

Disordered eating and psychological well-being of Ukrainian students three months after the emergence of full-scale war

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Introduction and Aim

PTSD can be a strong risk factor for the development of eating disorders, especially bulimia nervosa and binge eating disorder, and sleep disorders, including insomnia, nightmares, periodic limb movement disorder, and parasomnias (Mitchell et al, 2012). Research suggest that public health crises and national disasters influence eating behaviors (Carmassi et al, 2014 & Johnson et al 2023) and affect those with previously existing eating disorders (Fernandez-Aranda et al, 2020). Higher levels of eating disorders were observed in Syrian refugees living in North Lebanon, with three times higher risk of having eating disorder if PTSD symptoms present. Our study focused on the evaluation of Ukrainians, particularly young adults (students) mental health during the war. We examined their well-being in the context of sleep quality, depression, PTSD, anxiety symptoms, eating disordered and alcohol use. Furthermore, we have built a prediction model for depression symptoms among students using machine learning algorithms.

Aim: To depict eating disorder symptoms and overall psychological well-being of a large group of students from different universities in Ukraine three months after the emergence of full-scale war.

Methods and Materials

The current study enrolled 1142 participants, students of the Universities in Ukraine, including Bachelor, Master and PhD students, during April 28 - June 17 of 2022. For the convenience of the students, the questionnaires were sent to each of them as a Google form. All participants were informed that this study had a voluntary basis and that they could revoke their data at any time, and acquired data would be anonymous and confidential. All participants signed the informed consent and agreed to be included in the study.

Sociodemographic part of the survey included questions about age, gender, year of study, relocation experience and seeking support before and after full-scale invasion. All participants were asked to measure their psychological wellbeing on the 0-10 scale before and after full-scale war. Mental health symptoms were measured with following questionnaires: PC-PTSD-5, PHQ-9, GAD-7, ISI, SCOFF, CAGE.

All statistical analysis was processed using Microsoft Excel v. 16.0.15028.2016 and IBM SPSS v.25. To evaluate the connection between the aforementioned domains of mental health and socio-demographics, a χ^2 was conducted. Phi and Cramer's V coefficient were stated to demonstrate the power of the relationships. A $p < 0.05$ value was considered statistically significant.

Results

The sociodemographic characteristics of participants. Majority of respondents (78.4%) were women. The mean age was 21 years (MED = 20, St. Dev. = 5.08, SE = 0.15). Most of the participants were in the process of getting a Bachelor's degree (61.5%). A major number of students stated that they changed their place of residence due to war (70.7%), mostly within Ukraine (63.6%) and 1/3 of them moved abroad (36.4%). A quarter of those who left home and moved within or outside Ukraine have returned back. Only every fifth respondent (21.3%) sought any mental health support before the war. At the time the full-scale invasion began, the percentage of those seeking professional mental health support decreased to 14.6%. Third of respondents (39.2%) asked their parents, relatives, or friends for support. Majority of study participants were living with their parents or relatives (72.8%).

Median score of psychological well-being of respondents before the war was 8 (M = 7.12, St. Dev. = 2.34, SE = 0.069), where after the war it was 5 (M = 4.84, St. Dev. = 2.28, SE = 0.067) points out of 10. Therefore, psychological wellbeing of respondents, according to their self-assessment, decreased since the beginning of the full-scale war, and the difference was statistically significant ($p < 0.001$, $Z = -21.975$, $U = 307683.5$). According to reliability analysis, PTSD PC-5 showed low reliability with Cronbach's $\alpha = 0.582$, SCOFF's $\alpha = 0.52$, for CAGE $\alpha = 0.657$, for ISI $\alpha = 0.879$, McDonald's $\Omega = 0.886$, for GAD-7 $\alpha = 0.877$, McDonald's $\Omega = 0.88$, for PHQ-9 $\alpha = 0.846$, McDonald's $\Omega = 0.848$.

According to mental health screening questionnaires, 66% of all respondents screened positive for PTSD symptoms (PC-PTSD 5), 45% - moderate and severe anxiety symptoms (GAD-7), 47% - moderate and severe depressive symptoms (PHQ-9). Regarding sleep, alcohol use and eating behavior, 19% of surveyed students had signs of moderate and severe insomnia (ISI), 15% reported alcohol abuse (CAGE) and 31% disordered eating (SCOFF).

Continuation of results.

Only 14% of respondents have sought professional mental health support from psychiatrists and 14,6% - psychological support from psychologists or hotlines after the full-scale war started. Along with that, 16% of respondents used medications to cope with stress (4% - prescribed by professionals, 11,1% - non-prescribed by professionals (derived from personal stocks, friends, relatives or purchased in pharmacies (medications, that doesn't require prescription)), 0,6% - both).

According to the PC-5, participants were asked about experiencing one or more traumatic events within certain themes. Most of participants (67.26%) reported that they underwent traumatic events since the emerge of the full-scale war, The most chooseable category is loss of significant other due to homicide or suicide, given that 40% of all students mentioned experiencing it. Moreover, 27,5% of those who experienced traumatic events have marked experiencing two types of traumas, and 16,3% - three and more.

Presence of symptoms of eating disorders was associated with gender ($X^2(1,1137) = 40.213$, $\Phi = -0.188$, $p < 0.001$), education degree ($X^2(2,1137) = 12.640$, Cramer's $V = 0.105$, $p = 0.002$) and year of study ($X^2(6,1137) = 19.557$, Cramer's $V = 0.131$, $p = 0.003$). Levels of disordered eating among females were as twice higher as males. Furthermore, PhD students had relatively lower levels of eating disorders symptoms compared to Bachelor and Master students. Moreover, students who were seeking psychological support before and during the full-scale war had higher levels of disordered eating ($X^2(1,1137) = 13.002$, $\Phi = 0.107$, $p < 0.001$; $X^2(1,1137) = 3.988$, $\Phi = -0.059$, $p = 0.046$).

Discussion

The study demonstrated the high prevalence of mental health symptoms among university students in Ukraine during first months of the full-scale war. Majority of respondents reported symptoms of depression, insomnia, PTSD and anxiety, whereas, disordered eating and substance abuse were present in a significantly lower number of students. Lower initial psychological wellbeing, female gender, younger age, first years of study and any traumatic experience, including multiple trauma, predicted increases in depression score.

Conclusions

All abovementioned highlights the need of immediate action to support students' (young adults) mental health and psychosocial wellbeing. As we found that return to home after relocation was a protective factor against depressive symptoms, we believe that support from important ones was a factor which cannot be overlooked. At the same time, it should be remembered that it may be insufficient in cases of more severe or prolonged symptoms of depression and that would require professional intervention.

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Keywords

mental health, eating disorders, depression, PTSD, anxiety, psychological wellbeing.