

Impacts of Food Insecurity on College Students

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Introduction

Food insecurity is a growing public health concern and has become an increasing cause for concern in college students. A 2020 U.S. Government Accountability Office report estimated that 23% (3.8 million) of undergraduate college students, and 12% of graduate students faced food insecurity with 2.2 million categorized as having “very low food security” (U.S. Government Accountability Office, 2024). Nationally, 1 in 7 (~47 million) Americans experience some level of food insecurity, reflecting widespread challenges in accessing nutritious and affordable food (Food Research & Access Center, 2025). The U.S. Department of Agriculture classifies food insecurity as a condition to which a household is unable to have access to adequate levels of food (U.S. Department of Agriculture, 2025). It is then further divided into categories: “Low food security” and “Very low food security” with “Low food security” defined as a reduction in the quality of a diet without a reduction in food intake, whereas “Very low food security” is similarly defined as a reduction in the quality of food except there is a noted reduction in food intake (U.S. Department of Agriculture, 2025). The staggering number of food insecure students makes it an imperative challenge for officials to identify solutions to remedy the problem.

The impacts of food insecurity can have significant outcomes on afflicted individuals. Adults are at increased risk for various health problems including obesity and higher rates for chronic disease (U.S. Department of Health and Human Services, 2022) which puts a large burden on the health care system (UToronto, 2022). Additionally, mental health can be impacted with food insecurity having a strong relationship with an increased risk for depression, anxiety disorders, mood disorders, and suicidal thoughts (UToronto, 2022). This is significant for college students as a 2022 study found that over 60% of college students report fitting the criteria for at

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least one mental health problem with this number jumping nearly 50% since 2013 (Lipson et al., 2022). This rise in incidence of mental health issues makes it important for food insecurity to be addressed in the college student population, as inadequate access to nutritious food can further psychological distress and contribute to the overall burden many college students experience citation.

The Supplemental Nutrition Assistance Program (SNAP), more commonly referred to as food stamps, is a federal program that provides low-income households with monthly financial assistance to purchase nutritious food, and helps over 41 million Americans per month (Center on Budget and Policy Priorities, 2024). Despite the widespread usage of SNAP by Americans, only 2 in 5 food insecure college students met the eligibility criteria for SNAP with 59% of those not receiving SNAP benefits in 2020 (U.S. Government Accountability Office, 2024). The Food Stamp Act Amendment of 1980 restricted college student's access to SNAP due to concerns that full-time students with full and/or significant family financial support may qualify for assistance, causing Congress to create several specific exemptions related to income, work requirements, and student enrollment requirements (U.S. Government Accountability Office, 2024). As a result, many students fall into an eligibility gap, limiting their access to federal nutritional assistance programs and reinforcing their food vulnerability (U.S. Government Accountability Office, 2025).

Beyond its effects on physical and mental health, food insecurity can impact collegiate academic performance. This is crucial as academic performance can have an important influence on an individual's quality-of-life and career outcomes. Attaining higher levels of education directly correlates with higher potential career earnings and lower rates of unemployment in comparison to individuals who graduates with an associate's degree or individuals who attended

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college but did not receive any degree (U.S. Bureau of Labor Statistics, 2016). Additionally, GPA can predict career growth with individuals attaining higher salaries, more leadership positions over time, and higher career satisfaction as an individual progresses through their career (Steindórsdóttir et al., 2024). This emphasizes the importance of academic performance and highlights how academic disruptions, such as those caused by food insecurity, can disadvantage those individuals, and impact their socioeconomic status and quality-of-life after college.

Due to the rising rates of food insecurity and its documented impact on health and academic performance, it's crucial to examine the existing research on this topic. The purpose of this literature review is to highlight the prevalence of food insecurity and examine impacts on academic performance in addition to student health and well-being. Understanding the scale of food insecurity on college students can help identify potential interventions and policy responses to reduce the prevalence of this issue in the student population. Ultimately, the aim of this study is to identify the impacts of food insecurity on college students.

Methods

To identify the impacts food insecurity on college students, a search was conducted on the UGA Library system website. The UGA library system allows for free access to a variety of databases and journals that are peer-reviewed and relevant to the topic at hand. A Boolean search was conducted with the search term “(food security or hunger) AND (college students) AND (academic performance or GPA) AND (United States) NOT (high school)”. This search netted 442 total results. An inclusion criterion was then added to limit the studies to have been published in the last ten years and to ensure that all results were peer reviewed. The exclusion criteria of “NOT (high school)” were designed to eliminate results and studies featuring high schoolers and high school settings. This also had a secondary effect of eliminating results

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featuring elementary and middle school settings. In total, there were 338 total results with 11 selected for this review. Articles were selected for inclusion after reviewing whether the article was published in a reliable, reputable journal and after a review of the article's abstract to ensure that each paper covered food insecurity in the college population.

A second search was conducted through PubMed, a database of biomedical research managed by the National Institutes of Health. The same Boolean search was conducted "(food security or hunger) AND (college students) AND (academic performance or GPA) AND (United States) NOT (high school)". This search led to 25 results with the number holding steady after placing a ten-year criterion filter. A total of seven articles were selected for this review with articles chosen after evaluating the abstract for relevancy and reading each paper's methods section to ensure that the population and outcomes measured were consistent with the review's criteria.

A third and final search was conducted through PubMed. The following Boolean search was conducted "(food security or hunger) AND (college students) AND (academic performance or GPA) AND (United States) AND (sleep)". This search was designed to include more physical health results by introducing the "AND sleep" term and replacing the "NOT high school" term, ensuring that studies focused on sleep-related physical health studies. Removing the term "NOT high school" occurred but it did not impact the search results as no studies involved high school students, streamlining the overall Boolean search. The same ten-year inclusion filter from the prior searches were utilized. This resulted in three results with two selected for this review after evaluating the articles abstract for relevancy than reading each paper's methods section to ensure the studied population was college students and that the outcomes measured reflected this review's criteria.

Results

The reviewed papers consistently showcased that food insecurity impacts multiple elements to a college student's college experience. Three themes emerged: academic impairment, mental health consequences, and physical health issues. These themes reflect a broad pattern in which inadequate access to food affects not only students' basic well-being, but also their ability to engage and succeed academically.

Academic Outcomes

Across the board, numerous studies found relationships between academic performance and food insecurity. GPA differences were commonly noted. The National College Health Assessment found food secure students reporting a 3.59 GPA where as food insecure students reported a 3.32 with the odds of students being in the A- category decreasing by 25% in comparison to students found to have high food security (Marmolejo et al., 2024). Food insecure students across the University of California system were found to have lower GPAs and had 19% of students reporting C averages grades in comparison to food secure students with 9% reporting C average grades (Martinez et al., 2020). Additionally, University of California system Students of low socioeconomic position (SEP) were found to have higher odds of food insecurity and lower GPAs. Students from racialized, low SEP backgrounds reported a 3.05 GPA, while White, low SEP students reported a 3.32 GPA (Singh et al., 2024). First-generation college students attending a public Texas university observed a closer link between food-insecurity and GPA food secure students reporting 3.50 GPAs compared to food insecure students (Umeda et al., 2024). Food insecurity at a university in the Western United States was found to be negatively associated with GPA (Camelo & Elliott, 2019). Nursing students attending Sam Houston State

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University reported significantly lower GPAs than their food-secure counterparts (Cockerham et al., 2021).

Food insecurity was shown to impact the ability for students to complete courses. The presence of food insecurity in students led to an increase of credit hours at a Southwestern U.S. institution with food insecure students losing an average of 1.81 credit hours in comparison to 1.29 credit hour lost by food secure students. Additionally, food insecure students were 1.6x more likely to withdrawal or fail courses (Mechler et al., 2021). Another study of first-generation college students at Western Michigan University found food insecure students to earn 0.52 fewer credits earned and had lower fall-to-spring retention rates (Collier, 2021). Students attending three public New York City colleges reported difficulties attending class, studying, and in withdrawing from courses (Ahmed et al., 2022).

Mental Health Outcomes

Increases in depression and anxiety prevalence were noted in many studies. A study of university students within Georgia found food insecure students having a 1.81 increase in depression score on the PHQ-9 questionnaire, a 3.68 increase in anxiety score in the Anxiety Sensitivity Index, and a 2.16 decrease in hope score in the Adult State Hope Scale (Raskind et al., 2019). 33.6% of students attending Michigan University reported facing food insecurity with students reporting lower depression and anxiety scores (Leung et al., 2021). Immigration-impacted Latinx students attending schools within the University of California system with food insecure, immigration-impacted students scoring higher on depression and anxiety tests compared to U.S. citizen students with lawfully present parents (Haro-Contreras et al., 2025). Students reporting depression or having limited control over their were life were 2 or 6 times more likely to have a lower food security status and reported that their lack of access to food was

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negatively impacting their ability to enjoy the full university experience (Hall et al., 2024). A study evaluating students at a large, public, minority-serving university in New Mexico found that food-insecure students had 4.35 times the odds of screening positive for anxiety, 3.18 times the odds of screening positive for depression, and 2.84 times the odds of reporting fair/poor health than food-secure students (Coakley et al., 2022).

Poorer mental health was consistently shown to be associated with food insecurity. At four different HBCUs, 69% of students responded feeling worry about food running out before having the ability to purchase more with 81.4% of seniors responding they had worries about their food security level in the previous 12 months (Duke et al., 2023). A qualitative study of University of California, Berkeley students recorded students addressing food insecurity themes, with students stating they felt that the stress of food insecurity interfered with their daily lives, sadness from reflecting on their food security situation, and feelings of hopelessness and that they are undeserving of help (Meza et al., 2019).

Physical Health Outcomes

Worse physical health outcomes were apparent as result of food insecurity. Evidence suggests that food insecure students are likely to report fewer hours of sleep. Inadequate sleep (<7 hours per night) contributes to worse overall physical functioning and can impair cognitive functioning (Haskett et al., 2020). A study evaluating students across eight universities found food-insecure students were more than twice as high to experience poor sleep compared to food-secure students (El Zein et al., 2019). A study of dental students attending the College of Dentistry at the University of Iowa found food-insecure dental students were significantly more likely to report sleep disturbances due to their hunger with 22.6% of food-insecure students reporting hunger negatively affecting their sleep (Marshall et al., 2021). Food insecurity is also

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linked with harmful health behaviors. Students reported spending more money on alcohol, cigarettes, and recreational drugs instead of food, further hindering physical health through reducing the intake of quality food and increasing the intake of substances (Hagedorn et al., 2019).

Discussion

The literature collectively indicates that food insecurity in college students is closely associated with poorer academic performance, along with worse physical and mental health outcomes. While food insecure students represent a minority of the overall American college population, the consequences they face are substantial and persistent. Therefore, measures must be taken to improve the infrastructure that supports students experiencing food insecurity, as addressing this issue is crucial promoting student equity and well-being.

Implications for Policy and Practice

Promoting student food security can be a crucial option to decrease the number of students facing food insecurity. All ten Schools apart of the University of California (UC) system, all 23 schools in the California State University (CSU) system, and nearly all 116 campuses in the California Community College (CCC) system have established campus food pantries that served over 2 million students across the state (Loofbourrow & Scherr, 2023). A 2016 evaluation of food pantry availability found that 55% of public two- and four- year colleges utilize food pantries. Food pantries are popular choices for universities to institute as they are typically low budget, with 79% of them having annual budgets under \$10,000 (Freudenberg et al., 2019). While food pantries can help student immediate needs and serve as a visible marker for campus support, they are considered short-term resources that do not benefit students in the

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long run and cannot guarantee that all students experiencing food insecurity will use this resource (Loofbourrow et al., 2023). As a result, promoting food security on campuses requires pairing pantry access with broader policies and financial assistance to address student food insecurity. Some colleges have merged both with UCLA and UW-Madison having emergency meal swipe assistance, programs which provide students with limited emergency meal swipes and funds in instances where students have demonstrated food insecurity and an inability to purchase regular meals due to financial strain, alongside typical food pantry services (UCLA, 2025; University of Wisconsin-Madison OSAS, 2025). A study could not be identified to evaluate the overall effectiveness of these programs, yet they likely are a step in the right direction to address collegiate food insecurity.

Evidence suggests that improving access to food assistance programs can remedy these effects. Lesson can be learned from CalFresh, California's implementation of the federal SNAP program and the largest SNAP program in the U.S, has included exemptions for students to receive benefits, making it easier for college students to qualify compared to standard SNAP rules. A key difference between CalFresh and standard SNAP rules is that CalFresh defines a student to be anyone enrolled "half time" and between the ages of 18-49 years old, and has expanded exceptions beyond the federal 20-hour week requirement by allowing exemptions for students enrolled in work-study programs, students approved for a TANF-funded Cal Grant and students with children under age 12 (Legal Services of Northern California, 2025). A study of California's CalFresh (SNAP) program found that students enrolled into CalFresh experienced less of a decline in food security in GPA (Loofbourrow et al., 2023). CalFresh has also been found to make noticeable differences in a student's food budget with over 66% of participating CCC students and 87% of participating UC students receiving over \$100 or more each month

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(California Policy Lab, 2025). This level of financial support can reduce the burden of purchasing food, which can allow students more time to focus on coursework, potentially remedying declining academic performance. Together, these findings suggest that when food assistance programs are accessible and tailored to student needs, they can play a major role in improving both food security and academic outcomes.

A stigma associated with students using resources was noted across the literature. Reducing the stigma of using SNAP and improving its outreach can help students better understand the program and drive engagement (Li et al., 2024). Students may avoid using campus food pantries or applying for SNAP due to feelings of shame and feelings of judgement from their peers (Dickinson, 2022). This creates an environment where students are unwilling to seek assistance, as accessing support becomes associated with personal failure rather than it becoming a normal response to strain. Students who could benefit from the support may continue to struggle in isolation, ultimately worsening their academic and health outcomes. Introducing campus advocacy campaigns can reduce the stigma felt by students using assistance and can help improve the knowledge about the complicated enrollment and eligibility policies surrounding the programs (Landry et al., 2024). Confusion towards student SNAP eligibility has led to an estimated 57% of potentially SNAP eligible college students to not use the program, indicating a strong need to focus resources on student awareness and support programs that work to ensure students can receive the assistance they need (Center for Law and Social Policy, 2020).

Policy Options

Policies can help students struggling with food insecurity by reducing structural barriers to accessing nutritious food and expand eligibility for SNAP. Eliminating the college student exemption in SNAP eligibility requirements represents an ambitious, long-term goal that can

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significantly reduce the amount of food insecure student by immediately making a large amount of needy college students eligible to receive SNAP benefits (Freudenberg et al., 2019). In the short term, studies suggest that short-term, more moderate approaches such as reducing the work-hours exemption from 20 hours to fewer hours or eliminating the exemption altogether may help low-income, working students. This can reduce burden of working many hours a week to meet SNAP criteria and can students working on-campus jobs, many of which cap student employment hours to be under 20 per week (Esaryk et al., 2022). During the pandemic, the Consolidated Appropriations Act passed in December 2020 temporarily expanded SNAP to provide benefits to students whose expected family contribution was zero dollars and to students eligible for work-study programs but unable to participate. These changes expired following the end of the federal state of emergency, but recent federal proposals have been made to permanently expand SNAP eligibility to reinstate these previous measures (Bruening & Laska, 2023). Moderate adjustments, as opposed to outright eliminating the college student exemptions, could substantially increase access for students who are already economically vulnerable and reduce the tradeoffs they face, while offering policymakers a more viable, achievable alternative for change.

Limitations

This literature review has several limitations. The selection for articles was based upon the results of only two databases. From there, articles were selected after only reading the title, abstract, and methods section, potentially leading to an exclusion of relevant students whose full text contained important findings not presented within those sections. The sample size of the selected articles is 20. Additionally, most of the articles were cross-sectional surveys which only look at data in a single point in time, can only identify associations, and cannot establish cause-

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and-effect relationships between variables. A lack of longitudinal research is noted as none of the studies followed students across the course of their college career. All surveys included a self-reporting element with GPA and health outcomes, which opens the results up to response bias with respondents potentially overestimating or underestimating their experiences. Additionally, many of the surveys used convenience sampling, which may not accurately represent the broader college population as participants were often drawn from easily accessible groups rather than selected randomly. A lack of diversity in the sample populations is noted with many studies performed at large, public universities which may not reflect the experiences of students at smaller institutions or different type of colleges. Few studies prioritized evaluating food insecurity along with academic performance and well-being minority populations and minority-serving populations. Lastly, almost every survey was conducted at either a specific university or a cluster of regional universities, limiting the generalizability of their results across the entire United States college student population.

Conclusion

Food insecurity is a barrier for college students' success by negatively influencing academic performance, mental health, and physical health. Addressing these issues through university support and government policy interventions can be the key to foster student success. By recognizing food security as a crucial area hindering student success, colleges and policymakers can create environments where students are able to focus on learning and well-being rather than worrying about their future meals. Ensuring that all students have reliable access to a long-term, consistent supply of nutritious food is necessary for academic achievement, well-being, and long-term success. These findings ultimately suggest that food

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insecurity is a struggle for many students, and a more proactive approach must be taken to support students in and out of the classroom.

References

- Ahmed, T., Ilieva, R. T., Shane, J., Reader, S., Aleong, C., Wong, H. Y., Chu, C., Brusche, D., Jiang, K., Lopez, D., & Yan, A. (2022). A Developing Crisis in Hunger: Food Insecurity within 3 Public Colleges before and during the COVID-19 Pandemic. *Journal of Hunger & Environmental Nutrition*, *18*(1), 1–20. <https://doi.org/10.1080/19320248.2022.2026853>
- Bruening, M., & Laska, M. N. (2023). Position of the Society for Nutrition Education and Behavior: Food and Nutrition Insecurity Among College Students. *J Nutr Educ Behav*, *55*(10), 699–709. <https://doi.org/10.1016/j.jneb.2023.07.005>
- California Policy Lab, C. C. R. C., Accelerating Recovery in Community Colleges Network. (2025). How Much Do College Students Get From CalFresh Each Month? Policy Brief.
- Camelo, K., & Elliott, M. (2019). Food Insecurity and Academic Achievement Among College Students at a Public University in the United States. *Journal of College Student Development*, *60*(3), 307–318. <https://doi.org/10.1353/csd.2019.0028>
- Center for Law and Social Policy. (2020). State Options to Increase College Student Access to Public Benefits: Policies and Practices That Increase Student Success and Economic Security.
- Center on Budget and Policy Priorities. (2024). <https://www.cbpp.org/research/food-assistance/the-supplemental-nutrition-assistance-program-snap>
- Coakley, K. E., Cargas, S., Walsh-Dilley, M., & Mechler, H. (2022). Basic Needs Insecurities Are Associated with Anxiety, Depression, and Poor Health Among University Students in the State of New Mexico. *J Community Health*, *47*(3), 454–463. <https://doi.org/10.1007/s10900-022-01073-9>

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Cockerham, M., Camel, S., James, L., & Neill, D. (2021). Food insecurity in baccalaureate nursing students: A cross-sectional survey. *J Prof Nurs*, 37(2), 249–254.

<https://doi.org/10.1016/j.profnurs.2020.12.015>

Collier, A. D. F., Dan.; Brehm, Chelsea.; Archer, Eric. (2021). Coming to College Hungry: How Food

Insecurity Relates to Amotivation,

Stress, Engagement, and First-Semester

Performance in a Four-Year University. *Journal of Postsecondary Student Success* 1.

https://doi.org/10.33099/fsop_jpss124641

Dickinson, M. (2022). SNAP, campus food insecurity, and the politics of deservingness. *Agric Human Values*, 39(2), 605–616. <https://doi.org/10.1007/s10460-021-10273-3>

Duke, N. N., Campbell, S. D., Sauls, D. L., Stout, R., Story, M. T., Austin, T., Bosworth, H. B., Skinner, A. C., & Vilme, H. (2023). Prevalence of food insecurity among students attending four Historically Black Colleges and Universities. *J Am Coll Health*, 71(1), 87–93. <https://doi.org/10.1080/07448481.2021.1877144>

El Zein, A., Shelnut, K. P., Colby, S., Vilaro, M. J., Zhou, W., Greene, G., Olfert, M. D., Riggsbee, K., Morrell, J. S., & Mathews, A. E. (2019). Prevalence and correlates of food insecurity among U.S. college students: a multi-institutional study. *BMC Public Health*, 19(1), 660. <https://doi.org/10.1186/s12889-019-6943-6>

Esaryk, E. E., Moffat, L. F., Ritchie, L. D., & Martinez, S. M. (2022). Helping College Students Get Supplemental Nutrition Assistance Program: Facilitators of and Barriers to Students Accessing the Federal Nutrition Assistance Program. *J Nutr Educ Behav*, 54(5), 422–431.

<https://doi.org/10.1016/j.jneb.2022.02.008>

Impacts of Food Insecurity on College Students

Food Research & Access Center. (2025). *Data & Statistics on Hunger*. Retrieved September 22 from <https://frac.org/hunger-poverty-america>

Freudenberg, N., Goldrick-Rab, S., & Poppendieck, J. (2019). College Students and SNAP: The New Face of Food Insecurity in the United States. *Am J Public Health, 109*(12), 1652–1658. <https://doi.org/10.2105/AJPH.2019.305332>

Hagedorn, R., McArthur, L. H., Hood, L. B., Berner, M., Steeves, E. T. A., Connell, C. C., Wall-Bassett, E., Spence, M., Babatunde, O. T., Kelly, E. B., Waity, J. F., Lillis, J. P., & Olfert, M. D. (2019). Expenditure, Coping, and Academic Behaviors among Food-Insecure College Students at 10 Higher Education Institutes in the Appalachian and Southeastern Regions. *Current Developments in Nutrition*.

Hall, R. P., Agnew, J., Liu, W., Petrie, L., & North, C. (2024). Systematic investigation of inadequate food access at a large southeastern land grant university. *PLoS One, 19*(3), e0298041. <https://doi.org/10.1371/journal.pone.0298041>

Haro-Contreras, C., Zambrano Torres, C., Ayon, C., & Enriquez, L. (2025). Examining the association of food insecurity with mental health and academic performance among Latinx immigration-impacted students. *J Am Coll Health, 1–9*. <https://doi.org/10.1080/07448481.2025.2468305>

Haskett, M. E., Majumder, S., Kotter-Gröhn, D., & Gutierrez, I. (2020). The role of university students' wellness in links between homelessness, food insecurity, and academic success. *Journal of Social Distress and Homelessness, 30*(1), 59–65. <https://doi.org/10.1080/10530789.2020.1733815>

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- Landry, M. J., Hagedorn-Hatfield, R. L., & Zigmont, V. A. (2024). Barriers to college student food access: a scoping review examining policies, systems, and the environment. *J Nutr Sci*, 13, e51. <https://doi.org/10.1017/jns.2024.25>
- Legal Services of Northern California. (2025). *LSNC Guide to CalFresh Benefits*. Retrieved November 28 from <https://calfresh.guide/special-rules-for-students/>
- Leung, C. W., Farooqui, S., Wolfson, J. A., & Cohen, A. J. (2021). Understanding the Cumulative Burden of Basic Needs Insecurities: Associations With Health and Academic Achievement Among College Students. *Am J Health Promot*, 35(2), 275–278. <https://doi.org/10.1177/0890117120946210>
- Li, C. Y. H., Platkin, C., Chin, J., Khan, A., Bennett, J., Speck, A., Nielsen, A., & Leung, M. M. (2024). Web-Based Tool Designed to Encourage Supplemental Nutrition Assistance Program Use in Urban College Students: Usability Testing Study. *JMIR Form Res*, 8, e50557. <https://doi.org/10.2196/50557>
- Lipson, S. K., Zhou, S., Abelson, S., Heinze, J., Jirsa, M., Morigney, J., Patterson, A., Singh, M., & Eisenberg, D. (2022). Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013-2021. *J Affect Disord*, 306, 138–147. <https://doi.org/10.1016/j.jad.2022.03.038>
- Loofbourrow, B. M., Jones, A. M., Martinez, S. M., Kemp, L. C., George, G. L., & Scherr, R. E. (2023). Understanding the Role of CalFresh Participation and Food Insecurity on Academic Outcomes among College Students during the COVID-19 Pandemic. *Nutrients*, 15(4). <https://doi.org/10.3390/nu15040898>

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- Loofbourrow, B. M., & Scherr, R. E. (2023). Food Insecurity in Higher Education: A Contemporary Review of Impacts and Explorations of Solutions. *Int J Environ Res Public Health*, 20(10). <https://doi.org/10.3390/ijerph20105884>
- Marmolejo, C., Banta, J. E., Siapco, G., & Baba Djara, M. (2024). Examining the association of student mental health and food security with college GPA. *J Am Coll Health*, 72(3), 819–825. <https://doi.org/10.1080/07448481.2022.2058327>
- Marshall, T. A., Zheng, R., Anderson, C. L., Handoo, N., & Qian, F. (2021). Is food insecurity a barrier to dental student success? *J Dent Educ*, 85(9), 1518–1524. <https://doi.org/10.1002/jdd.12623>
- Martinez, S. M., Frongillo, E. A., Leung, C., & Ritchie, L. (2020). 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*, 25(12), 1930–1939. <https://doi.org/10.1177/1359105318783028>
- Mechler, H., Coakley, K., Walsh-Dilley, M., & Cargas, S. (2021). Examining the Relationship Between Food Insecurity and Academic Performance: Implications for Diversity and Equity in Higher Education. *Journal of College Student Retention: Research, Theory & Practice*, 26(1), 3–18. <https://doi.org/10.1177/15210251211053863>
- Meza, A., Altman, E., Martinez, S., & Leung, C. W. (2019). "It's a Feeling That One Is Not Worth Food": A Qualitative Study Exploring the Psychosocial Experience and Academic Consequences of Food Insecurity Among College Students. *J Acad Nutr Diet*, 119(10), 1713–1721 e1711. <https://doi.org/10.1016/j.jand.2018.09.006>

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- Raskind, I. G., Haardorfer, R., & Berg, C. J. (2019). Food insecurity, psychosocial health and academic performance among college and university students in Georgia, USA. *Public Health Nutr*, 22(3), 476–485. <https://doi.org/10.1017/S1368980018003439>
- Singh, S., Esaryk, E. E., Meza, E., Britton, T., & Martinez, S. M. (2024). Disparities in Food Insecurity and Academic Achievement Among California Public University Students: An Intersectional Approach. *Nutrients*, 16(21). <https://doi.org/10.3390/nu16213728>
- Steindórsdóttir, B. D., Arnulf, J. K., & Norbom, H. M. (2024). Does grade point average have a long-lasting impact on career success later in life? A resource caravans' perspective from adolescence to mid-career. *Journal of Vocational Behavior*, 155. <https://doi.org/10.1016/j.jvb.2024.104063>
- U.S. Bureau of Labor Statistics. (2016). *Education Matters*. <https://www.bls.gov/careeroutlook/2016/data-on-display/education-matters.htm>
- U.S. Department of Agriculture. (2025). *Food Security in the U.S. - Definitions of Food Security*. U.S. Department of Agriculture. Retrieved September 22 from <https://www.ers.usda.gov/topics/food-nutrition-assistance/food-security-in-the-us/definitions-of-food-security>
- U.S. Department of Health and Human Services. (2022). *Food Insecurity*. <https://odphp.health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/food-insecurity#cit21>
- U.S. Government Accountability Office. (2025). Federal Actions Needed to Help Connect College Students With Benefits.

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- U.S. Government Accountability Office. (2024). *Supplemental Nutrition Assistance Program: Estimated Eligibility and Receipt among Food Insecure College Students*. Retrieved 2025 from <https://www.gao.gov/products/gao-24-107074>
- UCLA. (2025). *Economic Crisis Response Team (ECRT)*. Retrieved November 28 from <https://studentincrisis.ucla.edu/economic-crisis-response>
- Umeda, M., Kim, Y., Park, S. W., Chung, E., & Ullevig, S. L. (2024). Food insecurity and academic function among college students during the COVID-19 pandemic: A moderating role of the first-generation college student status. *J Am Coll Health*, 72(9), 3576–3582. <https://doi.org/10.1080/07448481.2023.2185076>
- University of Wisconsin-Madison OSAS. (2025). *Badger FARE Program*. Retrieved November 28 from <https://osas.wisc.edu/badger-fare-program/>
- UToronto. (2022). *What are the implications of food insecurity for health and health care?* <https://proof.utoronto.ca/food-insecurity/what-are-the-implications-of-food-insecurity-for-health-and-health-care/>