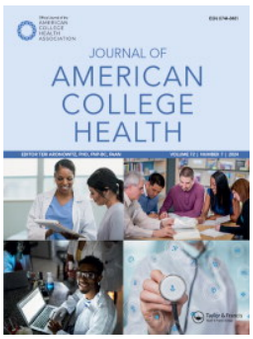

Journal of American College Health

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/vach20

Perceived self- and social stigma among campus-based food pantry users

Rita DeBate, Jocelyn E. Jarvis, Rashida Jones, David Himmelgreen, Kyaien Conner, Amber D. Dumford & Marilyn Stern

To cite this article: Rita DeBate, Jocelyn E. Jarvis, Rashida Jones, David Himmelgreen, Kyaien Conner, Amber D. Dumford & Marilyn Stern (09 Oct 2024): Perceived self- and social stigma among campus-based food pantry users, Journal of American College Health, DOI: 10.1080/07448481.2024.2412067

To link to this article: https://doi.org/10.1080/07448481.2024.2412067

Published online: 09 Oct 2024.

JOURNAL OF AMERICAN COLLEGE HEALTH
https://doi.org/10.1080/07448481.2024.2412067

Routledge
Taylor & Francis Group

BRIEF REPORT

Perceived self- and social stigma among campus-based food pantry users

Rita DeBate, PhD[a], Jocelyn E. Jarvis, BS[b], Rashida Jones, PharmD[a], David Himmelgreen, PhD[c], Kyaien Conner, PhD[d], Amber D. Dumford, PhD[e] and Marilyn Stern, PhD[b]

[a]College of Public Health, University of South Florida, Tampa, Florida, USA; [b]Department of Child & Family Studies, College of Behavioral and Community Sciences, University of South Florida, University of South Florida, Tampa, Florida, USA; [c]Department of Anthropology, College of Arts and Sciences, Center for the Advancement of Food Security and Healthy Communities, University of South Florida, Tampa, Florida, USA; [d]School of Social Work, University of Pittsburgh, Pittsburgh, Pennsylvania, USA; [e]Department of Leadership, Policy, and Lifelong Learning, College of Education, University of South Florida, Tampa, Florida, USA

ABSTRACT

Participants: A critical public health issue facing many universities is food insecurity. Food insecurity has been associated with many academic, physical, and mental health issues. Although the number of campus-based food pantries has grown exponentially, self-, and social stigma have been associated with low rates of utilization. **Methods:** The current quantitative study examined perceptions of food pantry stigma among food insecure college students ($n=93$) who have accessed food pantry services. **Results:** Results reveal moderate levels of food pantry stigma with no statistically significant differences in food pantry stigma scores by level of food security ($p=.322$) and frequency of food pantry use ($p=.263$). Few participants indicated perceptions of social stigma, yet mixed results were observed regarding self-stigma. **Conclusion:** More research is warranted aimed at gaining a better understanding of food pantry stigma among college students that can inform campus-based interventions, practices, and policies aimed at increasing the utilization of campus-based food pantry resources.

ARTICLE HISTORY
Received 30 January 2024
Revised 26 September 2024
Accepted 29 September 2024

KEYWORDS
Food insecurity; food pantry; stigma

Introduction

Food insecurity is a critical public health issue facing many US universities. College students are disproportionately more food insecure as compared to the general public.[1–3] Prevalence studies have reported an average of 36.5%[4–10] to 44% of college students as food insecure.[3,11–13] Moreover, food insecurity has been associated with decreased campus engagement,[14] lower academic performance,[1,2,15–17] poor physical hea lth,[4,6,12,15,18–25] and several mental health conditions such as stress, anxiety, depression, and suicidal ideation.[2,16,22,26,27]

Due to the prevalence of food insecurity among college students, the number of college campus food pantries has rapidly grown across the country as evidenced by an increase in College and University Food Bank Alliance membership since 2012 from 15 to over 700 universities.[2] Although food pantries have the potential to improve health outcomes,[28] current research documents low utilization rates.[29–32] For instance, in a cross-sectional study of 896 college students, 48.8% were classified as food insecure, yet only 17.4% utilized the campus food pantry.[31] Similarly, in a 2022 study among college students, 49.2% of participants were observed as food insecure, with only 40% reporting campus food pantry utilization.[30] Identified barriers include personal (self-stigma,[31–34] embarrassment, shame, and feeling of failure,[2] lack of awareness,[33] and beliefs that other students need it more[30,31,33]), social (social-stigma,[29] normalcy surrounding lack of food and finances in college[29,32,35]), and structural (time, lack of transportation, limited hours of pantry operation[30]) factors.

Social-stigma, self-stigma, and food pantry use among colleges students

Social stigma is defined as a social process that exists when labeling, stereotyping, and discrimination occur within a power context resulting in groups being socially devalued and discredited.[36–38] Social stigma within the context of food pantry utilization encompasses perceived negative judgment (eg, labels, stereotypes) from others due to using the food pantry.[39–42] Consequences of social stigma include a fear of others finding out about using a food pantry based on perceptions that others would judge[42,43] and view them as less valuable for using these food assistance resources.[14,40,44] Relevant to the current study, among college students who have accessed food pantry resources, social stigma from their peers was observed among first-time users.[2] In particular, this qualitative study revealed students expressing feelings of embarrassment walking through campus with food obtained from the pantry.[2] Perceived negative perceptions included being viewed as lazy/unmotivated, selfish, irresponsible, low-income, and poor financial management; thus,

CONTACT Rita DeBate rdebate@usf.edu College of Public Health, University of South Florida, 13201 Bruce B Downs Blvd, Tampa, FL 33612, USA

impacting the likelihood of subsequent food pantry utulization.[36,40,44,45]

Self-stigma refers to the individual's internalization of negative stereotypes, which may result in lower self-esteem and self-efficacy.[46] In reference to food pantry utilization, self-stigma has been characterized by the internalization of negative stereotypes associated with food assistance which may result in feelings of shame, embarrassment, and fear,[33,40,44–48] that can lead to individuals feeling undeserving of support,[40,44,49] and lowered self-esteem.[33,46] Among college students, a qualitative study revealed students who reported embarrassment from food pantry utilization often reported feeling that others have a greater need than themselves and that they are exploiting the food pantry.[33,50] Moreover, self-stigma salient to food pantry usage can be a consequence of internalization stemming from social stigma.[39,51] For example, a qualitative study among college students who accessed food pantry resources revealed students expressing the need to hide the food that was obtained out of embarrassment due to concerns of being seen by others, and judged, as they left the pantry.[14]

In addition to negative impacts on food pantry utilization.[8,33,39,47,48,51] previous literature has also noted the mental health implications from stigmatization of food pantry resources.[36,52–54] Bruckner et al.[55] note a strong link between self-stigma and anxiety from using food assistance. Feelings of shame and anxiety can be magnified by the stigmatization of acceptance of charitable foods from settings such as food banks.[46,48,56–58] In a quantitative study on food insecurity and COVID-19, it was found that for those who were not food insecure before COVID-19, stigmatization of receiving food assistance may have led to increased self-reported levels of anxiety and depression.[58] Self-stigma may also contribute to lower self-esteem due to the internalization of negative stereotypes regarding accessing food resources.[39,46] Among college students who were food insecure, perceiving oneself as having low social status has been related to depression.[48,59]

Previous literature, predominantly qualitative in nature, has provided some insight regarding social- and self-stigma and utilization of campus-based food pantry resources among food insecure college students.[8,33,39,48] Nonetheless, additional research is warranted that can be used to inform practices that address stigma-related barriers to campus-based food pantry utilization. To that end, the purpose of this quantitative cross-sectional study is to examine perceptions of food pantry stigma among food insecure college students who have accessed food pantry services.

Methods

Participants

The current study is part of a larger cross-sectional study exploring food insecurity among racially and ethnically diverse undergraduate college students attending a large, urban research institution ($n = 588$). The current study sample ($n = 93$) is comprised of participants from the larger study who self-reported either "sometimes" or "often" obtaining food from the campus food pantry.

Procedures

As part of the larger study, a list of all students meeting the following eligibility criteria: (1) currently enrolled as an undergraduate student and (2) 18 years old or older as verified from the university registrar ($n = 26,751$). From those eligible, a stratified sample (25% of non-Hispanic White students; 100% of Hispanic/Latino/a students; 100% of non-Hispanic Black/African American students) of students ($n = 15,528$) were emailed a link to the study screener survey. Individuals responding "yes" to a one-item food insecurity screener (*In the last 30 days, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?*)[60] were invited to participate in the study and were emailed a link to the informed consent form. Upon providing informed consent, participants completed the electronic survey housed in the Research Electronic Data Capture (REDCap) web-based application.[61,62] Participants received a $25 Amazon Gift Card for completing the survey. The study was reviewed and approved by the University of South Florida Institutional Review Board (IRB # 004835).

Measures

Food insecurity

The USDA Food Security Survey Short Form is a reliable ($\alpha = .87$)[63] 6-item questionnaire (5-items when self-administered) used to measure the level of food security.[64,65] A sum score was generated ranging from 0 to 6 with higher scores reflecting higher levels of food insecurity. Scores were categorized as 0–1= marginal food security; 2–4= low food security; 5–6 = very low food security.

Food pantry use

Food pantry use was measured by asking participants how often they obtained food from the campus food pantry within the last 30 days. The three categorical response options were "never," "sometimes," and "often."

Food pantry stigma

The 10-item, Likert-type (1 = strongly disagree to 5 = strongly agree) Food Pantry Stigma Scale[66] was employed to assess perceptions of stigma regarding use of a campus-based food pantry ($\alpha = .852$). Examples of items included, "*I have stopped socializing with people due to their reaction to me when using the food pantry*"; "*I am careful whom I tell that I use the food pantry*"; "*I do not mind if people in my neighborhood know I use the food pantry*"; "*I fear losing friends and facing rejection because I used a food pantry.*" A sum score was generated ranging from 10 to 40 with higher scores indicating greater food pantry stigma.

Sociodemographic characteristics

Variables included self-reported age, race, ethnicity, sex (assigned at birth), student status, undergraduate level, housing, employment status.

Statistical analysis

Survey data were exported from REDCap and uploaded into IBM SPSS Statistics Version 29.0.1 where all statistical analyses were conducted. Descriptive statistics were computed for all demographic variables by food pantry use for food-insecure students. Independent sample *t*-tests and chi-squares were used to identify any differences between food-insecure food pantry users and non-users across multi-level variables.

Results

Socio-demographics

Among the 93 participants, the majority self-identified as female (76.3%). Approximately 48% self-identified as Hispanic, 34% as Black non-Hispanic, and 17% White non-Hispanic. Many participants self-reported enrolled as full-time students (92.4%), either a Junior (33.3%) or Senior (33.3), living off campus (46.9%), and working (61%). Regarding food insecurity, approximately 74% were observed with very low food security and 26% with low food security while 100% accessed the food pantry (78% reported "sometimes" access and 22% "often" access). No statistically significant differences were observed for food insecurity by race/ethnicity ($p = .088$), sex ($p = .587$), or gender ($p = .809$).

When compared to participants in the larger study ($n = 494$; self-reported not accessing the campus-based food pantry), no statistically significant differences were observed by age, $p = .090$), race ($p = .128$), ethnicity ($p = .944$), sex ($p = .060$), full versus part time ($p = .597$), undergraduate level ($p = .668$), housing ($p = .937$), or employment status ($p = .683$). Statistically significant differences ($p = .009$) were observed between study participants and the larger study in that a larger percentage of participants in the current study population (ie, those who accessed the food pantry) were observed with very low food insecurity as compared with those in the larger study population who self-reported not accessing the food pantry (74.2% vs 59.9%).

Food pantry stigma

The mean food pantry stigma score among participants was 23.24 ($SD = 7.92$), reflecting scores at the midpoint of the range. No statistically significant differences were observed for food pantry stigma scores by race/ethnicity ($p = .622$), sex ($p = .309$), and gender ($p = .182$). Table 1 depicts specific items within the Food Pantry Stigma Scale. In general, the majority of participants reported either strongly disagree or disagree with the following statements: "*I have stopped socializing with people due to their reaction to me using the food pantry*" (79.3%), "*I fear losing friends and facing rejection because I use a food pantry*" (70.7%), "*Some people avoid interacting with me after finding out I used a food pantry*" (79.3%), "*I am not as good a person as others because I use a food pantry*" (65.6%), and, "*As a rule, telling others that I use a food pantry has been a mistake*" (59.1%),"*I work hard to keep that I use a food pantry from others*" (50.0%). Approximately half of all participants reported strongly agree/agree to the following statement: "*I have not had any trouble with people knowing that I use a food pantry*" (49.5%).

Conversely, participants were split with regard to the statements: "*I am careful whom I tell that I use the food pantry*" (39.8% strongly disagree/disagree, 45.2% strongly agree/agree), "*I feel guilty because I use the food pantry*" (46.7% strongly disagree/disagree, 45.2% strongly agree/agree), and "*I don't mind people in my neighborhood knowing that I use a food pantry*" (37.6% strongly disagree/disagree, 37.6% strongly agree/agree).

Differences in food pantry stigma by level of food security and frequency of use

An independent-samples *t*-test was conducted to compare the food pantry stigma scores by level of food security and frequency of food pantry use. There was no statistically significant difference in food pantry stigma scores ($p = .322$) among participants observed with low food security ($M = 21.83$, $SD = 8.65$) and very low food security ($M = 23.74$, $SD = 7.66$). The magnitude of the differences in the means (mean difference = −1.91, confidence interval [CI]: −5.73 to

Table 1. Food Pantry Stigma Scale item response.

Variable	Strongly disagree *n* (%)	Disagree *n* (%)	Neither agree/ disagree *n* (%)	Agree *n* (%)	Strongly agree *n* (%)
I have stopped socializing with some people due to their reaction to me using the food pantry	56 (60.9)	17 (18.5)	15 (16.3)	3 (3.3)	1 (1.1)
I am very careful whom I tell that I use the food pantry	25 (26.9)	12 (12.9)	14 (15.1)	26 (28.0)	16 (17.2)
I feel guilty because I use the food pantry	29 (31.5)	14 (15.2)	21 (22.8)	20 (21.7)	8 (8.7)
I fear losing friends and facing rejection because I use a food pantry	44 (47.8)	21 (22.8)	16 (17.4)	9 (9.8)	2 (2.2)
Some people avoid interacting with me after finding out I used a food pantry	49 (53.3)	24 (26.1)	14 (15.2)	4 (4.3)	1 (1.1)
I feel I'm not as good a person as others because I used a food pantry	41 (44.1)	20 (21.5)	17 (18.3)	12 (12.9)	3 (3.2)
I do not mind people in my neighborhood knowing that I use a food pantry	18 (19.4)	17 (18.3)	23 (24.7)	24 (25.8)	11 (11.8)
I have not had any trouble with people knowing that I use a food pantry	14 (15.1)	10 (10.8)	23 (24.7)	33 (35.5)	13 (14.0)
I work hard to keep that I use a food pantry from others	34 (37.0)	12 (13.0)	33 (35.9)	10 (10.9)	3 (3.3)
As a rule, telling others that I used a food pantry has been a mistake	33 (35.5)	22 (23.7)	26 (28.0)	10 (10.8)	2 (2.2)

1.91) was very small (.241). Similarly, there was no statistically significant difference in food pantry stigma scores ($p = .263$) among participants who reported sometimes accessing the food pantry ($M = 22.76$, $SD = 7.50$) and often accessing the food pantry ($M = 25.11$, SD = 9.39). The magnitude of the differences in the means (mean difference = −2.35, CI: −6.51 to 1.80) was very small (.298).

Discussion

Although the number of campus-based food pantries has grown exponentially,[2] current research notes low utilization rates[29–32] accompanied by personal barriers including social- and self-stigma.[29,31–34] The current study explored the concept of food pantry stigma among food insecure college students who have accessed the campus-based food pantry. Collectively, results reveal moderate food pantry stigma among participants who have accessed the food pantry with no observed differences in scores by level of food security or frequency of use. When observed separately, the *Food Pantry Stigma Scale* items reveal interesting insights regarding social- and self-stigma.

First, results reveal few participants noting social stigma and interpersonal impacts regarding utilization of campus-based food pantry resources. More specifically, most participants indicated that they had no difficulty with others knowing that they went to the food panty and, consequently, others' knowledge of their food pantry utilization had not resulted in less socialization or avoidance by others. These results do not support the work of others who revealed social stigma from peers and university as a result of obtaining food from a campus-based food pantry.[2,14] Yet, it is essential to note that the lack of perceptions of social stigma could be due to participants being careful about the number and with whom they share this information. Additional research is warranted to further explore the concepts of social stigma and social networks on food pantry utilization.

Second, varied insight regarding self-stigma associated with food pantry use was revealed. More specifically, although few participants revealed feelings of inferiority associated with obtaining food from the food pantry, almost half reported feeling guilty about using the food pantry. To that end, although these results align with previous work which notes feelings of shame associated with obtaining food from a food pantry,[14] more research is warranted with regard to the impact of self-stigma and campus-based food pantry use.

Interpretation of findings should be considered with certain study limitations. First, the study sample comprised undergraduate-level students at a single university which may affect generalizability to graduate-level and college students attending institutions in other geographical regions. Second, the small sample size from a single university limits generalizability due to differences in campus culture and food pantry resources (eg, location, processes, etc.). Additionally, data are from food pantry patrons who are observed with low or very low food security which may skew stigma scores. Further, the sample is comprised of students who self-reported using the food pantry, as such does not include students who have not used the food pantry—perhaps due to stigma. As such, food pantry stigma may be conservative. Third, the influence of social approval bias and social desirability bias that may have impacted the way students self-reported their food pantry stigma. Social desirability is related to the tendency to respond in a way as to avoid criticism and social approval refers to the tendency to seek praise.[67] Previous research has identified both social approval and social desirability bias to influence self-reported measures.[67–70] Thus, social desirability and approval bias may have depressed and skewed stigma scores.

Despite these limitations, to our knowledge, this is the first quantitative study exploring food pantry stigma among college students who have accessed food pantry resources. Collectively, findings provide additional information regarding food pantry stigma among food insecure students who utilize campus-based food pantries; specifically, the importance of looking more carefully at different aspects of food pantry use stigma. Furthermore, the current study provides additional insight into the contradictory nature of food insecurity among college students (ie, high rate of food insecurity and low perceived deservingness of assistance and associated guilt). Implications for college and university administrators include (1) reframing food insecurity as something that affects many students; (2) changing the way students think about being in need; and (3) normalizing food assistance as one of the many campus resources. To that end, social norming campaigns and positive messaging offer possibilities for increasing food pantry use. Social norms theory suggests that a person's perceptions of the behaviors among their peers can influence behaviors through a desire for social approval; as such, correcting misperceptions about norms may modify behavior.[71] Social norming campaigns have been found to be successful in addressing a variety of behaviors among college students.[72] With specific reference to food insecurity, social norming campaigns could focus on statements regarding the prevalence of the food insecurity among colleges students aimed as changing the way students think about being in need and associated campus resources. More research is needed to inform campus-based interventions, practices, and policies aimed at increasing campus-based food pantry utilization.

Disclosure statement

The authors have no conflicts of interest to report. The authors confirm that the research presented in this article met the ethical guidelines, including adherence to the legal requirements, of the U.S. and received approval from the Institutional Review Board of the University of South Florida.

Funding

This research was supported by funding from the University of South Florida College of Public Health.

ORCID

Rita DeBate http://orcid.org/0000-0001-6139-8049

Data availability statement

The participants of this study did not give written consent for their data to be shared publicly; therefore, supporting data is not available.

References

1. Broton KM, Cady CL. *Food Insecurity on Campus: Action and Intervention*. Baltimore, MD: Johns Hopkins University Press; 2020
2. Henry L. *Experiences of Hunger and Food Insecurity in College*. Cham, Switzerland: Palgrave Macmillan; 2020:1–129.
3. Freudenberg N, Manzo L, Jones H, Kwan A, Tsui E, Gagnon M. Food insecurity at CUNY: Results from a survey of CUNY undergraduate students. https://www.gc.cuny.edu/CUNY_GC/media/CUNY-Graduate-Center/PDF/Centers/Center%20for%20Human%20Environments/cunyfoodinsecurity.pdf; 2011
4. Hughes R, Serebryanikova I, Donaldson K, Leveritt M. Student food insecurity: the skeleton in the university closet. *Nutr Diet*. 2011;68(1):27–32. doi:10.1111/j.1747-0080.2010.01496.x.
5. Gaines A, Robb CA, Knol LL, Sickler S. Examining the role of financial factors, resources and skills in predicting food security status among college students. *Int J Consum Stud*. 2014;38(4):374–384. doi:10.1111/ijcs.12110.
6. Patton-López MM, López-Cevallos DF, Cancel-Tirado DI, Vazquez L. Prevalence and correlates of food insecurity among students attending a midsize rural university in Oregon. *J Nutr Educ Behav*. 2014;46(3):209–214. doi:10.1016/j.jneb.2013.10.007.
7. Maroto ME, Snelling A, Linck H. Food insecurity among community college students: prevalence and association with grade point average. *Community Coll J Res Pract*. 2015;39(6):515–526. doi:10.1080/10668926.2013.850758.
8. El Zein A, Mathews AE, House L, Shelnutt KP. Why are hungry college students not seeking help? Predictors of and barriers to using an on-campus food pantry. *Nutrients* 2018;10(9):1163. doi:10.3390/nu10091163.
9. Willis DE. Feeding the student body: unequal food insecurity among college students. *Am J Health Educ*. 2019;50(3):167–175. doi:10.1080/19325037.2019.1590261.
10. Weaver RR, Vaughn NA, Hendricks SP, et al. University student food insecurity and academic performance. *J Am Coll Health*. 2020;68(7):727–733. doi:10.1080/07448481.2019.1600522.
11. 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. doi:10.1016/j.jand.2017.05.022.
12. Broton KM, Goldrick-Rab S. Going without: an exploration of food and housing insecurity among undergraduates. *Educ Res*. 2018;47(2):121–133. doi:10.3102/0013189X17741303.
13. Nazmi A, Martinez S, Byrd A, et al. A systematic review of food insecurity among US students in higher education. *J Hunger Environ Nutr*. 2019;14(5):725–740. doi:10.1080/19320248.2018.1484316.
14. Watkins JR. *Hungry and Hesitant: An Exploration of the Experience of Stigma Among On-Campus Food Pantry Users* [dissertation]. Bakersfield, CA: California State University; 2021.
15. Henry L. Understanding food insecurity among college students: experience, motivation, and local solutions. *Ann Anthropol Pract*. 2017;41(1):6–19. doi:10.1111/napa.12108.
16. Martinez SM, Frongillo EA, Leung C, Ritchie L. No food for thought: food insecurity is related to poor mental health and lower academic performance among students in California's public university system. *J Health Psychol*. 2020;25(12):1930–1939. doi:10.1177/1359105318783028.
17. Pia Chaparro M, Zaghloul SS, Holck P, Dobbs J. Food insecurity prevalence among college students at the University of Hawai'i at Mānoa. *Public Health Nutr*. 2009;12(11):2097–2103. doi:10.1017/S1368980009990735.
18. Farahbakhsh J, Hanbazaza M, Ball GD, Farmer AP, Maximova K, Willows ND. *Food Insecure Student Clients of a University-Based Food Bank Have Compromised Health, Dietary Intake and Academic Quality*. Australia: John Wiley & Sons Ltd; 2017:67. doi:10.1111/1747-0080.12307.
19. Mirabitur E, Peterson KE, Rathz C, Matlen S, Kasper N. Predictors of college-student food security and fruit and vegetable intake differ by housing type. *J Am Coll Health*. 2016;64(7):555–564. doi:10.1080/07448481.2016.1192543.
20. Knol LL, Robb CA, McKinley EM, Wood M. Food insecurity, self-rated health, and obesity among college students. *Am J Public Health*.; 2017;48:1–8. doi:10.1080/19325037.2017.1316689.
21. Bruening M, van Woerden I, Michael T, Laska MN. Hungry to learn: the prevalence and effects of food insecurity on health behaviors and outcomes over time among a diverse sample of university freshmen. *Int J Behav Nutr Phys Act*. 2018;15(1):9. doi:10.1186/s12966-018-0647-7.
22. Payne-Sturges DC, Tjaden A, Caldeira KM, Vincent KB, Arria AM. Student hunger on campus: food insecurity among college students and implications for academic institutions. *Am J Health Promot*. 2018;32(2):349–354. doi:10.1177/0890117117719620.
23. Dhillon J, Diaz Rios LK, Aldaz KJ, et al. We don't have a lot of healthy options: food environment perceptions of first-year, minority college students attending a food desert campus. *Nutrients* 2019;11(4):816–816. doi:10.3390/nu11040816.
24. Allen CC, Alleman NF. A private struggle at a private institution: effects of student hunger on social and academic experiences. *J Coll Stud Dev*. 2019;60(1):52–69. doi:10.1353/csd.2019.0003.
25. Morris LM, Smith S, Davis J, Null DB. The prevalence of food security and insecurity among Illinois University students. *J Nutr Educ Behav*. 2016;48(6):376–382.e1. doi:10.1016/j.jneb.2016.03.013.
26. Alaimo K, Olson CM, Frongillo EA.Jr. Food insufficiency and American school-aged children's cognitive, academic, and psychosocial development. *Pediatrics*. 2001;108(1):44–53. doi:10.1542/peds.108.3.824-a.
27. Broton KM, Weaver KE, Mai M. Hunger in higher education: experiences and correlates of food insecurity among Wisconsin undergraduates from low-income families. *Soc Sci*. 2018;7(10):179–179. doi:10.3390/socsci7100179.
28. An R, Wang J, Liu J, Shen J, Loehmer E, McCaffrey J. A systematic review of food pantry-based interventions in the USA. *Public Health Nutr*. 2019;22(9):1704–1716. doi:10.1017/S1368980019000144.
29. Daugherty JB, Birnbaum M, Clark A. 'Having enough': students' understanding of food insecurity and campus food pantry use. *J Poverty*. 2019;23(7):600–620. doi:10.1080/10875549.2019.1652721.
30. Brito-Silva F, Wang W, Moore CE, et al. College campus food pantry program evaluation: what barriers do students face to access on-campus food pantries? *Nutrients* 2022;14(14):2807. doi:10.3390/nu14142807.
31. McArthur LH, Fasczewski KS, Farris AR, Petrone M. Use and perceptions of a campus food pantry among food insecure college students: an exploratory study from Appalachia. *J Appalach Health*. 2020;2(2):7–23. doi:10.13023/jah.0202.02.
32. Miller M, Middendorf G, Wood SD, Lutter S, Jones S, Lindshield BL. Food insecurity and assistance on campus: a survey of the student body. *Online J Rural Res Policy*. 2019;14(2):1–27. doi:10.4148/1936-0487.1097.
33. El Zein A, Vilaro MJ, Shelnutt KP, Walsh-Childers K, Mathews AE. Obstacles to university food pantry use and student-suggested solutions: a qualitative study. *PLoS One*. 2022;17(5):e0267341. doi:10.1371/journal.pone.0267341.
34. Mitchell A, Prescott MP. The role of campus food pantries in the food security safety net: on-going or emergency use at a Midwest campus pantry. *Nutrients* 2022;14(22):4876. doi:10.3390/nu14224876.

35. Howell C. *The Impacts of a Food Pantry on College Students*. Orlando, FL: Unviersity of Central Florida; 2022. https://stars.library.ucf.edu/etd2020/1388
36. Earnshaw VA, Karpyn A. Understanding stigma and food inequity: a conceptual framework to inform research, intervention, and policy. *Transl Behav Med*. 2020;10(6):1350–1357. doi:10.1093/tbm/ibaa087.
37. Link BG, Phelan JC. Conceptualizing stigma. *Annu Rev Sociol*. 2001;27(1):363–385. doi:10.1146/annurev.soc.27.1.363.
38. Reyes JED. *Food Insecurity, Food Pantry Use and Stigma: A Study of US Citizen and Non-Citizen University Students*. New Brunswick, NJ: Rutgers The State University of New Jersey, School of Graduate Studies; 2021.
39. Uri R. "It Make Me Feel Like I'm Beneath Them": Experiences of Stigma among Individuals Living with Food Insecurity [thesis]. Charlotte, NC: The University of North Carolina at Charlotte; 2021.
40. De Souza RT. *Feeding the Other: Whiteness, Privilege, and Neoliberal Stigma in Food Pantries*. Cambridge, MA: MIT Press; 2019.
41. Purdam K, Garratt EA, Esmail A. Hungry? Food insecurity, social stigma and embarrassment in the UK. *Sociology* 2016;50(6):1072–1088. doi:10.1177/0038038515594092.
42. Hossain Z. *Addressing the Social Stigma of Food Pantry Usage with Social Comparison Information in a Community College Setting* [dissertation]. Ithaca, NY: Cornell University; 2023.
43. Garthwaite K. Stigma, shame and 'people like us': an ethnographic study of foodbank use in the UK. *J Poverty Social Justice*. 2016;24(3):277–289. doi:10.1332/175982716X14721954314922.
44. Henry L. *Experiences of Hunger and Food Insecurity in College*. Cham, Switzerland: Springer; 2020.
45. Wright KE, Lucero J, Crosbie E. "It's nice to have a little bit of home, even if it's just on your plate"–perceived barriers for Latinos accessing food pantries. *J Hunger Environ Nutr*. 2020;15(4):496–513. doi:10.1080/19320248.2019.1664963.
46. Taylor N, Boyland E, Christiansen P, Southern A, Hardman CA. Towards measuring food insecurity stigma: development and validation of the food insecurity self-stigma scale and the food support experiences scale. *BMC Public Health*. 2024; [Preprint]. February 1, 2024. doi:10.21203/rs.3.rs-3869449/v1.
47. Middleton G, Mehta K, McNaughton D, Booth S. The experiences and perceptions of food banks amongst users in high-income countries: an international scoping review. *Appetite* 2018;120:698–708. doi:10.1016/j.appet.2017.10.029.
48. Peterson N, Freidus A, Tereshenko D. Why college students don't access resources for food insecurity: stigma and perceptions of need. *Ann Anthropol Pract*. 2022;46(2):140–154. doi:10.1111/napa.12190.
49. Hopper LG. Neoliberalism and Perceptions of Charitable Food Assistance Recipients [thesis]. Harrisonburg, VA; James Madison University; 2022
50. Weaver RR, Hendricks SP, Vaughn NA, McPherson-Myers PE, Willis SL, Terry SN. Obstacles to food security, food pantry use, and educational success among university students: a mixed methods approach. *J Am Coll Health*. 2022;70(8):2548–2559. doi:10.1080/07448481.2021.1873789.
51. Idehai OV, Mbaya P, Chung T, Bhurosy T. A systematic review of factors associated with student use of campus food pantries: implications for addressing barriers and facilitating use. *BMC Public Health*. 2024;24(1):97. doi:10.1186/s12889-023-17583-7.
52. Loh IH, Oddo VM, Otten J. Food insecurity is associated with depression among a vulnerable workforce: early care and education workers. *Int J Environ Res Public Health*. 2020;18(1):170. doi:10.3390/ijerph18010170.
53. Heflin CM, Siefert K, Williams DR. Food insufficiency and women's mental health: findings from a 3-year panel of welfare recipients. *Soc Sci Med*. 2005;61(9):1971–1982. doi:10.1016/j.socscimed.2005.04.014.
54. Leung CW, Epel ES, Willett WC, Rimm EB, Laraia BA. Household food insecurity is positively associated with depression among low-income supplemental nutrition assistance program participants and income-eligible nonparticipants. *J Nutr*. 2015;145(3):622–627. doi:10.3945/jn.114.199414.
55. Bruckner HK, Westbrook M, Loberg L, Teig E, Schaefbauer C. "Free" food with a side of shame? Combating stigma in emergency food assistance programs in the quest for food justice. *Geoforum* 2021;123:99–106. doi:10.1016/j.geoforum.2021.04.021.
56. Swales S, May C, Nuxoll M, Tucker C. Neoliberalism, guilt, shame and stigma: A Lacanian discourse analysis of food insecurity. *J Community Appl Soc Psychol*. 2020;30(6):673–687. doi:10.1002/casp.2475.
57. Gundersen C, Oliveira V. The food stamp program and food insufficiency. *Am J Agri Econ*. 2001;83(4):875–887. doi:10.1111/0002-9092.00216.
58. Fang D, Thomsen MR, Nayga RM. The association between food insecurity and mental health during the COVID-19 pandemic. *BMC Public Health*. 2021;21(1):607. doi:10.1186/s12889-021-10631-0.
59. Willis DE. Feeding inequality: food insecurity, social status and college student health. *Sociol Health Illn*. 2021;43(1):220–237. doi:10.1111/1467-9566.13212.
60. Makelarski JA, Abramsohn E, Benjamin JH, Du S, Lindau ST. Diagnostic accuracy of two food insecurity screeners recommended for use in health care settings. *Am J Public Health*. 2017;107(11):1812–1817. doi:10.2105/AJPH.2017.304033.
61. Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)—a metadata-driven methodology and workflow process for providing translational research informatics support. *J Biomed Inform*. 2009;42(2):377–381. doi:10.1016/j.jbi.2008.08.010.
62. Harris PA, Taylor R, Minor BL, et al. The REDCap consortium: building an international community of software platform partners. *J Biomed Inform*. 2019;95:103208. doi:10.1016/j.jbi.2019.103208.
63. Gulliford MC, Mahabir D, Rocke B. Reliability and validity of a short form household food security scale in a Caribbean community. *BMC Public Health*. 2004;4(1):22. doi:10.1186/1471-2458-4-22.
64. Six-item short form of the food security survey module. USDA, Economic Research Service. https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-u-s/survey-tools/; 2022
65. Bickel G, Nord M, Price C, Hamilton C, Cook J. *Guide to Measuring Household Food Security, Revised 2000*. Alexandria, VA: U.S. Department of Agriculture, Food and Nutrition Service; 2000.
66. Kindle P, Foust-Newton M, Reis M, Gell M. Food pantries and stigma: Users' Concerns and Public Support. *Contemp Rural Social Work J*. 2020;11:Article 2.
67. Hebert JR, Ma Y, Clemow L, et al. Gender differences in social desirability and social approval bias in dietary self-report. *Am J Epidemiol*. 1997;146(12):1046–1055. doi:10.1093/oxfordjournals.aje.a009233.
68. Tang JS, Haslam RL, Ashton LM, Fenton S, Collins CE. Gender differences in social desirability and approval biases, and associations with diet quality in young adults. *Appetite* 2022;175:106035. doi:10.1016/j.appet.2022.106035.
69. Adams SA, Matthews CE, Ebbeling CB, et al. The effect of social desirability and social approval on self-reports of physical activity. *Am J Epidemiol*. 2005;161(4):389–398. doi:10.1093/aje/kwi054.
70. Kopera M, Suszek H, Bonar E, et al. Evaluating explicit and implicit stigma of mental illness in mental health professionals and medical students. *Community Ment Health J*. 2015;51(5):628–634. doi:10.1007/s10597-014-9796-6.
71. Berkowitz AD. Applications of social norms theory to other health and social justice issues. In: Perkins HW, ed. The *Social Norms Approach* to *Preventing School* and *College Age Substance Abuse*: A *Handbook* for *Educators*, *Counselors*, and *Clinicians*. San Francisco, CA: Jossey-Bass/Wiley;2003:259–279.
72. Cimini MD, Rivero EM. *Promoting Behavioral Health and Reducing Risk among College Students: A Comprehensive Approach*. New York: Routledge; 2018.