

### Low Food Security Present on Texas College Campuses Despite High Nutrition Literacy

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**Objectives:** The relationship between student food security and nutrition literacy on college campuses has not been explored previously. Objectives of this study were to assess the relationship between student food security and nutrition literacy, and to explore associations of food security and nutrition literacy with demographic characteristics of college students.

**Methods:** An online survey tool in Psych Data was used to assess food security and nutrition literacy of students ( $n = 672$ ) on the three Texas Woman's University (TWU) campuses. The USDA Six-Item Short Form assessed food security and nutrition literacy questions were derived from a large valid and reliable assessment instrument. Cross tabulations using Pearson's chi-square or Fisher's exact test were used to explore the relationship among demographics, food security levels, and nutrition literacy. All analyses were conducted using IBM SPSS Statistics v25, with significance set as  $P < 0.05$ .

**Results:** Students ( $n = 672$ ) from all three campuses participated in the survey and 88.4% were females. The total prevalence of food insecurity (low and very low food security) was high across all campuses: Denton (47.3%), Dallas (36.1%), and Houston (45.9%). Significant differences in the degree of food security existed when the three campuses were compared ( $P = 0.001$ ). The highest percentage of very low food security existed among black (30%) and freshman (32.7%) students. The overall likelihood of adequate nutrition literacy among students was high (90.0%) with white students (95.7%) being more likely to have adequate nutrition literacy compared to other races/ethnicities ( $P < 0.001$ ). A greater proportion of students with adequate nutrition literacy were food secure (58%) than students with very low food security (18%). Graduate students had the highest nutrition literacy (95.7%) and campus residents had the lowest nutrition literacy (83.9%).

**Conclusions:** Food insecurity undermines educational success of students. Targeted measures to address the crisis of food security on college campuses must also address disparities by race and student class. Universities and colleges must consider creative, sustainable solutions to help improve student food security.

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