

Does Food Security Status Influence Binge Drinking Patterns in College Students?



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Introduction

Research suggests that food insecurity (FI) status can negatively impair mental health. Similarly, data suggest increased levels of perceived stress (PS) are associated with a higher frequency of binge drinking (BD). However, research regarding the relationship between FI and BD episodes related to increased PS within a college student population is scarce.

How is Food Security Status Defined?

The USDA categorizes food security into four groups;

- High food security**-no issues with accessing adequate food.
- Marginal food security**-problems or anxiety regarding the quality, adequacy, variety, and quantity of food, without having any reduction in volume.
- Low food security**-reduced desirability, variety, and quality of food with no disruption of eating patterns.
- Very low food security**-disruption to the household with food intake due to lack of resources.

What Qualifies as Binge Drinking?

*Based on the CDC's² data, binge drinking is most reported in individuals between the ages of 18 -34 years, specifically in those of the male gender.

Binge Drinking: a pattern of drinking large amounts of alcohol at one time, followed by short periods of abstinence.

Binge Drinking for Men: 5 or more drinks on an occasion

Binge Drinking for Women: 4 or more drinks on an occasion

How Can We Measure Perceived Stress?

Perceived stress scale is used to assess stress level and includes ten questions asking the individual how they have felt over the past month. Questions are scored based on how many time a person has felt stressed or felt as though they are not able to cope with their own stress over a month span.³

The students will receive a score between 0-40 and categorized as:

- 0-13 low stress
- 14-26 moderate stress
- 27-40 high perceived stress

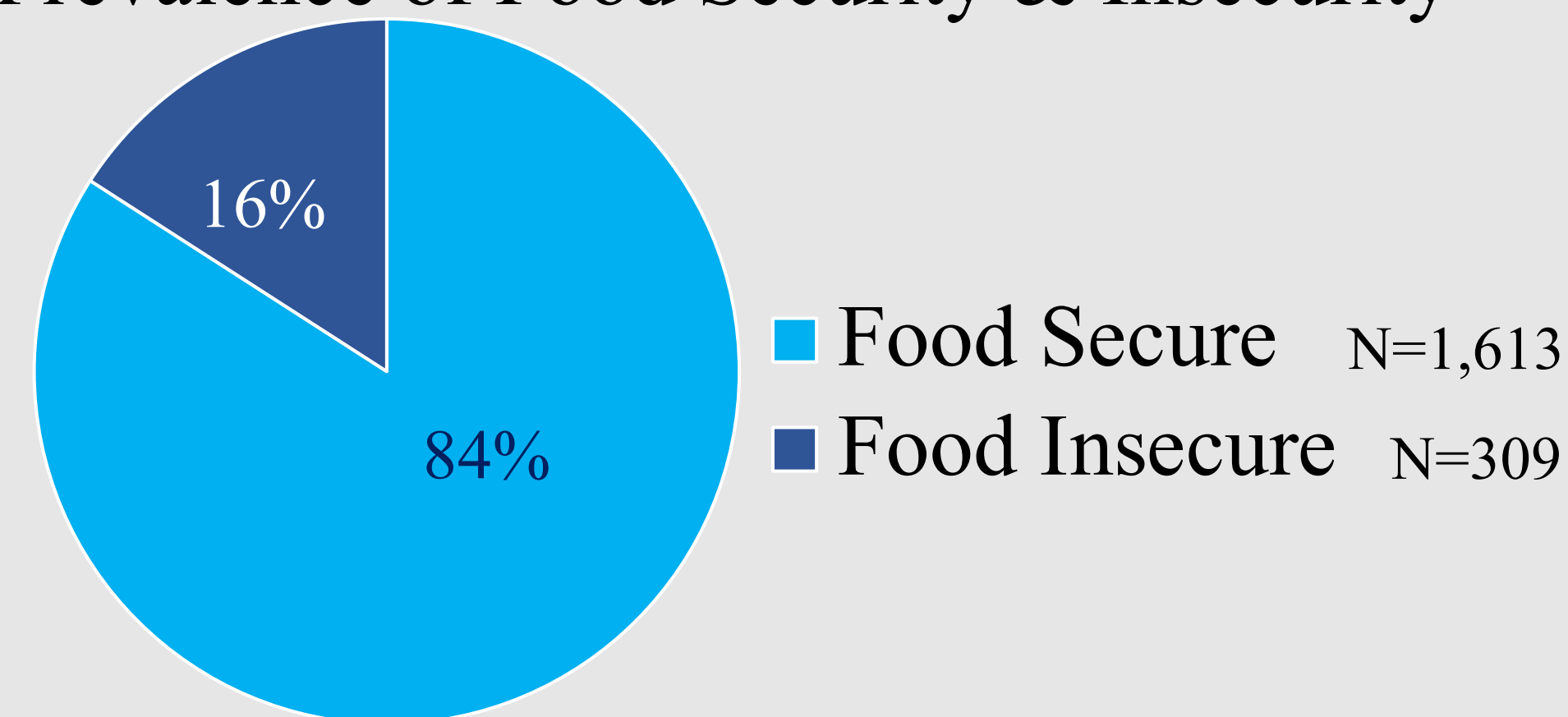
Subject Demographics

Demographics	All #	Food Secure	Food Insecure
Total (n)	1,922	1,613	309
Male/Female (%)	37/ 63	81.6 / 85.7	18.4 / 14.3
Race (%)			
White	92	94.1	90.5
Black	0.9	0.8	2
Asian	3	2.7	4.7
Other	2	2.3	2.7
Age (Y ± SD)	19 ± 1.1	18.9 ± 1.0	19.4 ± 1.3
Reports Binge Drinking (%)	57	55	67
PSS (± SD)	16.7 ± 6.5	16.2 ± 6.5	19.5 ± 6.2

Objective

To determine if food insecure college students, 18-24 years, had higher incidences of binge drinking episodes related to higher levels of perceived stress.

Prevalence of Food Security & Insecurity

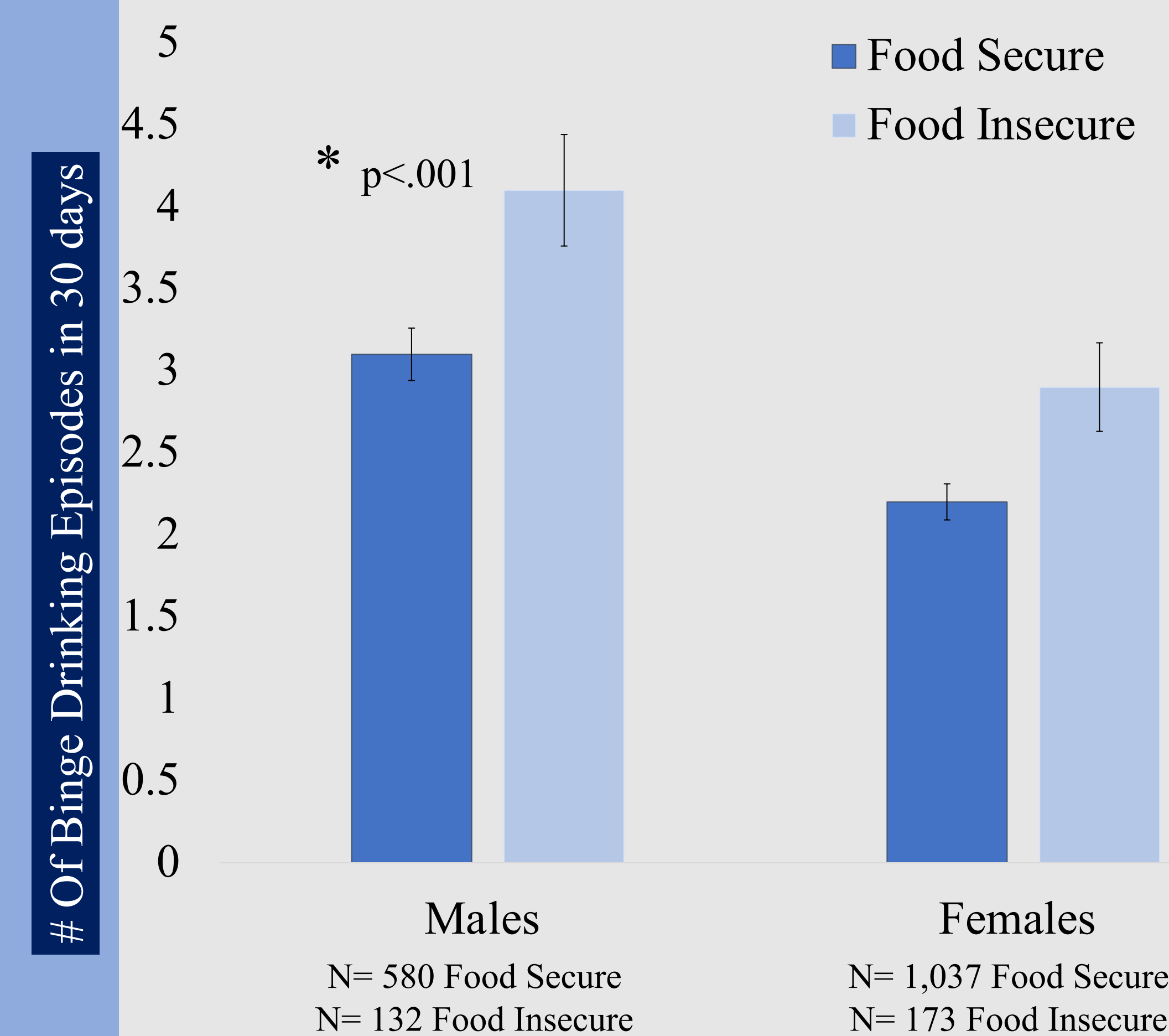


Study Design

The cross-sectional study was conducted between 2018-2023 at a midsized, northeastern university; data were collected as part of the College Health and Nutrition Assessment Survey (CHANAS) (UNH IRB #5524)

- Food security status, perceived stress, and binge drinking (# times/previous 30 days) were self-reported via online survey (Qualtrics)
- Short form USDA household food security survey (6-item) was used to assess FI status¹
- PS was measured via a validated ten-item scale³
- Differences in reported # BD between FI groups were evaluated via ANCOVA with age & gender serving as covariates (SPSS V28)
- Chi-square analysis examined differences in BD between male and female students who were food insecure

Food Security Status and Binge Drinking Episodes by Gender



Results

Overall, 16% of participants reported FI, and 57% reported BD in the past 30 days. FI students reported higher # of BD vs. food secure students (3.3 ± .21 vs. 2.6 ± .09 p < .001). No significant differences were seen between PS score and # BD episodes in FI students.

Conclusions

Data suggest food insecure students, particularly males, were more likely to participate in binge drinking. College campuses should continue to research the relationship between binge drinking and food security status. Further research is needed to understand the relationship PS has on BD episodes in FI students.

Key Take Away

- Food insecurity and binge drinking continue to be problems on college campuses
- Targeted interventions are needed to improve the health and well being in young adults on college campuses

Acknowledgements

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