

What are the areas of dietary concern among first-generation college students with food insecurity?



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Introduction

- FI is defined as the limited ability of nutritionally adequate and safe foods or limited or uncertain ability to acquire acceptable foods in socially acceptable ways.¹
- Food insecurity (FI) is common in college students, one group that unequally suffers more is first-generation (FG) college students.¹
- FG students are defined as students whose parents did not complete a 4-year degree.^{2,3}
- FG college students' prevalence of food insecurity is 15.7% higher when compared to their non-first-generation (NFG) counterparts.⁴

Objective

To explore the relationship between FG status, FI, and intake of the five nutrients of concern (NOC) (calcium, potassium, dietary fiber, iron, and vitamin D) among college students attending a public northeastern university.

Methods

•Data were collected between 2018- 2022 at a public northeastern university from the College Health and Nutrition Assessment Survey, a descriptive cross-sectional study (UNH IRB#5524). Participants (ages 18-24) were recruited through an introductory nutrition course.

•Participants were asked to track their dietary intake using a three-day food record. Participant's intake of the five NOC were compared to the RDA and then categorized into either meeting or not meeting the RDA (Diet and Wellness+).

•FG status was self reported where neither parent completed 4 years of university education via online survey (Qualtrics).^{2,3}

•The six-item short form food security survey was used to measure food security status.¹

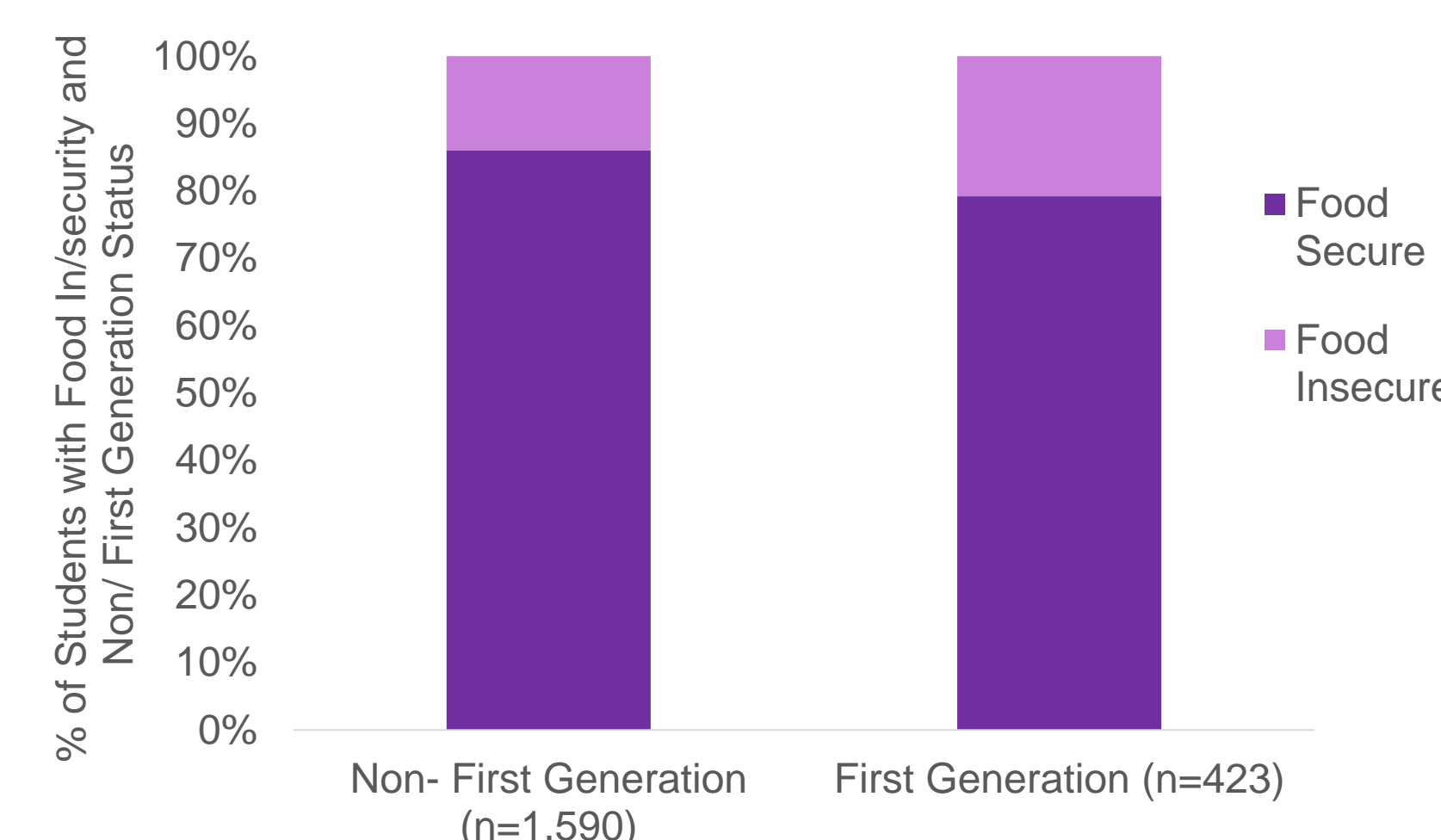
•The USDA's total food security score as used to categorize participants into high/ marginal food security (FS) or low/ very low FI groups (SPSS, V29).¹

•An ANCOVA test was used to distinguish the relationship between NOC score and FG status.

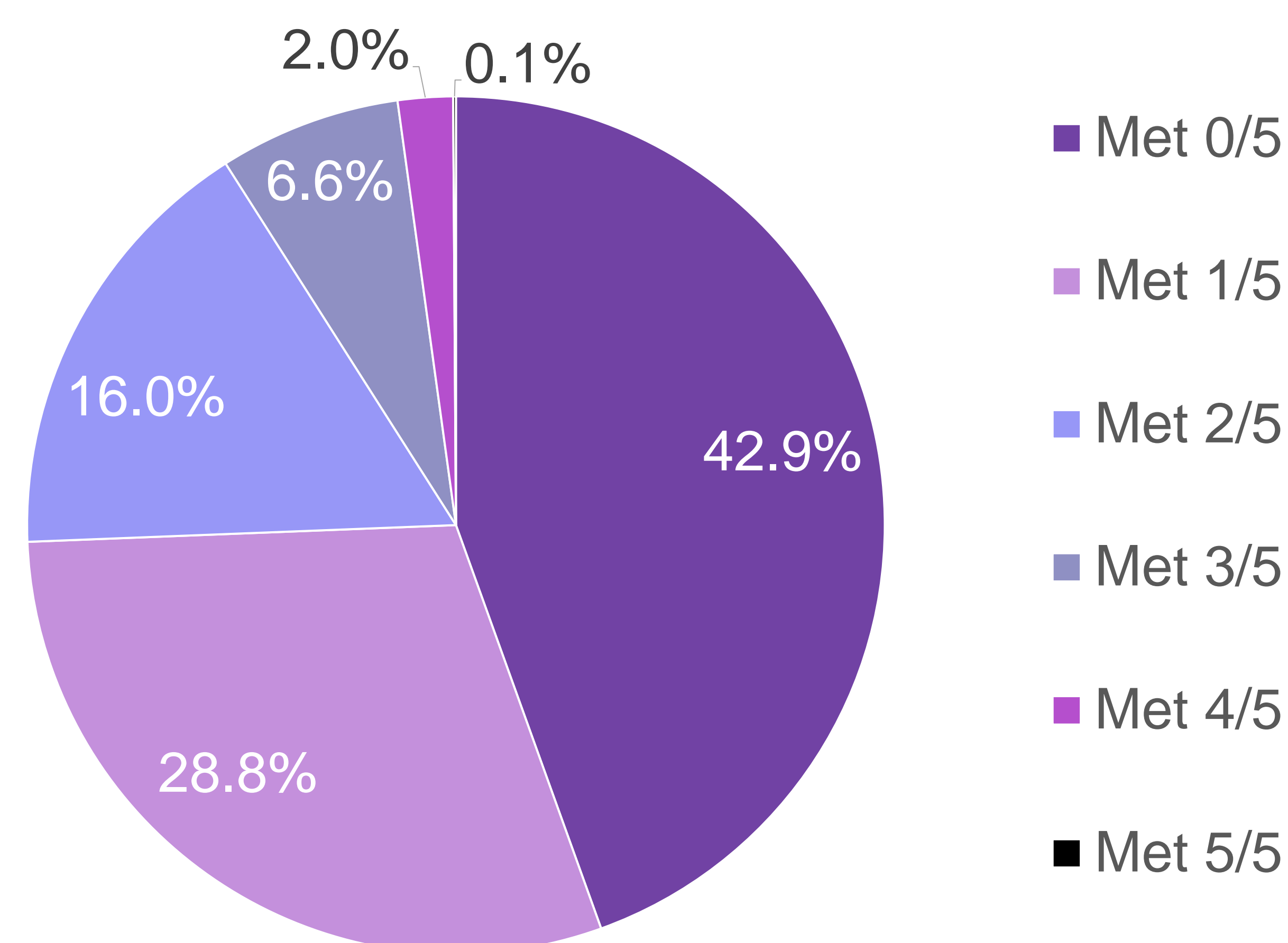
Participant Characteristics

	First Generation (n,%)	Non-First Generation (n,%)
Gender		
Female	(266, 62.9)	(996, 62.8)
Male	(157, 37.1)	(591, 37.2)
Race		
White	(387, 92.1)	(1482, 94.2)
Other Races	(33, 7.9)	(91, 5.8)
Food Security		
Food Secure	(335, 79.2)	(1376, 86.0)
Food Insecure	(88, 20.8)	(223, 14.0)

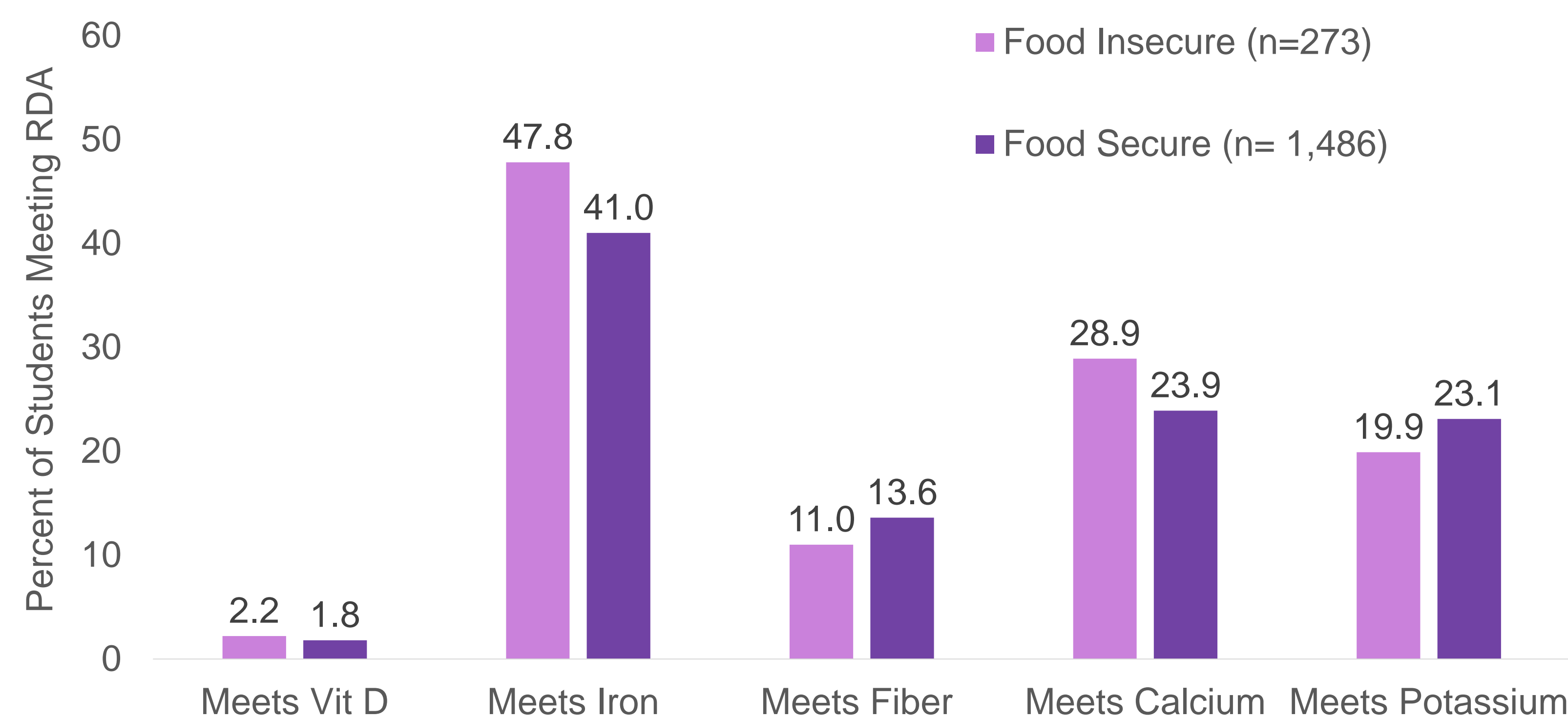
First Generation and Food Security Frequencies



Frequency of Students Who Met the RDA for up to 5 Nutrients of Concern



Food Security and Nutrients of Concern



Key Findings

- One out of 7 of students were FI (15.4%) and 1 out of 5 students met the definition for FG students (21.1%).
- FG students faced higher rates of FI when compared to NFG students (14.0%).
- Most students (42.9%) failed to meet any RDA for the NOC.
- The difference between NOC score and FG status ($p=0.296$) where the mean NOC score was 1 between both groups.
- No difference in the number of NOC met between FG and NFG students ($p=0.30$).

Conclusion

Food insecure first-generation students had no significant difference in the number of nutrients of concern with adequate intake compared to food secure non-first generation students.

Take Away

More research should be conducted to address solutions related to nutrition deficiencies to FI among college students.

Acknowledgements

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References

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