

Association between Food Insecurity and Depressive Symptoms in College Students Before and During the COVID-19 Pandemic

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Objectives: To examine the change in the relationship between food insecurity and risk of depression pre-COVID and during COVID periods in college students.

Methods: We conducted secondary data analysis of 1,004 undergraduate students from the Penn State College Relationships and Experiences (CORE) project. Students were surveyed in November 2019 (Wave 1) and followed up in May 2020 (Wave 2). A binary indicator of elevated risk for depression was created using data collected via the shortened Center for Epidemiologic Studies Depression Scale at both waves. Food insecurity was measured by 2-item Food Insecurity screen at both waves and was coded as a binary indicator. Cross-sectional analysis of each wave was conducted using logistic regression models to estimate elevated risk for depression as a function of food insecurity status. Longitudinal analysis was conducted to estimate elevated risk of depression at wave 2 as a function of the change in food insecurity status from wave 1 to wave 2. The models were adjusted for depression diagnosis at wave 1, living situation, gender, age, and race.

Results: At Wave 1, 28.2% of students were food insecure and 56.6% had elevated depression risk. Food insecurity was lower at wave 2 (14.3%) whereas proportion of elevated depression risk was slightly higher (63.4%). 26.4% of students changed from low risk of depression at Wave 1 to an elevated risk of depression at wave 2. Compared to the food secure referent, food insecure students were about 2 times more likely to have an elevated risk of depression at Wave 1 (OR = 2.30, 95%CI: 1.74, 3.8) and Wave 2 (OR = 2.10, 95%CI: 1.06, 4.42). Compared to those who stayed food secure, the students who changed from food insecure to food secure and those who remained food insecure were 2.08 (CI 1.05–4.30) times and 3.03 (1.23–8.34) times more likely to have elevated depression risk at wave 2 respectively.

Conclusions: College students who experienced food insecurity before the COVID pandemic were more likely to an elevated risk of depression before and during the COVID pandemic.

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