



Food Insecurity and Diet Quality Among Undergraduate Students

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Introduction

Food Insecurity (FI) is the state of not having consistent access to nutritious, nutrient dense foods and has been associated with poor nutrient intake among college students.¹

Food insecurity can lead to increased consumption of discretionary calories which are foods high in added salt, added sugar, added saturated fat, and low in fiber.¹ Diets high in these components rarely meet dietary recommendations set by the USDA.

Young adults are still developing and growing, so meeting their micronutrient needs is essential for proper growth and brain functionality, especially while attending college and being in a new environment with increased financial burdens.²⁻⁵

FI is associated with poor dietary intake among college students with the **extent** of these negative impacts still **unknown**.

Objective

This study examines the association between food insecurity and diet quality in a sample of undergraduate students attending a northeastern university.

Subject Characteristics

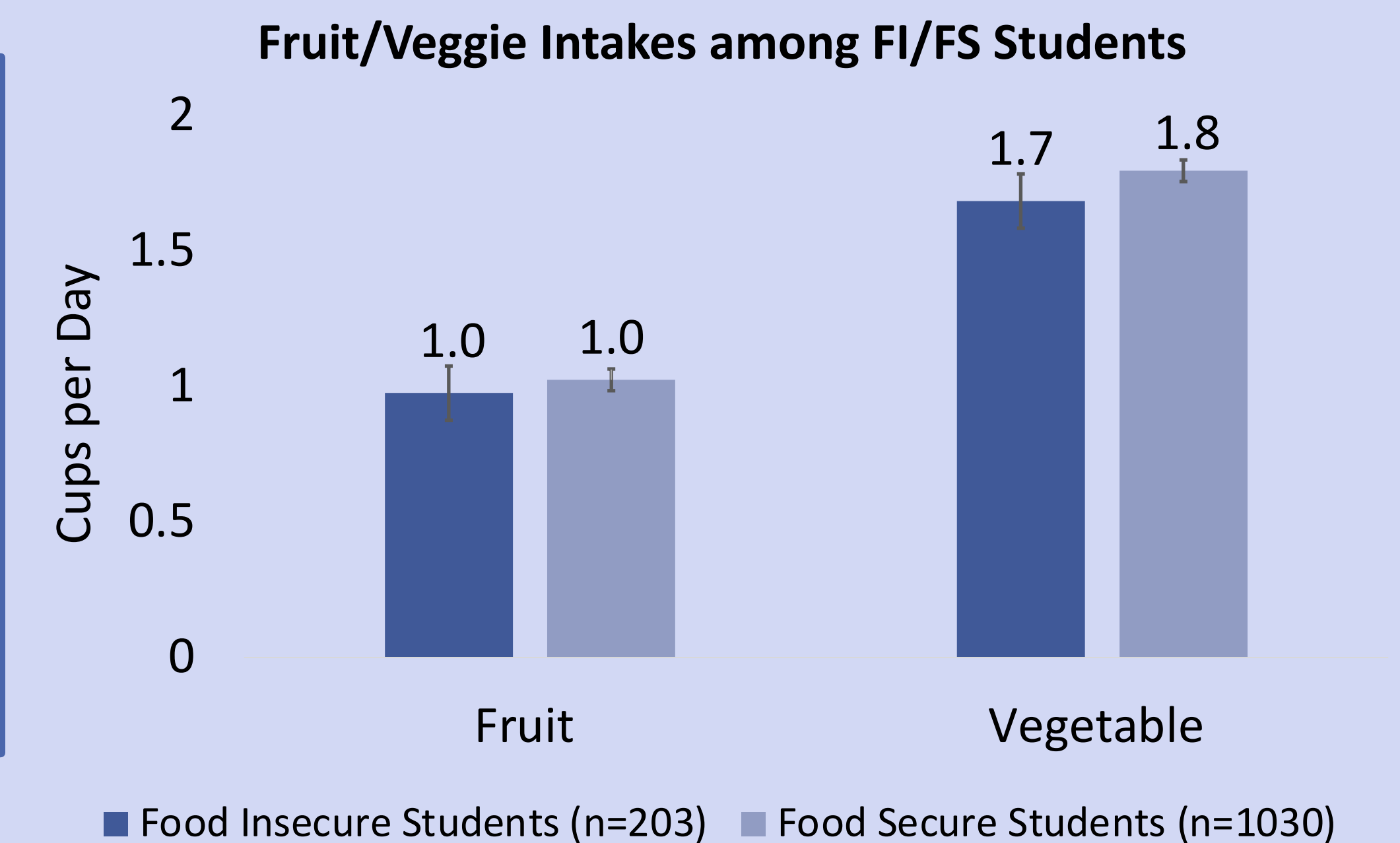
	All Students (N=1233)	Food Secure (N=1030)	Food Insecure (N=203)	p value
Gender (%)				<.001*
<i>Female</i>	61.6	61.9	59.6	
Race (%)				.053
<i>White</i>	91.3	92.1	87.9	
Housing (%)				.005*
<i>On campus</i>	78.8	80.2	71.4	
Pell Grant Status (%)				<.001*
<i>No</i>	80.6	82.5	70.9	

Results

One out of six (16.5%) students reported being food insecure.

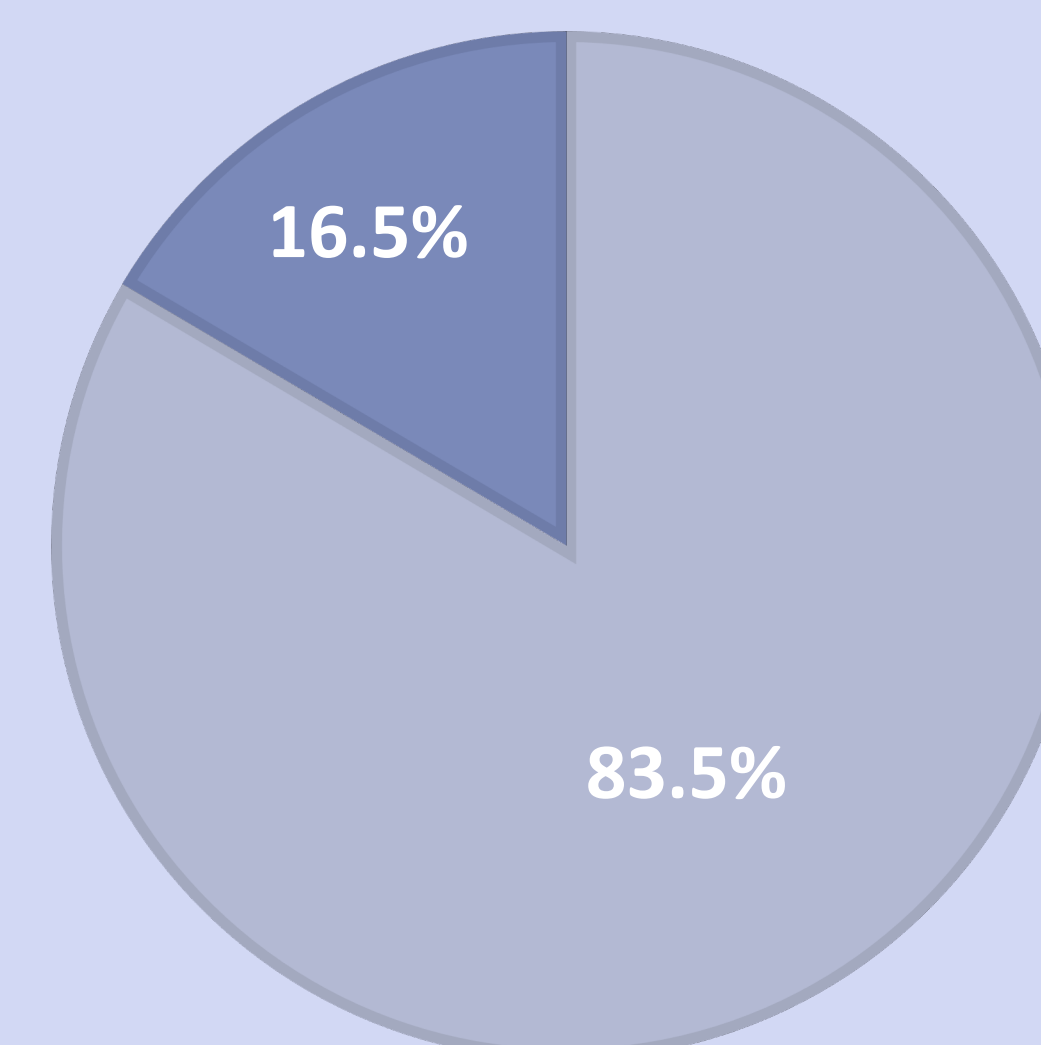
FI students reported similar intakes compared to FS students:

- Saturated fat (23.9±.7 vs. 23.5±.3 g, $p=.63$)
- Discretionary calories (587.0±20.9 vs. 554.5 ±9.3 kcals, $p=.16$)
- Fruit (1.0±.1 vs. 1.03±.03 cups, $p=.53$)
- Vegetables (1.7±.1 vs. 1.8 ±.04 cups, $p=.28$)

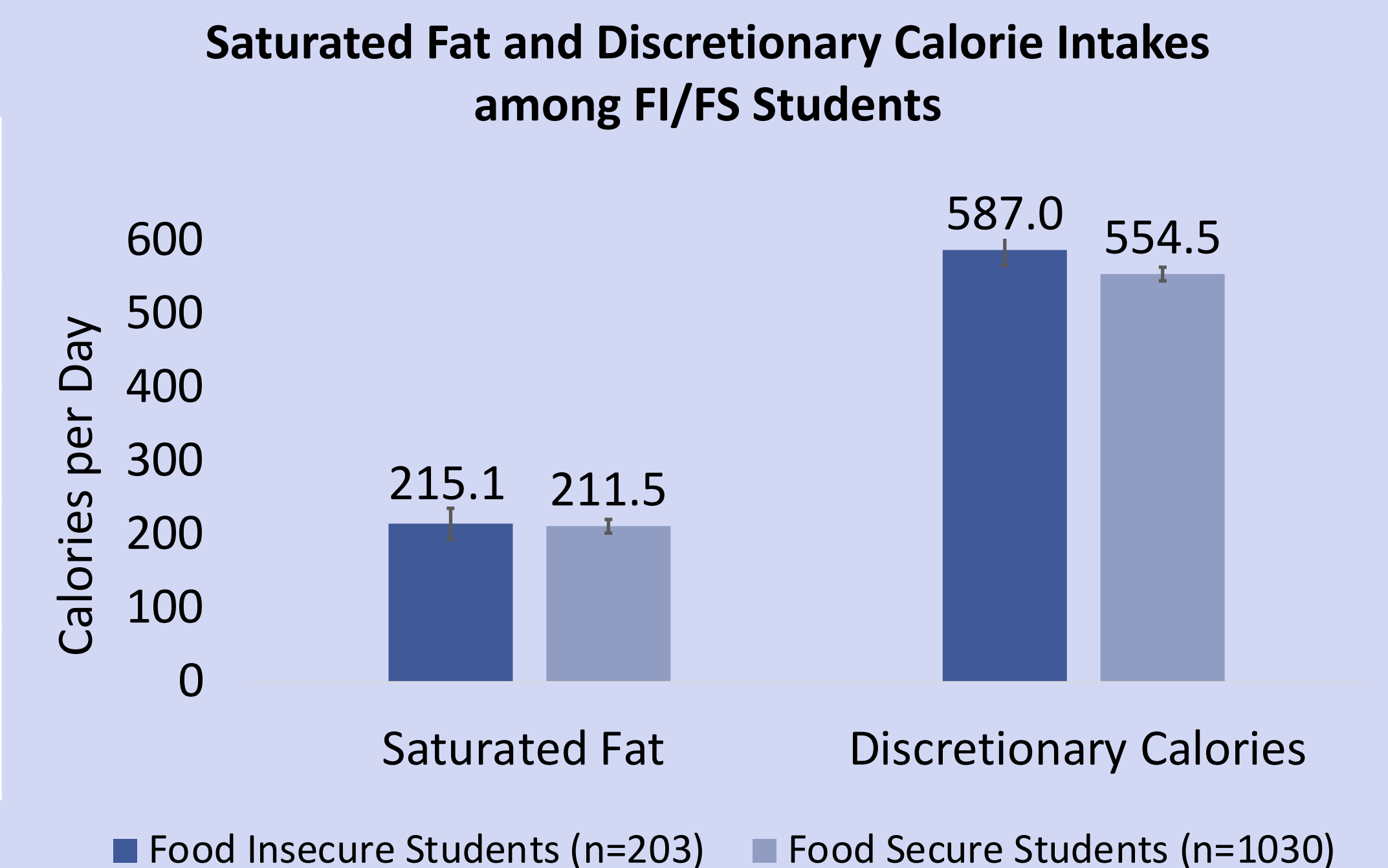


RATES OF FOOD SECURITY

■ Food secure (n=1030) ■ Food insecure (n=203)



Dietary Component	DRI Goal ⁶
Fruit	2 cups
Vegetable	2.5 cups
Saturated Fat	< 10% daily calories
Discretionary Calories	<15% daily calories



Methods

- Between 2018-21 undergraduate students were recruited to participate in the ongoing cross-sectional College Health and Nutrition Assessment Survey. All students provided informed consent (UNH IRB #5524).
- Students completed the USDA 6-item Short Form survey via online questionnaire and recorded 3-day food diaries.
- Diet and Wellness Plus.
- A final sample (n=1233) was analyzed after all data was screened and cleaned.
- Food insecurity data were dichotomized into food secure (FS, n=1030) and food insecure (FI, n=203).
- Data analysis were conducted via SPSS v.27; significance was set at $p<.05$.

Conclusion

Many university students report experiencing food insecurity. Both FI and FS students are not meeting RDAs and report poor dietary quality. While differences between groups were not observed, findings suggest a need for interventions to reduce the burden of disease associated with poor dietary intake.

More research is needed to further investigate the association between food insecurity and dietary intake and to grasp the longitudinal effects seen to one's diet quality and overall well-being.

Funding

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References

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