



Mental Health and Substance Use Among Ukrainian “Help Profession” Students During the COVID-19 Pandemic

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Dear Dr. Ronzani,

Considerable attention has been focused on the Russian invasion of Ukraine since February 24, 2022. However, a key concern throughout Eastern Europe that remains for more than 2 years is the intense level of COVID-19 infection and associated death. During the last few months, alone, rates have more than doubled. Vaccination remains the best means of protection for the COVID-19 variants but that needs change because of virus mutation. Eastern Europe country health systems, like many elsewhere, are strained because of infection among service personnel and the risk of infection in health care settings (WHO, 2022).

The Ben Gurion University of the Negev (BGU) - Regional Alcohol and Drug Abuse Research (RADAR) Center has received recognition and award from the US National Institute on Drug Abuse for its international collaborative research efforts. Since the early stages of the pandemic, the RADAR Center has been researching the COVID-19 impact on university student psycho-emotional conditions including substance use with particular focus on Eastern European countries. Papers have been published in the *International Journal of Mental Health and Addiction* about such effort and findings (Gritsenko et al., 2021; Konstantinov et al., 2021; Reznik et al., 2021). However, a dearth of information remains about university students from the Ukraine.

This letter to the editor of the *International Journal of Mental Health and Addiction* is about substance use among Ukrainian students during the 4th wave of COVID-19 at the end of 2021. Like many other countries, Ukraine experienced a surge of infection due to

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the Omicron variant most likely due to the low level of vaccination — only 35% of the Ukrainian population had been vaccinated (Park, 2022).

The Ukraine, part of the former Soviet Union until 1991, is one of the poorest countries in Europe (Atlantic Council, 2019). In this study, we hypothesize substance use among Ukrainian “help” profession (i.e., medicine, psychology, and social work) students is associated with conditions related to COVID-19 such as fear, psycho-emotional well-being, burnout, and eating behavior. A total of 1,014 medical ($n=210$), psychology ($n=728$), and social work ($n=76$) students — 85.1% female and 14.9% male — completed the on-line questionnaire from September to November 2021.

The RADAR Center has institutional research approval for study of substance abuse and related psycho-emotional conditions during the coronavirus crisis. Also, Ukrainian investigators (i.e., those from Karazin Kharkiv National University, Taras Shevchenko National University of Kyiv, Shevchenko National University “Chernihiv Colehium”, Rivne State University of Humanities) received approval from the ethics committees of their universities for this research. The Ukrainian university ethics approval process is equivalent to established regulations to help protect the rights and welfare of human research subjects. No external grant funding was received for the study.

The Qualtrics software platform was used and data collection included three scales: Fear of COVID-19 Scale (FCV-19 S) (Ahorsu et al., 2020; Reznik et al., 2021), Brief Resilience Scale (BRS) (Smith et al., 2008), and Short Burnout Measure (SBM) (Malach-Pines, 2005). Cronbach’s reliability of the FCV-19 S is 0.825, 0.775 for the BRS, and 0.900 for SBM.

Regarding gender and religiosity, fear among males was less than that of females ($t_{957}=5.073$; $p<.001$); and, secular students reported less fear than those who reported being religious ($t_{955}=5.278$; $p<.001$). Resilience was found more prevalent among males than females ($t_{943}=4.457$; $p<.001$); however, the rate was similar among secular and religious students ($t_{940}=0.229$; $p=.819$; n.s.). Female ($t_{932}=3.224$; $p=.001$) and secular students ($t_{931}=3.197$; $p=.001$) reported significantly more burnout.

Regarding substance use, 70.8% of the respondents reported last month use. Among these students, 85.9% used alcohol and tobacco. Alcohol use was more prevalent among psychology (65.8%) and social work students (60.0%) than those from medicine (52.5%) ($p=.004$); prescription drug use for pain was more prevalent among female (12.3%) than male students (4.3%) ($p=.005$); and last month drug use was more prevalent among secular (75.5%) than religious students (67.5%) ($p=.008$). Regardless of gender, religiosity, and study profession, 14.6% of the study respondents reported an increase of monthly substance use due to COVID-19.

Survey results evidence deterioration of student psycho-emotional well-being due to COVID-19. Students reported the following conditions (note: percentages of positive responses are in parentheses): depression (19.1%), exhaustion (30.4%), loneliness (24.6%), nervousness (29.0%), anger (26.2%), and problem eating behavior (48.4%). Additionally, 32.5% of the respondents reported a weight increase due to pandemic conditions. Students who reported problem eating behavior had higher COVID-19 fear ($t_{905}=4.420$; $p<.001$) and burnout ($t_{923}=7.021$; $p<.001$); and lower resilience ($t_{931}=5.358$; $p<.001$). Also, an increase of monthly substance use was found associated with deterioration of student psycho-emotional well-being (odds ratio (OR)=3.657; 95% CI: 2.395–5.586), eating unhealthy foods including those with high levels of sugar and/or salt (OR=2.133; 95% CI: 1.463–3.108), and weight gain (OR=1.535; 95% CI: 1.058–2.226). Logistic regression analysis shows more last month substance use associated with deterioration of psycho-emotional well-being (OR=2.294; 95% CI: 1.505–3.808); burnout (OR=0.948; 95%

CI: 0.926–0.971); and, last month binge drinking (OR = 11.907; 95% CI: 6.127–23.141). Nagelkerke $R^2 = 0.226$.

During the fourth wave of pandemic infection in the Ukraine, substance use and eating behavior were significantly associated with COVID-19-related fear, burnout, and resilience factors. Such findings, common to disaster conditions and conflict zones in Syria, Afghanistan, Ethiopia, and Croatia for example (Doty et al., 2018; Gire & Ibaishwa, 2019; Greene et al., 2018; Malla, 2021; Mohsen et al., 2021), are expected to have increased in Ukraine resulting from its present war with Russia. Further research is needed across multiple locations in the country and overtime to understand the impact of disaster conditions on Ukrainian students as well as other segments of the population including women who are the majority of students and professionals in the health professions.

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Declarations

Ethics Approval and Consent to Participate Informed consent has been received from the participating survey respondents and all human and animal rights have been protected.

Conflict of Interest The authors declare no competing interests.

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