi.org/10.19131/rpesm.0248

Mykhaylyshyn, U. B., Stadnik, A. V., Melnyk, Yu. B., Vveinhardt, J., Oliveira, M. S., & Pypenko, I. S. (2024). Psychological stress among university students in wartime: A longitudinal study. *International Journal of Science Annals, 7*(1), 27–40. https://doi.org/10.26697/ijsa.2024.1.6

Nazik, H., Nazik, E., Özdemir, F., Gül, Ş., Tezel, A., & Narin, R. (2015). Effect of parity on healthy promotion lifestyle behavior in women. *Contemporary Nurse*, *50*(2-3), 267–273. https://doi.org/10.1080/10376178.2015.1081072

Ors, M. (2024) Healthy lifestyle behaviors among teachers working in public primary schools and affecting factors. *Frontiers in Public Health*, 12, Article 1382385. https://doi.org/10.3389/fpubh.2024.1382385

Pypenko, I. S., Maslov, Yu. V., & Melnyk, Yu. B. (2020). The impact of social distancing measures on higher education stakeholders. *International Journal of Science Annals, 3*(2), 9–14. https://doi.org/10.26697/ijsa.2020.2.2

Pypenko, I. S., Stadnik, A. V., Melnyk, Yu. B., & Mykhaylyshyn, U. B. (2023). The impact of the war in Ukraine on the psychological well-being of students. *International Journal of Science Annals, 6*(2), 20–31. https://doi.org/10.26697/ijsa.2023.2.2

Safa, F., Anjum, A., Hossain, S., Trisa, T. I., Alam, S. F., Abdur Rafi, M., Podder, V., Koly, K. N., Azad, D. T., Ahmad, W. U., Nodi, R. N., Ashraf, F., Quamrul Akhter, S. M., Ahmed, H. U., & Hasan, M. T. (2021). Immediate psychological responses during the initial period of the COVID-19 pandemic among Bangladeshi medical students. *Children and Youth Services Review,* 122, Article 105912. https://doi.org/10.1016/j.childyouth.2020.105912

Safaie, N., Ketabi, S., Kia, N., Mirmohammadkhani, M., Moonesan, M., & Paknazar, F. (2020) Exploration of mental health problems in association with health-promoting lifestyle profile in Iranian medical students: a cross-sectional study. *Journal of Education and Health Promotion, 9,* 84. https://doi.org/10.4103/jehp.jehp_582_19

Sazakli, E., Leotsinidis, M., Bakola, M., Kitsou, K.S., Katsifara, A., Konstantopoulou, A., & Jelastopulu, E. (2021). Prevalence and associated factors of anxiety and depression in students at a Greek university during COVID-19 lockdown. *Journal of Public Health Research, 10*(3). https://doi.org/10.4081/jphr.2021.2089

Siddik, M.A. B., Ali, A., Miah, S., Hasan, M., Ahmed, M., & Sunna, T. C. (2024). Psychological disorders among college going students: a post COVID-19 insight from Bangladesh. *Journal of Affective Disorders Reports, 15,* Article 00686. https://doi.org/10.1016/j.jadr.2023.100686

Slonim, J., Kienhuis, M., Di Benedetto, M., & Reece, J. (2015) The relationships among self-care, dispositional mindfulness, and psychological distress in medical students. *Medical Education Online, 20*(1), Article 27924. https://doi.org/10.3402/meo.v20.27924

Sousa, P., Gaspar, P., Vaz, D. C., Gonzaga, S., & Dixe, M. A. (2015). Measuring health-promoting behaviors: Cross-cultural validation of the Health-Promoting Lifestyle Profile-II. *International Journal of Nursing Knowledge, 26*(2), 54–61. https://doi.org/10.1111/2047-3095.12065

Stadnik, A. V., Melnyk, Yu. B., Babak, S. A., Vashchenko, I. V., & Krut, P. P. (2022). Psychological distress among students and cadets of universities in the war conditions. *International Journal of Science Annals, 5*(1-2), 20–29. https://doi.org/10.26697/ijsa.2022.1-2.0

Stadnik, A. V., Melnyk, Yu. B., Mykhaylyshyn, U. B., & de Matos, M. G. (2023). Peculiarities of the psychological well-being and social adaptation of young students and cadets in wartime conditions. *International Journal of Science Annals, 6*(1), 22–30. https://doi.org/10.26697/ijsa.2023.1.7

Walker, S. N., Sechrist, K. R., & Pender, N. J. (1987). The health-promoting lifestyle prole: Development and psychometric characteristics. *Nursing Research, 36*(2), 76–81. https://doi.org/10.1097/00006199-198703000-00002

Wei, C. N., Harada, K., Ueda, K., Fukumoto, K. Minamoto, K., & Ueda, A. (2012). Assessment of health-promoting lifestyle profile in Japanese university students. *Environmental Health and Preventive Medicine, 17*(3), 222–227. https://doi.org/10.1007/s12199-011-0244-8

Yahia, N., Wang, D., Rapley, M., & Dey, R. (2016). Assessment of weight status, dietary habits and beliefs, physical activity, and nutritional knowledge among university students. *Perspectives in Public Health, 136*(4), 231–244. https://doi.org/10.1177/1757913915609945

Zheng, Z., Zhao, W., Zhou, Q., Yang, Y., Chen, S., Hu, J., Jiang, W., Zhang, W., Cai, J., & Qiu, J. (2023). Sex differences in depression, anxiety and health-promoting lifestyles among community residents: A network approach. *Journal of Affective Disorders, 340*, 369–378. https://doi.org/10.1016/j.jad.2023.07.107

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