

Prevalence of and Characteristics Associated with Food Security Status Among International College Students

Jessica Soldavini, MPH, RD, LDN¹; Maureen Berner, PhD²

¹Center for Health Promotion and Disease Prevention and Department of Nutrition, University of North Carolina at Chapel Hill

²School of Government, University of North Carolina at Chapel Hill

Background

- There are over 1.4 million international students studying in the US.¹
- International students may experience a variety of challenges as they transition to living and studying in a new country and institution.
- Food insecurity refers to a lack of consistent and dependable access to enough food to support an active and healthy life.²
- The majority of studies on food insecurity among US college students show higher prevalence rates than the general population.^{2,3}
- Studies have found higher rates of food insecurity among international students compared with non-international students attending UNC Chapel Hill.^{4,5}
- Past studies have examined characteristics associated with food security status among students, but have not looked specifically at characteristics associated with food security status among international students.^{3,4}

Objective

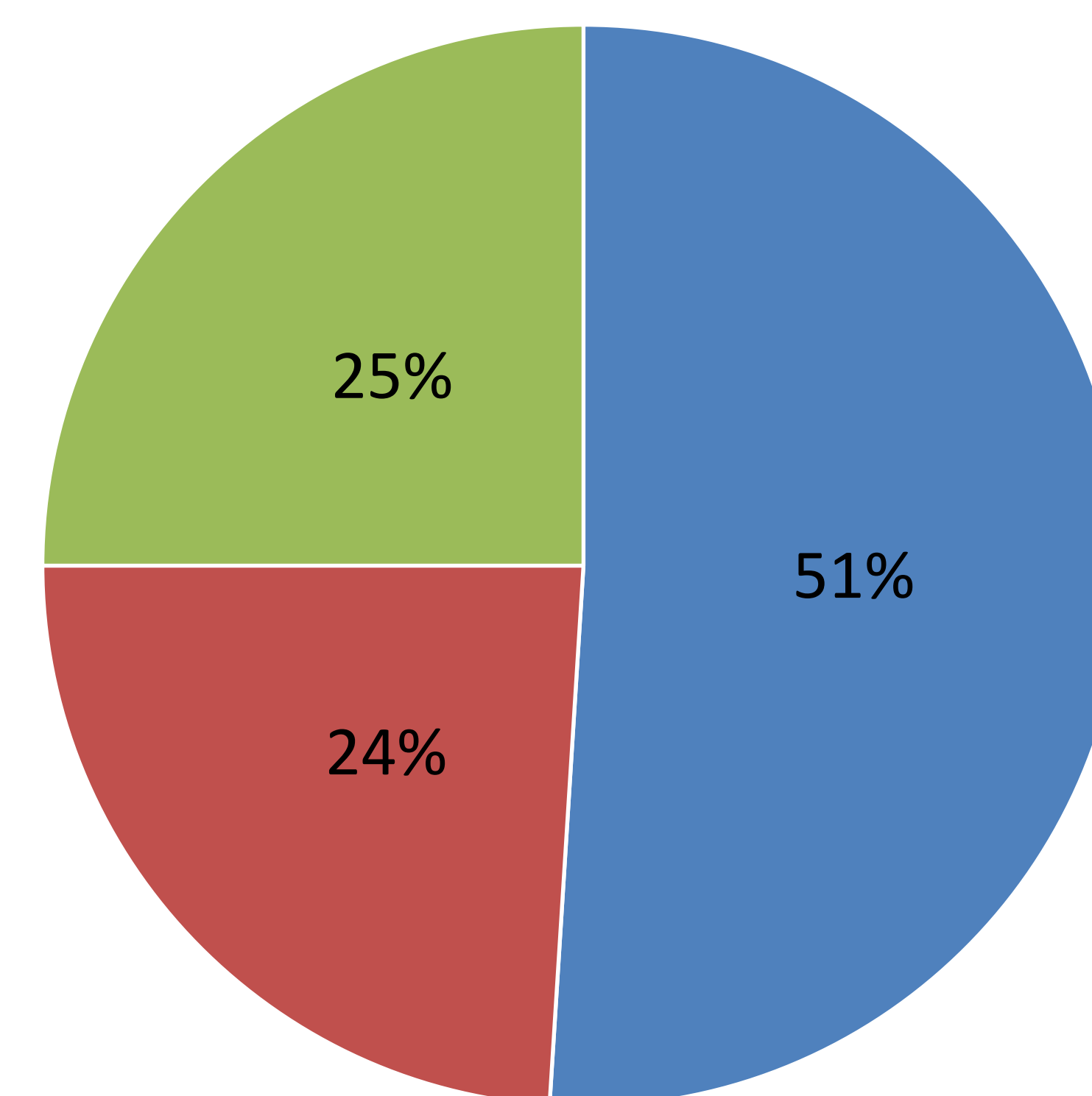
To estimate the prevalence of and identify characteristics associated with food insecurity among international students at UNC Chapel Hill.

Methods

- This cross-sectional study used data from 263 international students attending UNC Chapel Hill who completed an online survey in October and November of 2016.
- Food security status was assessed using the 10-item US Adult Food Security Survey Module and students were categorized as having high food security, marginal food security, or food insecurity.
- Self-reported demographics and other student characteristics were assessed.
- Descriptive statistics were calculated. Monte Carlo Estimates for the Exact Test and ANOVA were used to assess statistical significance for the association between food security status and student characteristics.

Results

Food Security Status Among International Students



- High Food Security
- Marginal Food Security
- Food Insecurity

Table 1: Characteristics of International Students by Food Security Status

	High Food Security (n=135)	Marginal Food Security (n=63)	Food Insecurity (n=65)	p-value
Mean (SD)				
Age	25.4 (5.3)	24.4 (4.6)	23.9 (5.4)	.16
Years in US	2.6 (3.2)	2.2 (2.8)	2.9 (4.2)	.47
n (%) ¹				
Gender				.03
Female	84 (62)	38 (60)	28 (43)	
Male	51 (38)	25 (40)	37 (57)	
Marital Status				.59
Not Married	106 (79)	51 (81)	55 (85)	
Married	29 (21)	12 (19)	10 (15)	
Dependent Children				.39
No	127 (94)	62 (98)	61 (94)	
Yes	8 (6)	1 (2)	4 (6)	
Year in School				.01
Freshman	13 (10)	1 (2)	6 (9)	
Sophomore	11 (8)	7 (11)	7 (11)	
Junior	11 (8)	6 (10)	15 (23)	
Senior	11 (8)	10 (16)	8 (12)	
Graduate	89 (66)	39 (62)	29 (45)	
Residency				.34
Off-Campus	87 (64)	37 (59)	35 (54)	
On-Campus	48 (36)	26 (41)	30 (46)	
Employment Status				.77
Unemployed	71 (53)	37 (59)	38 (58)	
≥1 Part-time jobs	48 (36)	17 (27)	20 (31)	
Full-time job	16 (12)	9 (14)	7 (11)	
Have car				.03
No	80 (59)	49 (78)	45 (69)	
Yes	55 (41)	14 (22)	20 (31)	
Financial Aid				.12
No	50 (37)	27 (43)	34 (52)	
Yes	85 (63)	36 (57)	31 (48)	
Perceived Health Rating				.005
Excellent	56 (41)	23 (37)	13 (20)	
Good	71 (53)	36 (57)	40 (62)	
Fair/poor	8 (6)	4 (6)	12 (18)	
Weight Status				.39
Underweight	8 (6)	8 (13)	6 (9)	
Normal weight	93 (69)	39 (62)	47 (72)	
Overweight	25 (19)	14 (22)	11 (17)	
Obese	9 (7)	2 (3)	1 (2)	
Cooking Frequency				.05
Never	13 (10)	6 (10)	4 (6)	
Sometimes	39 (29)	18 (29)	32 (49)	
Often	83 (61)	39 (62)	29 (45)	
Perceived Cooking Skills				.20
Poor	9 (7)	6 (10)	5 (8)	
Fair	28 (21)	14 (22)	13 (20)	
Good	60 (44)	35 (56)	37 (57)	
Excellent	38 (28)	8 (13)	10 (15)	
Meal Plan				.34
No	108 (80)	54 (86)	49 (75)	
Yes	27 (20)	9 (14)	16 (25)	

Conclusions

- Lack of food security is a serious issue among international students at the University of North Carolina at Chapel Hill, with nearly half reporting food insecurity or marginal food security.
- The characteristics identified in this study as being associated with food security status can help to inform future research and interventions for addressing food security status among international students.

References

1. SEVIS. *SEVIS by the Numbers. Biannual Report on International Student Trends*. US Immigration and Customs Enforcement; 2019.
2. Coleman-Jensen A, Rabbitt MP, Gregory CA, Singh A. *Household Food Security in the United States in 2018*. U.S. Department of Agriculture, Economic Research Service; 2019.
3. Bruening M, Argo K, Payne-Sturges D, Laska MN. The struggle is real: A systematic review of food insecurity on postsecondary education campuses. *J Acad Nutr Diet* 2017;117(11):1767-1791.
4. Soldavini J, Berner M, Da Silva J. Rates of and characteristics associated with food insecurity differ among undergraduate and graduate students at a large public university in the Southeast United States. *Prev. Med. Rep.* 2019;14:100836.
5. Soldavini J, Berner M. The importance of precision: differences in characteristics associated with levels of food security among college students. *Public Health Nutr.* 2020;23(9):1473-1483.

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Contact Information

Jessica Soldavini, MPH, RD, LDN
 Jessica6@live.unc.edu