

F.23. EATING BEHAVIOR PROFILES, PHYSICAL ACTIVITY, AND SELF-PERCEIVED HEALTH DURING THE COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY OF STUDENTS AND ACADEMIC STAFF AT THE TECHNICAL UNIVERSITY OF MOLDOVA

RODICA SIMINIUC*, DINU ȚURCANU, SERGIU SIMINIUC

*Technical University of Moldova, 168, Stefan cel Mare bd, Chisinau, Republic of Moldova
email: rodica.siminiuc@adm.utm.md*

Abstract. The COVID-19 pandemic created conditions conducive to maladaptive eating behavior, physical inactivity, and psychological distress, particularly among university populations. Yet Eastern European contexts remain substantially underrepresented in the relevant literature, and no prior study has examined appetitive traits in a Romanian-speaking population using the Adult Eating Behavior Questionnaire (AEBQ). The present cross-sectional study characterizes eating behavior profiles, physical activity levels, and self-perceived health among students and academic staff of the Technical University of Moldova (TUM), and identifies independent predictors of emotional over-eating during the pandemic period. Data were collected between October and November 2021 via two parallel bilingual online questionnaires administered to 744 TUM-affiliated participants — 623 students (83.7%; 362 males, 261 females; 83.6% aged 18–23 years) and 121 academic staff members (16.3%; 42 males, 79 females; modal age group 41–50 years). Four measurement blocks were administered: demographics and COVID-19 history; physical activity, assessed via an adapted version of the Global Physical Activity Questionnaire (GPAQ) and classified according to World Health Organization (WHO) criteria using metabolic equivalent of task (MET) minutes per week; self-perceived health, adapted from the 36-Item Short Form Survey (SF-36); and eating behavior, measured using the full 35-item AEBQ across eight subscales — Enjoyment of Food (EF), Emotional Over-Eating (EOE), Emotional Under-Eating (EUE), Food Fussiness (FF), Food Responsiveness (FR), Slowness in Eating (SE), Hunger (H), and Satiety Responsiveness (SR). Statistical analyses included Mann-Whitney U tests, Kruskal-Wallis tests, Spearman correlations, and ordinary least squares (OLS) multiple and binary logistic regression, with Bonferroni correction applied to multiple comparisons. Internal consistency was adequate to excellent for EOE and EUE (Cronbach alpha = 0.905 and 0.899 in students, respectively), meeting reference values from the original validation. EF and H met the acceptability threshold of 0.70 in both cohorts, while FF, FR, and SR fell below it — a pattern consistent with prior cross-cultural adaptations in Mexican and Chinese samples. The SE subscale yielded systematically negative alpha values across all subgroups (students: alpha = -0.242; male staff: alpha = -0.612), indicating active item conflict and necessitating its exclusion from all inferential analyses. This constitutes the first documented failure of the SE subscale in a Romanian-speaking population and implies that cross-cultural revision is required prior to future use. EF was the highest-rated subscale in both cohorts, with food-avoidance and hunger-related subscales clustered in the lower-moderate range, suggesting that the pandemic context did not broadly dysregulate appetitive behavior in this population. Students scored significantly higher on EF than staff ($p < 0.001$, effect size $r = 0.213$), while staff reported higher EOE ($p = 0.003$, $r = 0.110$) and SR ($p = 0.006$, $r = 0.103$). Among students, female

participants scored significantly higher than males on EOE, EUE, H, and SR after Bonferroni correction, with uniformly small effect sizes ($r = 0.186\text{--}0.264$). Confirmed COVID-19 history was associated with elevated Hunger scores only among students (Kruskal-Wallis $H = 12.60$, $p = 0.002$, $\eta^2 = 0.018$). Physical activity showed a consistent inverse association with EOE across both continuous (Spearman $\rho = -0.175$, $p < 0.001$) and categorical analyses. Mental health score was the strongest inverse predictor of EOE (Spearman $\rho = -0.213$, $p < 0.001$) and H ($\rho = -0.317$, $p < 0.001$). OLS regression identified female gender ($\beta = 0.341$, $p < 0.001$), staff cohort membership ($\beta = 0.378$, $p < 0.001$), lower mental health score ($\beta = -0.185$, $p < 0.001$), higher EF ($\beta = 0.244$, $p < 0.001$), and lower EUE ($\beta = -0.150$, $p < 0.001$) as independent predictors of EOE ($R^2 = 0.165$). Binary logistic regression confirmed that female gender was associated with over three-fold higher odds of clinically elevated EOE (odds ratio = 3.42, 95% confidence interval: 2.04–5.72, $p < 0.001$), while better mental health (odds ratio = 0.693, $p = 0.003$) and better self-perceived health (odds ratio = 0.736, $p = 0.017$) were protective. These findings identify female academic staff with poor psychological well-being as a priority target group for integrated nutritional and mental health interventions within university occupational health programs. The study provides the first cross-cultural psychometric evaluation of the AEBQ in a Romanian-speaking Eastern European population, documenting both its strengths for emotional eating measurement and the need for subscale revision prior to broader application.

Keywords: Adult Eating Behavior Questionnaire; emotional over-eating; COVID-19; university population; physical activity; psychometric validation.

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