



# Food Insecurity Among UMKC Students

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A SUMMARY REPORT

**Don E. Willis**

DEPARTMENT OF SOCIOLOGY | UNIVERSITY OF MISSOURI - COLUMBIA

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## **Acknowledgements**

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## ***Timeline***

The research presented in this report was conducted while I was a doctoral candidate at the University of Missouri. I began writing the report during this time and completed it during the beginning of my assistant professor position at the University of Arkansas at Little Rock.

## ***Funding***

Funding for this project was provided by the Department of Sociology at the University of Missouri - Columbia.

## **Contact Information**

Don E. Willis, PhD  
Assistant Professor of Sociology  
2801 S. University | Stabler Hall 405-I  
Department of Sociology and Anthropology  
University of Arkansas at Little Rock  
Email: dewillis@ualr.edu

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# Food Insecurity Among UMKC Students: A Summary Report

## Purpose

This report is a summary of descriptive statistics from the Food, Health, and Social Life Survey administered in the spring of 2017. The purpose of this study was to assess food security among students at the University of Missouri in Kansas City (UMKC) and examine the social and health outcomes associated with food insecurity status.

This report contains a description of the sample, methods, and prevalence of food insecurity among students at the University of Missouri in Kansas City (UMKC). The report also includes comparisons of food insecurity prevalence across many student groups.

## Background

Higher education plays a key role in shaping social mobility and opportunity. However, a growing body of research has revealed that many college students experience significant material hardship during their time in college, including experiences of food insecurity. Existing research estimates food insecurity prevalence among college students ranging from 14 percent in Alabama<sup>1</sup> to nearly 60 percent at a university in Oregon.<sup>2</sup> All estimates of college food insecurity exceed the estimated prevalence of 12.3 percent for U.S. households in general.<sup>3</sup>

Food insecure individuals lack “consistent, dependable access to the nutrition needed for living a healthy, active lifestyle.”<sup>3</sup> Food insecurity is associated with a wide array of negative social, academic, and health outcomes in child, adult, and elderly populations; however, little is known about the impact on college students who are navigating a critical life course transition referred to by many scholars as “emerging adulthood.” Thus, food insecurity is a major issue for educational, social, and health outcomes among the college student population. This study

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<sup>1</sup> Gaines, A., Robb, C.A., Knol, L.L. and Sickler, S. (2014). Examining the Role of Financial Factors, Resources and Skills in Predicting Food Security Status among College Students. *International Journal of Consumer Studies* 38: 374–384.

<sup>2</sup> Patton-López, M. M., López-Cevallos, D. F., Cancel-Tirado, D. I., & Vazquez, L. (2014). Prevalence and Correlates of Food Insecurity Among Students Attending a Midsize Rural University in Oregon. *Journal of Nutrition Education and Behavior*, 46(3):209–214.

<sup>3</sup> Coleman-Jensen, A., Rabbitt, M.P., Gregory, C.A., Singh, A. (2017). *Household Food Security in the United States in 2016*, ERR-237, U.S. Department of Agriculture, Economic Research Service.

aimed to extend a limited body of existing research on college student food security by assessing its prevalence, as well as its associated health, and social life outcomes among UMKC students.

## Methods

### *Procedures*

An online survey was distributed via email to a stratified random sample of undergraduate and graduate students enrolled at UMKC in the spring of 2017. The Office of Institutional Research at UMKC generated the random sample from complete email rosters of the student population—excluding graduating seniors—and distributed the survey. A recruitment email was sent to 4,000 randomly selected undergraduate students and 3,495 randomly selected graduate students. Roughly 10 percent of both random samples completed the survey, providing 389 undergraduate responses and 351 graduate or professional student responses for a combined sample of 740. An incentive for participation was offered, which included entry into a raffle for one of two \$100 gift cards. Graduating seniors were not included in the randomly generated sample because they were simultaneously being recruited for another institutional survey.

The project was approved by the Institutional Review Board at the University of Missouri in Columbia and supported by the Office of Institutional Research at the University of Missouri in Kansas City.

### *Measurement*

This study utilized the United States Department of Agriculture (USDA) short form Adult Food Security Survey Module (AFSSM) developed by the National Center for Health Statistics in collaboration with Abt Associates Inc. The measure includes six items about the food they have eaten in the last 30 days. Two of the items are statements. Respondents indicate if the statements are “often true,” “sometimes true,” or “never true” for themselves. Respondents were also asked, for example, whether they “ever cut the size” of or skipped meals because there

**Figure 1. Food Security Questions**

Q1	The food that I bought just didn't last, and I didn't have money to get more.
Q2	I couldn't afford to eat balanced meals.
Q3	Did you ever cut the size of your meals or skip meals because there wasn't enough money for food?
Q4	[IF YES] How often did this happen? [number of days in past month]
Q5	Did you ever eat less than you felt you should because there wasn't enough money for food?
Q6	Were you ever hungry but didn't eat because there wasn't enough money for food?

was not enough money for food, to which they could respond with “yes,” “no,” or “don’t know.” Affirmative responses are tallied to provide a raw score, with responses of three days or more counting as an affirmative response to item four. Food insecurity status is categorized accordingly:

Raw score 0-1 = High or marginal food security.

Raw score 2-4 = Low food security.

Raw score 5-6 = Very low food security.

Researchers often use these scores to then determine whether a household or individual is food secure or food insecure in a dichotomous measure. Scores of less than 2 are considered food secure. Scores of 2 or higher are considered indicative of some level of food insecurity.

## Results

The results presented in this report include descriptive statistics for both graduate and undergraduate student samples. These results are presented separately for graduate and undergraduate students as they represent two separate random samples. Each sample was weighted to more closely match the demographic characteristics of the student population.

Overall, the results show that more than a quarter (25.8%) of all students experienced some level of food insecurity. The prevalence of food insecurity among undergraduates (32%) was higher than the prevalence for graduate students (19%) who had higher proportions of upper income, white, and heterosexual students (see Table 1).

### Samples

Table 1. displays weighted demographic characteristics for both the graduate and undergraduate student samples. Both samples of students are predominantly white and heterosexual with family incomes at or above \$60,000 per year. Women

Table 1. Sociodemographic Characteristics		
	Undergraduate Students	Graduate Students
<b>Gender</b>		
Female	57.1%	54.8%
Male	42.9%	45.2%
<b>Sexuality</b>		
Heterosexual	84.7%	92.2%
LGBTQ	15.3%	7.8%
<b>Race</b>		
Black	14.1%	6.5%
White	59.0%	62.6%
Other	26.9%	30.9%
<b>Parent Income</b>		
Less than 30K	17.2%	15.3%
30-59K	27.2%	23.6%
60K and up	55.6%	61.1%

slightly outnumber men among both groups of students. Readers may note that representation among women, LGBTQ, black, and low-income students is lower among graduate students than it is for undergraduate students.

### **Food Insecurity**

Figures 2-3. display the food security status of graduate and undergraduate students. Students who are not in the High Food Security category are considered to have experienced some level of food insecurity in the past month. Those in the Low Food Security category experience a less severe form of food insecurity than those in the Very Low Food Security category.

The majority of students are food secure. However, the prevalence for both undergraduate and graduate students in these samples exceed the national prevalence of 12.3 percent among all U.S. households in 2016.<sup>3</sup>

The experience of food insecurity in college is not equally distributed. Undergraduate students have a higher prevalence of food insecurity (32%) in comparison to graduate students (19%). The experience of both low and very low food insecurity was more prevalent among undergraduates than graduate students. Approximately 16 percent of undergraduates fall within the low food security category; 12 percent of graduate students experienced the same level

Figure 2. Graduate Student Food Security

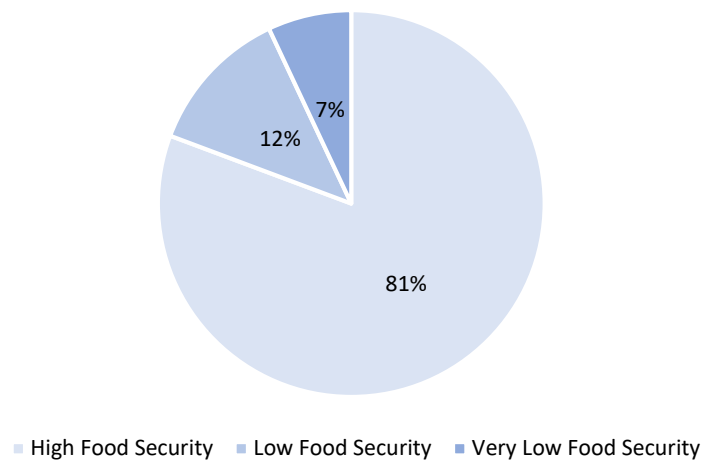
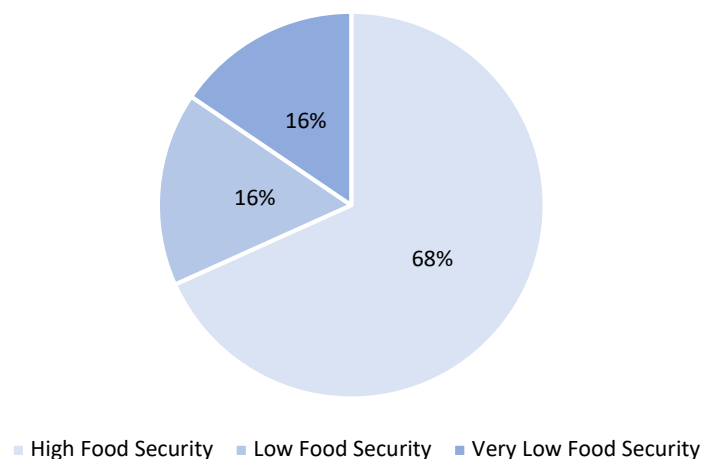


Figure 3. Undergraduate Food Security



<sup>3</sup> Coleman-Jensen, A., Rabbitt, M.P., Gregory, C.A., Singh, A. (2017).

of food insecurity. Among undergraduates, 16 percent answered with enough affirmative responses to categorize them as experience very low food security, while 7 percent of graduate students fall into the same category.

*Gender*

Figure 4. displays prevalence of food insecurity by gender and graduate status. Among graduate students, food insecurity is more prevalent among men (20.8%) than women (16.9%). Among undergraduate students, we see a reversal of this; food insecurity is more prevalent among undergraduate women (33.8%) than it is among men (28%).

Figure 4. Food Insecurity by Gender and Graduate Status

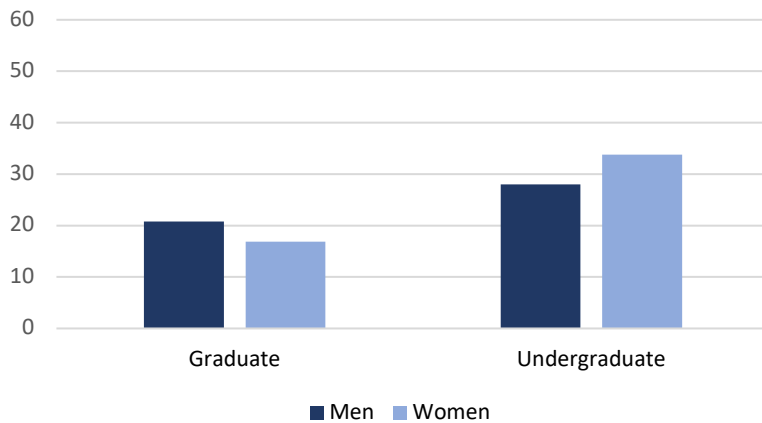
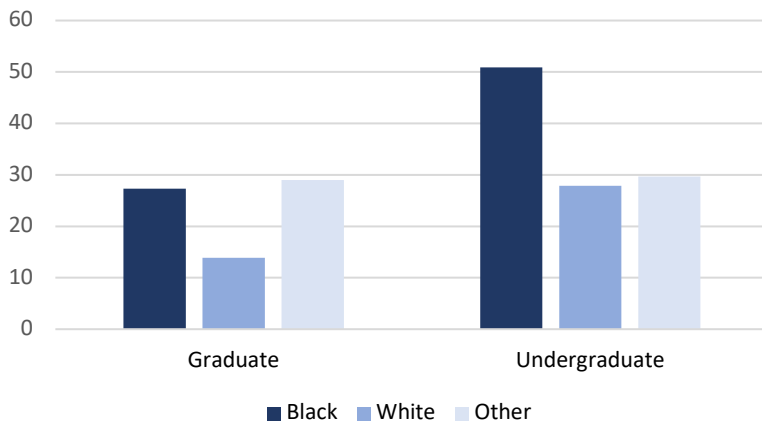


Figure 5. Food Insecurity by Race and Graduate Status



*Race*

Figure 5. displays the prevalence of food insecurity by race and student status. The experience of food insecurity is drastically unequal across race among both graduate and undergraduate students. Among graduate students, both black (27.3%) and other racial minorities (29%) experience substantially higher rates of food insecurity than their white classmates (13.9%). This difference is even greater among undergraduate students, where over half of all black students (50.9%) have experienced food insecurity. In comparison, just over a quarter of white students (27.9%) and just under thirty percent of those



in other racial categories (29.7%) also experienced some level of food insecurity.

*Parent Income*

Figure 6. displays food insecurity prevalence by parent household income and graduate status. Food insecurity prevalence increases as parent income decreases. Among graduate students, a third of students in the lowest income category reported some level of food insecurity (33.3%), a quarter of students whose parents’ annual income was reported to be between 30K-59K were food insecure (25.8%), and approximately 16 percent of students whose parents earned over 60K were food insecure. Food insecurity followed a similar pattern among undergraduates, with the highest rates existing among the lowest parent income group (56.3%) and lower rates among the middle parent income (39.2%) and highest parent income (21.5%) groups.

Figure 6. Food Insecurity by Parent Income and Graduate Status

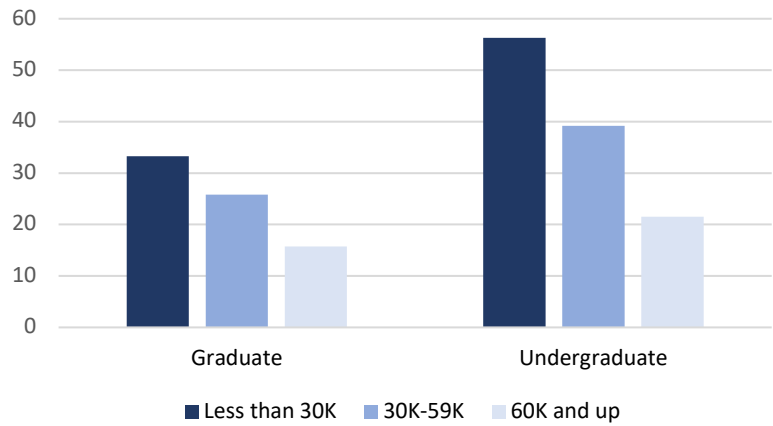
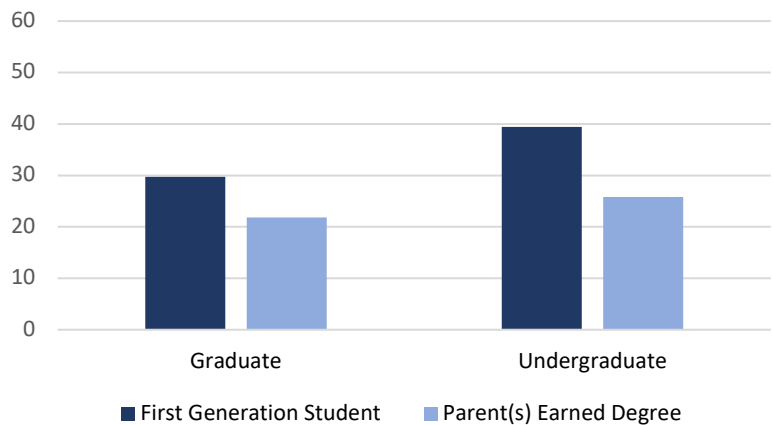


Figure 7. Food Insecurity by Parent Education and Graduate Status



*First Generation Students*

Figure 7. shows food insecurity prevalence by parent education—in particular, first generation status. First generation students are those who do not have a parent with a bachelor’s degree or higher. Among both undergraduate and graduate students, first generation students have a higher prevalence of food insecurity than students who had at least one parent or more that earned a bachelor’s degree or higher.

Figure 8. Food Insecurity by Parental Financial Support and Graduate Status

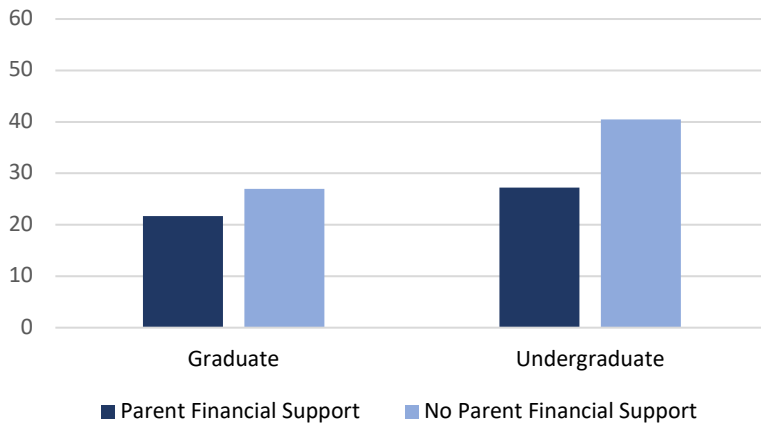
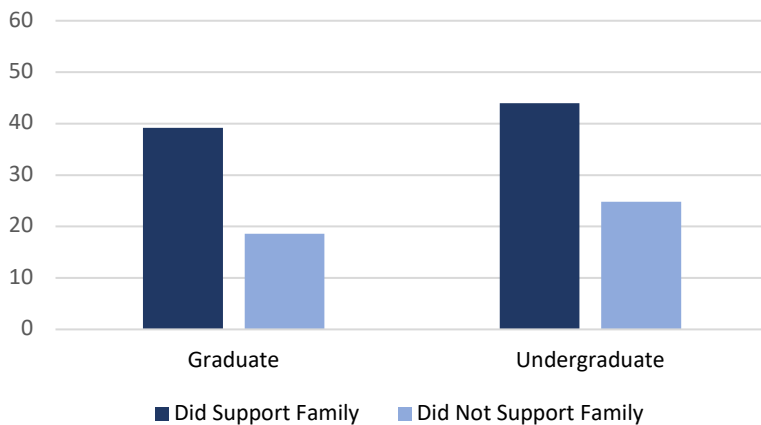


Figure 9. Food Insecurity by Financial Support for Family and Graduate Status



*Parent Financial Support*

Figure 8. displays food insecurity prevalence by parental financial support. While it is often assumed that parents are offering support, there is reason to question that assumption. Among undergraduates, there is a pronounced gap in food insecurity prevalence between those who received parental support and those who did not, with those receiving support reporting food insecurity at a lower prevalence. Specifically, undergraduates who received support report a food insecurity prevalence of 27.2 percent while those who did not receive support have a food insecurity prevalence of 40.5 percent. A smaller gap exists for graduate students; however, even among them it is those who receive support

from parents that have the lower prevalence of food insecurity (21.7%) compared to the food insecurity prevalence of those who did not receive support (27%).

*Financially Supports Family*

Figure 9. displays food insecurity prevalence by whether or not the student financially supports family members. It is often assumed that financial support flows from parents to students rather than the reverse; yet, this is not the experience of all students, many of whom may be supporting families of origin or their own families themselves. The prevalence of food insecurity among students who report that they have financially supported family members is much higher (39.2%) than those who have not (18.6%), and this gap is more pronounced

among undergraduates. Undergraduates who supported family financially have a food insecurity prevalence of 44 percent in comparison to the 24 percent of undergraduates who did not financially support family that reported food insecurity.

*Parenthood*

Figure 10. displays food insecurity prevalence by parent status. These percentages should be interpreted with some caution, as only a small number of undergraduate (31) and graduate students (56) reported having children. Differences across parental status appear minimal for graduate students—17.9 percent of graduate students with no children experienced food insecurity compared to 19.8 percent of graduate students with children. Among

undergraduate students, 31.5 percent of non-parents and 35.5 percent of parents reported some level of food insecurity. The measure of food insecurity used in this study does not tell us whether or not the children to these parents were also food insecure; however, research does suggest that living in food insecure households has a number of negative consequences for youth health and development.

*Marital Status*

Figure 11. displays food insecurity prevalence across marital status. Married undergraduate and graduate students had a lower prevalence of food insecurity than their unmarried

Figure 10. Food Insecurity by Parent and Graduate Status

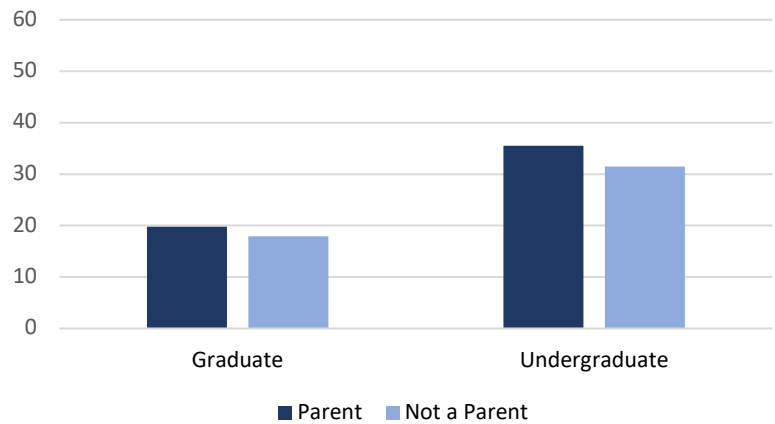
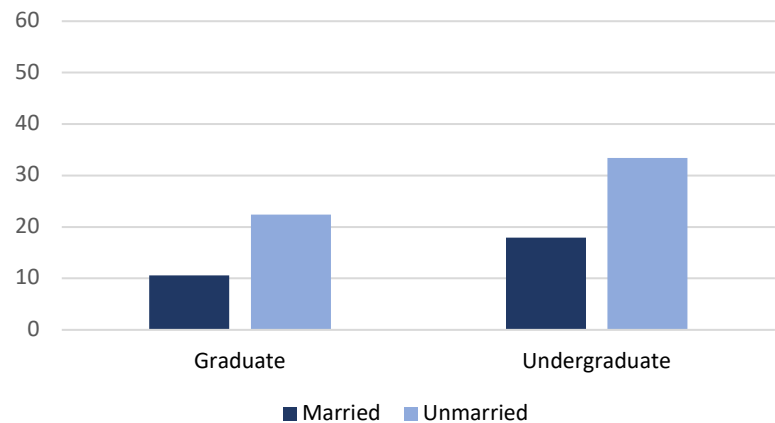


Figure 11. Food Insecurity by Marital and Graduate Status

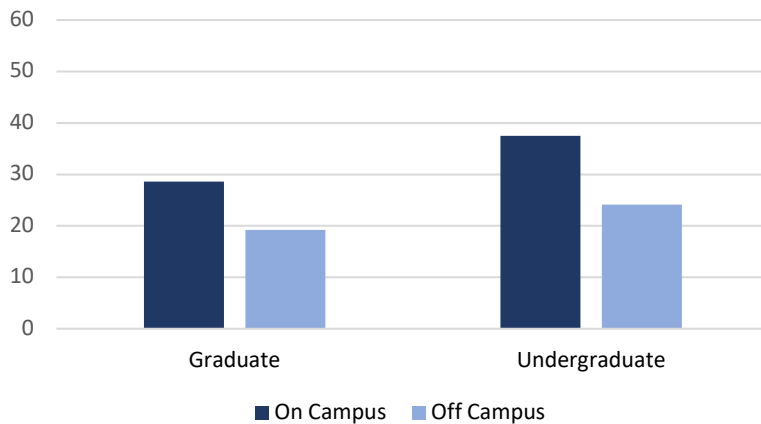


counterparts. While married graduate and undergraduates have a food insecurity prevalence of 10.6 percent and 17.9 percent, respectively, unmarried graduate and undergraduate student food insecurity prevalence is at 22.4 percent and 33.4 percent, respectively.

### *Campus Residence*

In Figure 12. we can see differences in food insecurity prevalence across campus residence. Students living off campus have a lower prevalence of food insecurity than those who live on campus. Among graduate and undergraduate students living off campus, 19.2 percent and 24.1 percent, respectively, report food insecurity. Among those living on campus, the prevalence jumps to 28.6 percent for graduate students and 37.5 percent for undergraduates.

Figure 12. Food Insecurity by Campus Residence and Graduate Status

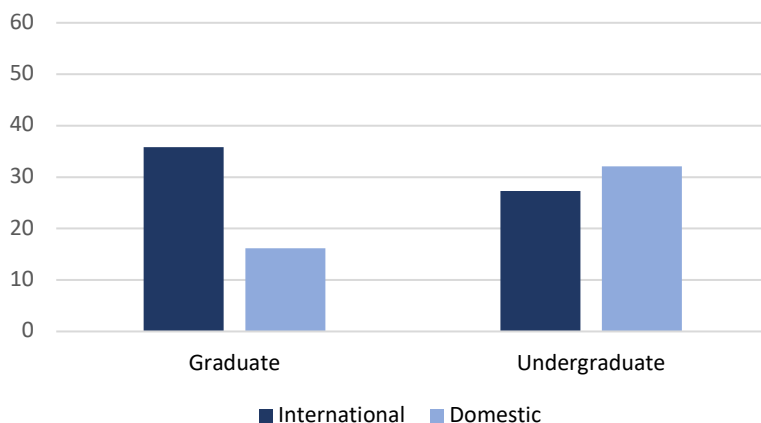


for graduate students and 37.5 percent for undergraduates. These results suggest that campus residence may be one of the important factors shaping students' access to healthy foods.

### *International Students*

Figure 13. shows only a slight difference in food insecurity by international status among undergraduates but a sizeable gap in the prevalence among graduate students. International graduate students have a food insecurity prevalence of 35.8 percent while domestic graduate students have a prevalence of 16.2 percent.

Figure 13. Food Insecurity by International and Graduate Status



### Work Status

Figure 14. shows differences in food insecurity prevalence across work status among students. Because graduate students often occupy positions within the university as both a student and a worker, they were specifically asked to indicate if they worked for pay in positions other than as graduate workers.

Undergraduate students were asked simply if they worked for pay. Both were asked to indicate if they worked within the past year while being enrolled as students.

Interestingly, the relationship of work to food insecurity seems to be different for graduate and undergraduate students. Among graduate students, those who worked for pay outside of their graduate assistantship had a lower prevalence of food insecurity. Undergraduates who worked for pay while enrolled had a higher prevalence of food insecurity than those who did not work. This difference raises questions about the role and meaning of work at different points in the life course, as graduate students tend to be older students who are more likely to be supporting families while undergraduates tend to be supported by families. Furthermore, these results clearly run counter to popular narratives of the food insecure and hungry as groups that are unwilling to work.

### Food Pantry Users

Figure 15. shows food insecurity prevalence according to food pantry usage. Among students that use the on-campus food pantry, food insecurity is very high.

Figure 14. Food Insecurity by Work Status and Graduate Status

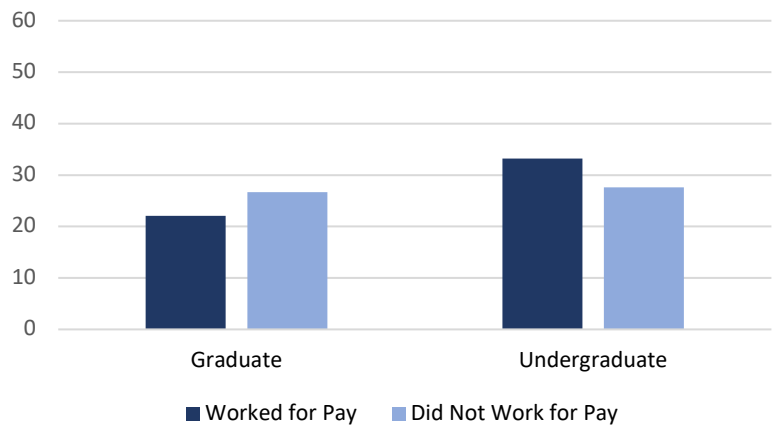
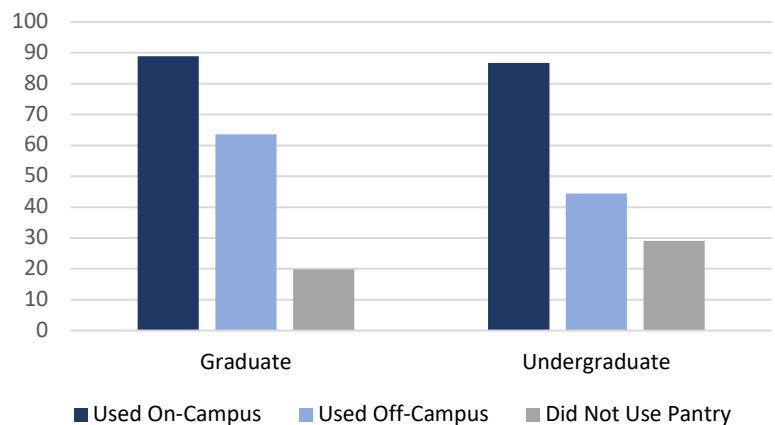


Figure 15. Food Insecurity by Food Pantry Use and Graduate Status



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Among both graduate and undergraduate students, food pantry users have a food insecurity prevalence over 85 percent. The prevalence of food insecurity among those who use off-campus pantries is also high, ranging between 44 percent for undergraduates and 63 percent among graduate students. Also of note from this figure is the percentage of food insecure students who do not use the food pantry. Just under 30 percent of undergraduates who do not use any food pantry are food insecure, while nearly 20 percent of graduate students who do not use any pantry are food insecure.

## **Summary**

### ***SNAP Eligibility***

An additional buffer against food insecurity for the general population would be the Supplemental Nutritional Assistance Program (SNAP) benefits, or food stamps as they are commonly known. However, it is important to note that the majority of college students are not eligible for SNAP—this may be one reason why college students have a higher than expected prevalence of food insecurity relative to the general population. Indicative of this, only eight undergraduates in this survey responded that they received any SNAP benefits. In the U.S. government’s first ever recognition of food insecurity among college students, they suggest that better information could increase SNAP receipt among this population. Their analysis estimates that nearly 2 million students are potentially eligible for SNAP and not receiving benefits.<sup>4</sup> However, while there are exemptions that allow some college students to be eligible, it is worth noting that the large majority of college students are still excluded from this program. While addressing the information gap is certainly a good idea, it is unlikely to dramatically impact the many students who remain ineligible for nutrition assistance.

### ***Graduate/Undergraduate Differences***

In this report, I have analyzed food insecurity separately across groups of graduate and undergraduate students. In doing so, it is clear that the factors associated with higher rates of food insecurity may be somewhat different depending on graduate/undergraduate status. For example, the patterns we observe in food insecurity across gender are different according to this status. Work status also appears to operate differently across graduate status—graduate students who work have a lower prevalence of food insecurity, while undergraduates who work have a higher prevalence of food insecurity. Racial

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<sup>4</sup> U.S. Government Accountability Office. 2019. “Food Insecurity: Better Information Could Help Eligible College Students Access Federal Food Assistance Benefits.” (GAO-19-95).

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differences are wide for both categories of students but they are particularly pronounced among undergraduates. The differences in food insecurity across parent income are also more pronounced among undergraduates. This may be due, in part, to the fact that food insecurity is more prevalent among undergraduates to begin with, or it may mean that the most salient factors predicting food insecurity shift as students progress from undergraduate to graduate student status. These findings raise additional questions regarding the relationship between positions and transitions in the life course and the risk of food insecurity.

### ***Race***

Race remains one of the most consistent predictors of food insecurity, and this sample of college students was no exception to that trend. Perhaps the starkest contrast of student food insecurity presented in this entire report is shown in Figure 5., which displays the prevalence of food insecurity between black, white, and other racial categories of students. Specifically, the gap between black and white student food insecurity is substantial. Just over half of black undergraduate students and more than a quarter of black graduate students experienced food insecurity just in the thirty days leading up to the survey.

### ***Socio-economic Status***

In addition to race, the burden of food insecurity falls clearly across the fault lines of socio-economic background. The income of students' parents, whether or not they are first-generation college students, and the flow of family financial support either to students from family or vice-versa, are all major factors in the prevalence of student food insecurity. Interestingly, among undergraduates, students who are working have a higher prevalence of food insecurity than students who have not worked. Not only does this indicate that the problem is a deeply structural one, it suggests further that the college experience has become split by socio-economic background in terms of who has to work while in school, and who can focus wholly on their coursework.

### ***An Unequal Burden***

Despite popular narratives of college student affluence, food insecurity has a significant presence in higher education, including UMKC. Furthermore, the burden of food insecurity is an unequal one across the student population. The prevalence of food insecurity is highest among undergraduates, black students, low-income students, and those who live on campus. Parents tend to have a higher prevalence of food insecurity relative to non-parents, as do unmarried

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students relative to married students—however, these differences should be interpreted with caution due to fairly low rates of parenthood and marriage among the student population in general. The unequal burden of food insecurity is likely to intersect with and compound other existing inequalities in student inclusion, performance, achievement, health, and well-being. Food insecurity and equal opportunity cannot coexist in higher education.

### ***Conclusions***

The data presented in this report make clear that there is reason for concern when it comes to the basic needs of students. While some segments of the student population appear to have a low prevalence of food insecurity, groups like undergraduate black students have a prevalence over 50 percent. Progress made in terms of access to college entrance is being countered by food insecurity. Access to the front door of the university does not ensure access to full opportunities that are supposed to be afforded by a college education when large portions of the student body must worry about where their next meal may come from. Opening the door is not the same as welcoming someone. And the best way to welcome someone is to offer them a meal.

### ***Final Notes***

On parent status findings: The measure of food insecurity used in this study does not tell us whether or not the children of student-parents were also food insecure; however, research does suggest that living in food insecure households has a number of negative consequences for youth health and development.

On marriage findings: I caution against interpreting these findings as evidence that marriage promotion is a legitimate strategy for easing the burden of food insecurity or any form of poverty among college students for at least three reasons. First, while further analysis reveals these differences are statistically significant, the causal direction between these variables remains unclear. Second, the marriage promotion policies that were included in 1996 welfare reform efforts have been shown to have had a number of negative impacts leading scholars to overwhelmingly conclude that these are not legitimate strategies for poverty reduction. Finally, the decision to enter into or leave a marriage is a complex one, and financial security is not the only—or even the most important—factor playing a role in these decisions.



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## References

- Coleman-Jensen, A., Rabbitt, M.P., Gregory, C.A., Singh, A. (2017). Household Food Security in the United States in 2016, ERR-237, U.S. Department of Agriculture, Economic Research Service.
- Gaines, A., Robb, C.A., Knol, L.L. and Sickler, S. (2014). Examining the Role of Financial Factors, Resources and Skills in Predicting Food Security Status among College Students. *International Journal of Consumer Studies*, 38: 374–384.
- Patton-López, M. M., López-Cevallos, D. F., Cancel-Tirado, D. I., & Vazquez, L. (2014). Prevalence and Correlates of Food Insecurity Among Students Attending a Midsize Rural University in Oregon. *Journal of Nutrition Education and Behavior*, 46(3):209–214.
- U.S. Government Accountability Office. (2019). Food Insecurity: Better Information Could Help Eligible College Students Access Federal Food Assistance Benefits. (GAO-19-95).