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Coping with Hunger: A Qualitative Study on Food Insecure Students' Academic, Social, and Food-Related Experiences

By

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Degree to be Awarded: Master of Public Health
Behavioral Sciences and Health Education

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Boston University
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2019

Coping with Hunger: A Qualitative Study on Food Insecure Students' Academic, Social, and Food-Related Experiences

Background: Food insecurity (FI) is an emerging, important issue that disproportionately affects college and graduate students. In order to develop programs that effectively address FI in this population, we need to better understand FI from the student perspective. Accordingly, this study aims to identify the academic, social, and food-related experiences of FI students, including their knowledge of food-acquisition related resources like food pantries and coping strategies.

Methods: This study utilized the inquiry framework of phenomenology. We conducted semi-structured qualitative interviews with a sample of 16 students, 8 undergraduate and 8 graduate, attending a private university in Georgia. Participants were recruited via university listservs and private social media groups. Prior to each interview, participants verbally confirmed FI status through a screening question derived from the university's National College Health Assessment (NCHA). All interviews were transcribed verbatim and descriptively and analytically coded. Inter-coder agreement was reached prior to determining findings. Transcripts were thematically analyzed with the use of matrices to identify patterns.

Results: Themes focused on perceptions of FI, prior experiences with FI, resource acquisition, and problem-focused and emotion-focused coping strategies, These themes included 1) de-identification with food insecurity, 2) distraction as a coping strategy, 3) seeking social support, 4) institutional indifference, 5) gaps in students' knowledge, and 6) advocacy through accessibility. Students discussed the label of FI connoting shame and stigma, even if they did not personally experience or feel those emotions.

Conclusions: FI affects more students than they are willing to admit, and food acquisition-related resources on campus may not be able to reach them. Understanding experiences of FI students will be useful in addressing structural challenges to educational attainment, stemming from students' social differences. While food pantries assist in reducing FI, students' ideal solutions would involve large-scale efforts, including but not limited to wider dining options and campus-wide conversations to reduce stigma and promote awareness of the issue. Results from this study will inform future food pantry practices and efforts, as well as other strategies for addressing FI in this population.

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Chapter 1: Introduction and Statement of the Problem and Purpose

Food insecurity (FI), defined as the lack of consistent access to enough affordable and nutritious food, is an emerging issue amongst undergraduate and graduate students. A systematic review of the literature reveals that FI among undergraduate students in the United States ranged between 35% - 42% of the population at any given time (Bruening, Argo, Payne-Sturges, & Laska, 2017), and that FI was associated with a lack of student loan money to pay for adequate amounts of nutritious food as well as grade point averages (GPA) below a 3.0 (Morris, Smith, Davis, & Null, 2016). Students use a range of strategies to manage their resources, such as attending on or near campus events offering free food, utilizing on-campus resources such as food pantries and banks, preparing and/or consuming inexpensive foods like granola bars or beans and rice, or relying on their social networks to obtain food; often, these strategies are used in conjunction with each other, and students have reported reluctance to rely too heavily on their peers and friends for assistance (Watson, Malan, Glik, & Martinez, 2017). Additionally, students utilizing food banks on their campuses suffer from poor health and dietary intake, leading to worse academic scores than food-secure peers (Farahbakhsh et al., 2017). Food insecure students are also more likely to report disruptions in their academic work; in one university system in the southern United States, FI students were also significantly more likely to have a lower-self reported GPA than food secure students (Phillips, McDaniel, & Croft, 2018; Wooten, Spence, Colby, & Anderson Steeves, 2019).

At Emory University, FI affects roughly one third of the undergraduate and graduate student population, with 6.7% of students reporting that they reduce their meal sizes once a month and 10% reporting that they reduce their meal size every other month (National College Health Assessment, 2017). Despite these statistics, Emory has made significant strides in addressing FI. As of January 2018, Emory's Office of Student Success has expanded food support to include a case management model that

educates students on meal plans and making the most of their resources. Together, they collaborate with the food pantry provided by Bread Coffeehouse, guest meal swipes from Emory Dining, and the College and University Food Bank Alliance (CUFBA) to support students who struggle with food insecurity (Cady, Smith-Tyge, Mathews, Chauhan, & Keaton, 2018; Reid, 2018). Additionally, students volunteering at any of the eight educational community gardens on campus may take home their harvests of peas, beans, greens, eggplant, tomatoes, lettuces, greens, and strawberries, depending on the time of year. That said, Emory acknowledges that their myriad solutions to address this issue are designed for the short-term rather than the long-term, and that their various offices must raise awareness regarding the resources available and must create more permanent, sustainable solutions ("Sustainable Food," 2016).

Problem Statement

In 2016, the healthcare related costs from food insecurity in the United States was an estimated $160 billion, accounting for direct costs of treatment that are plausibly linked with food insecurity, direct costs of special education in primary and secondary schools, as well as indirect costs such as workers' own illnesses or health problems attributable to food insecurity and workers' loss of productivity for providing care to a family member (Cook & Poblacion, 2016). Additionally, food-insecure individuals experience higher rates of hospital re-admissions within 30 days (Swinburne, Garfield, & Wasserman, 2017). Interventions designed to reduce food insecurity, therefore, also have the potential to reduce hospital and healthcare-related expenses, as well as to improve both food security and quality of life among affected populations.

It is important to determine how food insecurity may negatively impact undergraduate and graduate students' ability to succeed in school and beyond. Food insecure individuals have lower GPA's, are more likely to take an academic hiatus, and have lower self-reported health status (Morris et

al., 2016).They are also more likely to postpone medical or dental care, and students have reported choosing between food and necessary school expenses, such as rent, insurance payments, and medical expenses (Broton & Goldrick-Rab, 2016). Therefore, reducing food insecurity may improve healthcare utilization and even reduce healthcare expenses.

Theoretical Framework

This study draws on Lazarus and Folkman's stress and coping theory (1984). In this framework, cognitive appraisal and coping are distinguished separately as important processes between humans and their environments. Cognitive appraisal is first defined as a person's interpretation of the extent to which a situation is stressful. This appraisal is further differentiated into primary appraisal, where the individual determines if the situation is stressful or not, and secondary appraisal, where that individual then determines if he or she has been given enough resources to handle their stressor. Given that all participants experience food insecurity, they would have completed the primary appraisal and determined that their situation is one that directly affects them. This study would primarily utilize the steps of secondary appraisal, namely in determining if students have enough resources to handle their situation, and how students manage the situation and their stress to ensure the best possible outcome. Stress, in this framework, is a negative emotion that the person actively wants to change. In overcoming this stress, students can use two types of coping strategies: problem-focused coping and emotion-focused coping. Problem-focused coping strategies are defined as strategies where students would seek to eliminate the underlying cause of their stress, while emotion-focused coping strategies are ones where students seek to mitigate or minimize the negative emotions associated with their stress. With rational demands, students' ways of coping – both emotion-focused and problem-focused coping strategies – would have to change.

Purpose Statement

Little research has been conducted on the factors associated with FI among undergraduate and graduate students (Bruening et al., 2017). Further, existing research has primarily used quantitative cross-sectional surveys. The purpose of this qualitative study is to understand the perceptions and experiences of both college and graduate students experiencing food insecurity, including academic, social, and food-related experiences, the knowledge they have about food-related resources, and how they cope with food insecurity.

Research Objectives:

1) What are the experiences and perceptions of students at Emory University who self-identify as food insecure?
2) What knowledge do students have regarding the food acquisition-related resources, including food pantries, available to them?
3) What coping strategies do these students use to avoid or manage experiencing food insecurity?

Significance Statement

People experiencing FI lack the economic stability and security to purchase nutritious, affordable food on a consistent basis, often forgoing food for some other necessity such as clothes, textbooks, rent, or even medical expenses (Mills et al., 2014). Health outcomes can be improved by providing people with basic resources for survival (Gunderson & Ziliak, 2015). The United States' current food policies designed to address FI include the Supplemental Nutritional Assistance Program (SNAP), Women, Infants, and Children (WIC), but these federal-level solutions are not relevant or effective for college students. Additionally, the myriad of short-term campus-related solutions is not universally applicable for students given pantries' scale and long-term sustainability.. Food may sustain a population, but food also serves several other purposes: food nourishes humans and serves as a conduit or opportunity for

meetings and a myriad of social occasions. Everyone, at some point in their lifetime, has celebrated an occasion of some sort with a shared meal. FI forces people to choose between absolute necessities – and so this phenomenological study seeks to understand how FI occurs among undergraduate and graduate students.

Definition of Terms Used

College and University Food Bank Alliance (CUFBA): A network of university food pantries that aims to provide support and training to campus-based food banks and pantries as well as other initiatives that address food insecurity among its student population.

Cognitive Appraisal: A person's interpretation of the extent to which a situation is stressful.

Coping Strategies: methods people use to manage their situations. Can be divided into emotion-focused coping strategies, which seek to reduce emotions associated with stress, or problem-focused coping strategies, which seek to reduce the underlying factors behind their stress.

Food Insecurity (FI): the lack of consistent access to affordable and nutritious food in sufficient quantities.

Food Pantry: An individual location that provides food for those suffering from food insecurity and hunger. These locations directly serve local residents who suffer from hunger and food insecurity within a specified area, often receiving food through donations or from larger food banks.

GPA: Grade Point Average. This number is a measure of a student's academic achievement at a college or university.

Hunger: An individual-level phenomenon that results from food insecurity and often results in discomfort, pain, and illness that lasts far longer than a physical sensation.

SNAP: Supplemental Nutrition Assistance Program. This is the largest federal food assistance program, which increases the purchasing power of low-income households in retail establishments such as grocery stores and farmers' markets.

Stress: In the Stress and Coping Model, Stress is a negative emotion that a person actively wants to change.

USDA: United States Department of Agriculture. This is the federal executive department responsible for developing and executing federal laws related to farming, forestry, and food.

WIC: The Special Supplemental Nutrition Program for Women, Infants, and Children. This program provides food, health care referrals, and nutritional education for low-income pregnant, breast-feeding, and non-breastfeeding postpartum low-income women who have children aged 0 to 5.

Chapter 2: Literature Review

The first objectives of this literature review are to define food insecurity (FI) and explain how it can be measured. Then, a general overview of FI among students attending private liberal arts universities in the United States will be given, along with the general outcomes of food insecurity among this population and how this population utilizes food pantries. The review will also discuss the utilization of food pantries in the United States, along with previously studied coping mechanisms these individuals use to avoid or reduce FI. Then the review will discuss current associations between FI and clinical outcomes such as long-term chronic illness or mental health conditions that may exist among this population. Finally, the review will discuss previous theoretical frameworks used in FI research, along with the behavioral theory underlying this study.

Definition and Prevalence of Food Insecurity

Food insecurity (FI) is defined as the lack of consistent access to affordable and nutritious food in sufficient quantities, is an emerging issue that affects approximately 11.8% (15 million households) of U.S households. Among FI households, approximately 7.3% (9.3 million households) experience low food security, and 4.5% (5.8 million households) experience very-low food security. The United States Department of Agriculture (USDA) categorizes FI into four levels: high food security, marginal food security, low food security, and very low food security. High food secure households experience no anxiety about consistently accessing food, while marginal food secure households may experience occasional anxiety about accessing food. Low food secure households may reduce the quality or desirability of their food, but the quantities of food remain the same. Finally, very low food secure households have reduced both the quality and quantity of the food they consume. High or marginal food secure households are thus described as food secure, while low secure and very low secure households are described as food insecure (Coleman-Jensen, Gregory, & Rabbitt, 2018).

Sub-populations such as females living alone (13.9%), males living alone (13.4%), single-female households with children (30.3%), African-Americans (21.8%), Hispanic Americans (18.0%), as well as low income families under 185% of the poverty guidelines (30.8%) are affected even more than the general population (Coleman-Jensen, Rabbitt, Gregory, & Singh, 2017). A recent systematic review indicated that average FI prevalence among college and graduate students in 2015 in the U.S was 43.5%, much higher than the 2015-average of 13% in the general U.S. population (Nazmi et al., 2018). Thus, undergraduate and graduate students may have a significantly higher risk of experiencing FI than the general population and even some of the subpopulations mentioned, as well as a significantly higher likelihood of associated risk behaviors such as disordered eating, higher levels of anxiety and stress, and likelihood of chronic illnesses (Morris et al., 2016). Previous studies have also indicated that food insecurity has hindered students' interest in learning, perceptions of college, and confidence levels, as well as students' sense of belonging, comfort in accessing university services, and ease in engaging with faculty members (Wood & Harris, 2018).

In national surveys, the USDA measures FI with a 10-item scale, or 18-item scale if a household includes children under the age of 18. All households, regardless of the number of children, are asked sample questions such as "Was this statement often, sometimes, or never true for you in the last 12 months? 'We worried whether our food would run out before we got money to buy more.'" Or "In the last 12 months, did you ever cut the size of your meals or skip meals because there wasn't enough money for food?" (Coleman-Jensen et al., 2018). Based on their answers to these questions as well as others inquiring about their behaviors and experiences with access to food, households are categorized as food secure or insecure.

Survey Questions Used by the USDA to Assess Household FI (Coleman-Jensen et al., 2018).
1. "We worried whether our food would run out before we got money to buy more." Was that often, sometimes, or never true for you in the last 12 months?
2. "The food that we bought just didn't last and we didn't have money to get more." Was that often, sometimes, or never true for you in the last 12 months?
3. "We couldn't afford to eat balanced meals." Was that often, sometimes, or never true for you in the last 12 months?
4. In the last 12 months, did you or other adults in the household ever cut the size of your meals or skip meals because there wasn't enough money for food? (Yes/No)
5. (If yes to question 4) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?
6. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food? (Yes/No)
7. In the last 12 months, were you ever hungry, but didn't eat, because there wasn't enough money for food? (Yes/No)
8. In the last 12 months, did you lose weight because there wasn't enough money for food? (Yes/No)
9. In the last 12 months did you or other adults in your household ever not eat for a whole day because there wasn't enough money for food? (Yes/No)
10. (If yes to question 9) How often did this happen—almost every month, some months but not every month, or in only 1 or 2 months?

Table 1. *USDA 10-point scale for measuring prevalence and severity of food insecurity*.

Currently, the USDA distinguishes FI from hunger by defining hunger as an individual-level phenomenon that results from food insecurity and often results in discomfort, pain, and illness that lasts far longer than a physical sensation (Coleman-Jensen, Rabbitt, et al., 2017). Food insecurity, then, is defined as a household-level economic and social condition that is characterized by this unstable access to nutritious and sufficient quantities of food.

The US government currently addresses FI through the Supplemental Nutrition Assistance Program (SNAP), the largest federal food assistance program, which increases the purchasing power of low-income households in retail establishments such as grocery stores and farmers' markets (Coleman-Jensen, Rabbitt, et al., 2017). In Georgia, SNAP reached 1,800,531 people, and served 89.1% of eligible residents in 2015 (USDA, 2018). While previous studies have indicated that implementing SNAP benefits yielded significant efforts in reducing FI among those eligible to receive SNAP benefits, many Americans still lack the financial means to purchase sufficient quantities of fruits and vegetables. The average cost of a low-income meal is 27% higher ($2.36) than the maximum SNAP benefit of $1.86 per meal per household (Waxman, Gundersen, & Thompson, 2018). Additionally, most college students between the ages of 18 and 49 are ineligible for SNAP benefits, unless they meet certain criteria like participating in a work-study program, working 20 hours or more a week, or taking care of a dependent under the age of 6 ("Students," 2016). This, along with the high rates of SNAP usage among eligible residents, indicates a significant need to provide and develop additional methods of assistance in reducing FI among vulnerable populations.

Establishing Prevalence among Working-Age Adults

Working-age adults, typically defined between 25 and 61 years of age, are the most studied of adults in regard to FI. In 2017, the national prevalence of FI for single-households was 13.4% for men living alone and 13.9% for women living alone (Coleman-Jensen, Gregory, & Rabbitt, 2017). They typically head households with children, for example, and rely on earned income. In a demographic study surveying young adults (18-24 years) and working-age adults, 14.5% of young adults and 11.8% of working age adults lived in food insecure households. Both young and working adults' employment status, with 88.6% having a working family member and 11.4% having no working family members, is associated with the level of food insecurity they face. Despite the fact that their households have an

income, those working part-time jobs or facing unemployment are significantly more likely to experience FI (Brucker & Coleman-Jensen, 2017). Young adults, typically defined in research as 18-35 years of age, are especially transient as they shift from a schooling environment to that of adulthood, and may be more vulnerable to FI than working-age adults.

Establishing Prevalence among Postsecondary Students

Among college students, food insecurity is an emerging issue with a dire lack of peer-reviewed literature. As students are increasingly asked to bear the burden of rising college costs, the burden of FI increasingly grows among middle-income and moderate-income students as well as on White, Latino/Hispanic, and African-American students, with Latino/Hispanic and African-American students facing a disproportionate amount of burden (Elliott & Friedline, 2013). Any financial hardship, including tuition, medical, housing, utilities, and transportation expenses, also contributes to the effects of FI as a psychological burden (Robb, Moody, & Abdel-Ghany, 2012). International students are especially vulnerable to FI, as identifying as an international student not only predicted food pantry use but also resulted in a far higher prevalence of FI than that of both in-state and out-of-state students at an American public university (El Zein, Mathews, House, & Shelnutt, 2018). Despite the increased vulnerability to financial hardships, international students have also received little attention. The only current peer-reviewed study that examines international students reported that among 220 international undergraduate college students, 56% of students report financial difficulties as a significant source of stress. They also had the highest prevalence of food insecurity (37.6%) compared to domestic in-state students at the same university (30.7%) and out-of-state students (29.3%). (El Zein et al., 2018).

To date, most research on food insecurity on college and university campuses have focused on undergraduate rather than graduate students. This research has demonstrated that food insecurity was consistently associated with lower academic scores, such as lower grade point averages (GPAs). Food

secure students at an Appalachian university, for instance, had an average GPA of 3.51 compared to FI students with an average GPA of 3.33. FI was also associated with poor health outcomes such as higher BMIs and higher odds of mental stress and depressed moods (Bruening et al., 2017). Yet another study believes that FI starts during students' first year of college, as the prevalence of FI among college freshman at 21.5% is three times that of the prevalence of their current family FI for students at 7.1% (McArthur, Fasczewski, Wartinger, & Miller, 2018).

Given the length of a college semester, some studies examining FI among students have adapted the USDA's national definition of 12 months to either 3 months or 30 days (Bruening et al., 2017). As such, the prevalence of FI differs among universities. Nearly 90% of first-year college students at the University of Wisconsin-Madison reported worries about lacking the financial means to pay for all necessary college expenses. To afford these necessities, 71% of students altered either their food-shopping or eating habits, and when surveyed again, 27% indicated that they lacked the financial means in the past 30 days to buy food or that they altered the size of their meals, while 7% had spent an entire day without food (Broton & Goldrick-Rab, 2016). Another study, at University of Massachusetts-Boston, revealed that 27% of food insecure undergraduate students skipped meals on a regular basis, while 6% did not eat for one to two days due to resource limitations (Silva et al., 2017). Yet another study, focusing on college freshmen at an urban campus in the southern U.S., noted that the prevalence of FI at the end of the fall (35%) and spring (36%) semesters was significantly higher than at the start of each semester (28%) (Bruening, van Woerden, Todd, & Laska, 2018). Combined, these studies indicate that the prevalence of FI among postsecondary education students is at least double that of the general population, and thus, poses a pressing need that must be addressed (Bruening et al., 2017). To see a summary of FI prevalence in various universities mentioned in this paper, refer to Table 2.

Citation	Setting	Study sample and size	FI Rate
Morris, Smith, Davis, & Null, 2016	4 Illinois universities: Eastern Illinois University, Northern Illinois University, Southern Illinois University, and Western Illinois University	1,882 undergraduates	35%
Broton & Goldrick-Rab, 2016	University of Wisconsin-Madison	3,000 freshmen	27%
Silva et al., 2017	University of Massachusetts-Boston	390 undergraduates	27.3%
Bruening, van Woerden, Todd, & Laska, 2018	Urban campus in southern U.S.	1138 freshmen	28% at the beginning of a semester; 35% at the end
Wooten, Spence, Colby, & Steeves, 2019	Large public university system in southeastern state	4,824 students out of 38,614 (12.5% response rate)	35.6%
Phillips, McDaniel, & Croft, 2018	Large, urban, public, midwestern university	508 students out of 5,000 students (10.2% response rate)	36.7%
Payne-Sturges et al., 2018.	Atlantic publicly-funded university	237 undergraduate students	15%, with an additional 16% at-risk
(McArthur et al., 2018)	Appalachian university	456 freshmen	21.5%
(Martinez, Webb, Frongillo, & Ritchie, 2018)	10 University of California campuses	8705 students	42%

Table 2. *Food Insecurity Prevalence in Universities across the United States.*

Utilization of Food Pantries in the United States

Food pantries in the U.S. were initially established to assist with short-term food acquisition or emergency situations that clients may face; however, they have long since become a long-term source of food in various communities. Overall, 15% of the U.S. population uses the services of a food pantry (Mills et al., 2014). As the face of FI individuals changes, food pantries which aim to fill the gaps in

federal assistance programs like SNAP and Special Supplemental Nutrition Program for Women, Infants and Children (WIC), become increasingly necessary. However, as food pantries are often owned and operated by third-party non-profit organizations including but not limited to religious and academic institutions as well as other governmental agencies, their organizational structure, food capacity, and operational hours widely varies. Despite the growing demands of their services and their overstretched budgets, food pantries utilize their resources with ingenuity in serving as many people as they can (Vissing, Gu, Jones, & Gabriel, 2017).

The lack of standardization among food pantries, however, creates a challenge for evaluation efforts. Recent studies on food pantry utilization, noting the increasing amount of hunger in the US, have focused their efforts on understanding food pantry users rather than those who own, operate, and/or volunteer at these pantries. A recent systematic review examining intake among food pantry users in 10 research articles noted that food pantry users may have a lower mean intake of fresh fruits and vegetables than food secure individuals, and also consume more, on average, than the recommended five servings of grains per day. Food pantry users still express concerns about their current consumption of fruits and vegetables, and also report a desire to receive more fresh fruits and vegetables, as well as more acceptable-quality meat. This desire thus reflects either a less-than-acceptable quality of meat available at these pantries or a potential lack of nutritional education (Simmet, Depa, Tinnemann, & Stroebele-Benschop, 2017).

In recognition of the increased awareness of FI among students on college campuses, several universities have established on-campus or campus-adjacent food banks or food pantries. In 1993, Michigan State University launched the first campus food pantry, and along with Oregon State University in 2012, co-established the College and University Food Bank Alliance (CUFBA). CUFBA aims to provide support and training to campus-based food banks and pantries as well as other initiatives

that address food insecurity among its student population, noting that while 30% of students face FI, 75% of them receive financial aid and 43% of them have campus dining plans (Dubick, Mathews, & Cady, 2016). As of January 2018, registered member campuses had grown to over 582 members (Bengtsson-Tops, Markström, & Lewin, 2005).

On-campus pantries, such as one surveyed in Ohio, reported that their most common clients were full-time students facing economic hardship; 67% of food pantry users were unemployed while 57% received federal Pell Grant awards. Of their visitors, 51% were also repeat clients who had previously utilized the pantry. Despite living with roommates and lacking dependents, students still struggled to meet their mounting monthly expenses (Twill, Bergdahl, & Fensler, 2016).

Additionally, the traditional food pantry model of providing clients with a set amount of pre-selected food once a month does not account for their clients' autonomy or agency. A recent study noted that the perceived agency and autonomy of a food pantry's clients was significantly and inversely associated with FI. The more a client feels like they have choice in regard to what they eat, the higher their odds of increased food security would be. Thus, the current recommendations for food pantries are to prioritize the self-efficacy of their clients by allowing clients to choose the types of food they wish to eat, even if it comes at the cost of food pantry operations, to reduce food insecurity among their most vulnerable groups (Martin, Colantonio, Picho, & Boyle, 2016).

Despite all of these interventions to increase client autonomy and agency, as well as the increasing number of member food pantries across the country, food insecure undergraduates have reported four main reasons behind their avoidance of university-sanctioned as well as food pantry assistance: stigma and embarrassment, scarce information determining eligibility for the pantry, inconvenient and often inflexible hours, and self-identifying as individuals with a moral duty to reject help so that others in greater need may receive it . In not accepting pantry assistance, students were explicit in voicing their

belief that their rejection of food would allow food pantries to allocate the maximum amount possible to those with greater needs, such as single mothers. Of the respondents, only 38% voluntarily sought the services of a food pantry located near their campus (El Zein et al., 2018).

Coping Strategies related to FI

In the context of FI, coping strategies are methods individuals use when they are concerned about maintaining adequate amounts of food. Students are an especially vulnerable population, as their most common methods of income – which includes employment and scholarships – do not grant them enough money to adequately cover the rising costs and monthly expenses related to food acquisition and consumption (Hanbazaza, Ball, Farmer, Maximova, & Willows, 2016). Undergraduate and graduate students utilizing a food pantry may have additional burdens, such as unemployment, parenthood, living away from family members or support systems, and accumulated student debt, that highlight the need to understand their coping strategies. Given that the typical budget for food expenses was $50 USD per month in 2016, and that food secure households spent 29% more on food than FI households, students may have an especially difficult time securing funds (Coleman-Jensen, Rabbitt, et al., 2017).

Coping methods may include the behaviors students engage in to maintain their food supply as well as the behaviors they use when their food supply is exhausted. While not limited to students, FI individuals will utilize strategies such as visiting food pantries or cooking meals with low-cost items. However, previous studies have highlighted the ingenuity of individuals to avoid FI and their willingness to utilize management strategies such as selling one's blood and/or plasma; participating in multiple research studies and utilizing the $10-25 incentive from each one; and obtaining general help from others such as family members, neighbors, and friends (Kempson, Keenan, Sadani, & Adler, 2003). In one focus group study, participants shared stories about running out of food by the end of the month, but few mentioned budgeting. Instead, participants would discuss activities that decreased

expenses. The focus groups also discussed the uncommon practice of engaging in illegal activities such as selling drugs or selling stolen objects, with the mindset that "the system [of welfare and federal assistance] doesn't work" (Kempson et al., 2003). Other studies have noted similarly risky behaviors ranging in severity, from removing mold from cheese before eating it to pawning off items to have money or shoplifting or gambling to obtain food (Anater, McWilliams, & Latkin, 2011).

Additionally, FI individuals use additional coping strategies that may result in adverse psychological outcomes, such as disordered eating patterns and more internalizing behavior (Darling, Fahrenkamp, Wilson, D'Auria, & Sato, 2017). For example, FI women engage in cyclical patterns like over-and-under-eating depending on food availability; when food is plentiful, FI individuals may either overeat or ration food to make it last longer. They may also consume unhealthy foods, if that is all that is accessible, as these individuals do not know when they will next see adequate amounts of food (Darling, Fahrenkamp, Wilson, D'Auria, & Sato, 2017).

Outcomes Associated with Food Insecurity

Dietary outcomes

FI has been associated with poor dietary quality in multiple studies. In a systematic review of 46 research articles that examined dietary intake in adults and children, FI adults consumed less vegetables, fruit, and dairy products, and overall had a lower intake of associated vitamins and minerals like vitamins A and B-6, calcium, magnesium, and zinc. FI women were especially likely to consume less vitamin A and B-6 compared to their food secure counterparts (Hanson & Connor, 2014). In another study sampling adults in 12 U.S. states, FI adults with a previous history of FI have a different dietary intake – more carbohydrates, less protein, and less total fat consumption (Pan, Sherry, Njai, & Blanck, 2012). Another systematic review found similar results, noting that FI households both consumed less

fruits and vegetables and consumed more tubers than their food secure counterparts (Araújo, Mendonça, Lopes Filho, & Lopes, 2018).

Mental health outcomes

A recent systematic review noted adverse mental health outcomes for all FI children, regardless of age; for example, preschool students had higher risks of aggressive behavior, depressed moods, and hyperactivity, while school-age children between 6-11 years were two times more likely to report seeing a psychologist. Adolescents reported not only mental health outcomes like anxiety, depression, dysthymia, and suicidal ideation, but also having fewer friends and a higher chance of having seen a psychologist (Shankar, Chung, & Frank, 2017).

Like their younger counterparts, FI undergraduate students experienced significantly higher levels of depressive symptoms, anxiety, and stress than their food secure counterparts, even after controlling for socioeconomic status and other factors that may distinguish the two groups (Darling et al., 2017). In a longitudinal cohort study, experiencing FI significantly increases the risk and likelihood of suicidal ideation, depression, and substance use (Pryor et al., 2016). At an Appalachian university, both male and female FI students who consumed less fruits and vegetables were significantly more likely to have depression. Additionally, both male and female FI students who consumed higher amounts of sugar were significantly more likely to have anxiety than food secure students who consumed the same amount of sugar (Wattick, Hagedorn, & Olfert, 2018). Among undergraduate students at a Midwestern university, FI was significantly associated with depression and disordered eating styles, including emotional eating, uncontrolled eating, and cognitive restraint (Medina, Umoren, Yao, & Ozier, 2018). In another study examining food insecure women in the U.S. over the course of 2003-2008, food insecure women had 1.4 times higher odds of obesity compared to those who were food secure, even when

adjusting for race and self-reported health status. They were also 80% less likely to report strong social support from family or peers (Ashe & Lapane, 2018).

Other studies have additionally proposed a bidirectional association between emotional well-being and food security; in cross-sectional surveys, there were significant associations between FI and poor emotional health, including but not limited to depression and anxiety, just as there were associations between poor emotional health and FI (Bruening, Dinour, & Chavez, 2017). Poor emotional health, in turn, has been previously and independently linked to several chronic and long-term illnesses such as type 2 diabetes mellitus, cardiovascular disease, and arthritis (Bruening et al, 2017).

Physical health outcomes

i. Among working-age adults

Currently food insecure adults between 18-35, with a previous history of FI, have higher average body mass indexes (BMI), waist-to-height ratios and disordered eating scores than those who never experienced FI. (Medina et al., 2018). FI adults, additionally, are 32% more likely to be obese - with BMIs over 30 - than their food secure counterparts, and one in three food insecure adults are obese (Pan et al., 2012). FI women also have lower levels of high-density lipoprotein cholesterol (HDL-C), which is a risk factor for cardiovascular disease (Shin, Bautista, Walsh, Malecki, & Nieto, 2015).

Among working-age adults, FI has also been associated with increased rates of prediabetes and diabetes. According to a recent review examining national data between 2010-2014, FI individuals have twice the odds of experiencing type 2 Diabetes Mellitus (Lee, Scharf, & DeBoer, 2018). Additionally, 20.3% of individuals with mild food insecurity, and 10% of individuals with severe food insecurity, reported having diabetes compared to 11.7% of food secure individuals. Additionally, of those with prediabetes, 14.3% experienced mild FI, while 8.5% experienced severe food insecurity within the past year (Montgomery, Lu, Ratliff, & Mezuk, 2017). FI adults who had access to programs like SNAP were

more likely to have metabolic syndrome than FI adults without access; however, the authors theorized this outcome either occurred from selection bias – the participants may have had worse baseline health or reduced access to healthy food than food secure participants (Lee et al., 2018). FI is also associated with higher rates of hypertension and hyperlipidemia, as well as worse outcomes on health exams (e.g. asthma, limitations in daily activities) and reporting poor sleep outcomes (Gunderson & Ziliak, 2015).

In a recent report, the USDA noted that the lower one's food security, the higher the probability of all 10 adverse health outcomes studied such as hypertension, coronary heart disease (CHD), hepatitis, stroke, cancer, diabetes, arthritis, chronic obstructive pulmonary disease (COPD), and kidney disease. 37.4% of food-secure individuals had a chronic illness, compared to 43.2% of marginally secure, 46.9% of low food secure, and 52.7% of very low food secure individuals, indicating that adults in FI households had an 18% higher probability of having a chronic illness than their food secure counterparts (Gregory & Coleman-Jensen, 2017). FI individuals are also far more likely to be re-admitted to the hospital within 30 days of a discharge (Swinburne et al., 2017).

ii. Among undergraduates

Among undergraduate students, physical health outcomes are studied less than mental outcomes. However, FI individuals' rates of obesity significantly differ from campus to campus. Some report no association between FI and BMI, while others have found a significant association (Bruening et al., 2017; Payne-Sturges, Tjaden, Caldeira, Vincent, & Arria, 2018). As there is a significant difference in self-reported health between FI and food secure students, this may be partially attributed to students' perceptions of their health (Knol, Robb, McKinley, & Wood, 2017). However, FI individuals have reported performing less physical activity on campus and there may be an association between levels of physical activity and food security status (Bruening et al., 2018).

Academic-related health outcomes

i. Among children

Academic-related outcomes have been most studied in children. As such, studies have indicated that FI children have significant lags in reading and mathematics performance as early as kindergarten, and as long-lasting as from kindergarten to third grade; consistent FI from kindergarten through 3rd grade only increased the disparity between FI and food secure children. If the household's food security status reverses, however, the student's reading scores significantly improved and the discrepancy between the groups of children was eliminated (Jyoti, Frongillo, & Jones, 2005). A systematic review examining academic performance in children also found that FI children had a higher likelihood of repeating a grade as well as using special education services, and that a dose-response relationship existed between a student's FI status and his or her mathematic scores (Shankar et al., 2017).

ii. Among undergraduates

Similarly, studies examining undergraduate FI students and academic outcomes have found significant associations between FI and academic performance. First, in a study examining students at an Atlantic publicly-funded university, undergraduate FI students, in addition to reporting poor sleep outcomes like the general population, also reported an impaired ability to attend their classes (Payne-Sturges et al., 2018). In a recent study that used cross-sectional surveys to capture FI among undergraduates at a large Northeastern state school and defined FI as reducing meals due to monetary expenses, 58.6% of FI students reported feeling somewhat to very affected in their ability to attend class, compared to 16.4% of food secure students. Furthermore, 87.5% of FI students were somewhat to very affected in "their ability to perform in class," compared to 22.1% of food secure students. Severe FI was also a factor in failing courses, as students experiencing severe FI were nearly 15 times more likely to have failed courses, as well as 6 times more likely to have withdrawn from college or failed to register for more courses at the institution (Silva et al., 2017). In a study examining FI among undergraduates at

a Midwestern institution, FI students were 3.49 times more likely to report considering dropping out of college due to monetary expenses, and 3.58 times more likely to reduce their class load because of monetary expenses (Phillips et al., 2018). Two studies examining undergraduate students in the Southeastern and Midwestern US also found an association between FI and a GPA approximately 0.2 points lower than the GPAs of food secure students (McArthur et al., 2018; Phillips et al., 2018).

Housing-related outcomes

Among undergraduates, food insecurity was also significantly associated with housing status; students who rented, boarded, or otherwise shared their accommodations were more likely to report food insecurity, as well as those who had lower incomes or financial assistance from the government (Hughes, Serebryanikova, Donaldson, & Leveritt, 2011). In a Midwestern university, students who lived more than 2 miles away from campus were nearly 3 times more likely to experience FI (Phillips et al., 2018).

Theoretical Frameworks Used in Food Insecurity Research

Studies on food pantries have previously utilized the socioecological model, which seeks to understand the interaction between individuals, their support networks, their communities, and ultimately, the society in which they live (McLeroy, Bibeau, Steckler, & Glanz, 1988). Food pantries, in these studies, are community-level resources designed to fill the gaps where larger societal interventions such as SNAP and WIC, interpersonal solutions such as borrowing , and individual level methods fail (Vissing et al., 2017).

However, little research exists on food pantry utilization among students. Therefore, previous studies focusing on the development of campus pantries on university campuses opted to utilize grounded theory to advance the body of literature (Dave, Thompson, Svendsen-Sanchez, & Cullen, 2017). Previous studies also aimed to further develop concepts such as categorized food acquisition or

coping strategies related to avoiding FI. However, no study has yet established the necessary variables for interrelationships, which is crucial for theory development (Kempson et al., 2003). Some studies have used the framework known as the "theory of people and places," which is also an ecological model of health; specifically, it organizes factors that might support or thwart health. This theory includes key factors; attributes of people, including skills such as budgeting and portion control; and attributes of places, including local community organizations, or state and national policies and programs (Cheung et al., 2015). Other studies have examined food insecurity through resilience frameworks to contextualize FI individuals' and households' experiences, namely to see how socioeconomic status and FI intersect in a way that impacts individuals' long-term health outcomes (Younginer, Blake, Draper, & Jones, 2015).

For this study, the main framework would be Lazarus and Folkman's stress and coping theory (1984). In this framework, cognitive appraisal and coping are distinguished separately as important processes between humans and their environments. Stress, in this framework, is a negative emotion that the person actively wants to change; in turn, coping – and specifically coping strategies – would have to change with rational demands. Furthermore, coping can be divided into two types: emotion-focused coping and problem-focused coping (Lazarus & Folkman, 1984).

In emotion-focused coping, individuals want to reduce emotions associated with stress, such as shame, embarrassment, fear, anxiety, and desperation. Examples of emotion-focused coping strategies would be discussing their problems with their friends or reframing the way they think, with statements like "Hunger is the best condiment" (Watson et al., 2017). In problem-focused coping, individuals aim to remove stress by focusing on the source of that stressor. Studies examining coping strategies, while not using Lazarus's and Folkman's framework, have noted problem-focused coping strategies for FI individuals such as decreasing the types of food they eat, reducing the amount of food they eat, and skipping meals to conserve their resources (Tsegaye et al., 2018). The final step in this model is

reappraisal, where students discern how they feel about their situation, and if they have controlled the situation enough to reappraise or review the extent to which their situation is stressful (Lazarus & Folkman, 1984).

In examining food insecurity, food pantry use, and coping strategies through this framework, this study can better contextualize FI among students and see how various aspects of their experiences may overlap to influence either their food pantry use, their coping strategies, or both.

Conclusions

Currently, the prevalence of food insecurity is far higher in postsecondary students than the general population, for reasons that may include the rising costs of secondary education and competing financial demands. Food insecurity is also associated with risky behaviors, disordered eating, chronic illness, lower academic outcomes, and a decreased sense of belonging. However, little research exists on food pantry utilization, let alone food insecurity among college and graduate students, and additional research will need to be conducted not only to understand the phenomenon among this population but also to better tailor nascent interventions that address the factors related to food insecurity.

Chapter 3: Methodology

This study used qualitative semi-structured interviews on food insecurity, food pantry usage and motivations for use, and coping strategies to explore participants' experiences with and perceptions of those topics. All participants responded to recruitment emails or social media posts and consented to participate prior to each interview. Food insecurity, in this study, was defined as the lack of consistent access to affordable and nutritious food.

Participants

Specific inclusion criteria included: 1) young adults who were 18 years or older, 2) current students enrolled either fulltime or part-time in Emory College, Laney Graduate School, Rollins School of Public Health, Emory Law School, Emory School of Medicine, Candler School of Theology, or Goizueta Business School at Emory University, and 3) self-identified as food insecure after being provided with a definition. Participants were asked if they had ever utilized a food pantry but were not disqualified if they had never visited a food pantry.

In total, 16 participants were recruited: 8 undergraduate students from Emory College and Goizueta Business School and 8 graduate students, 4 from Rollins School of Public Health and 4 from Candler School of Theology.

Recruitment and Procedures

Gatekeepers from a third-party food pantry adjacent to campus (Bread Coffeehouse) were initially contacted to recruit participants via an online mailing list that only they can access. They emailed previously-screened students who have used the food pantry. In addition to the online email, Bread also left flyers and handouts detailing the study along with its risks and benefits. Professors in various graduate school departments, such as Rollins School of Public Health and Candler School of Theology, also emailed their students details about the study. Finally, students were also recruited

through flyers posted around Emory's main campus, as well as through social media posts on private Facebook groups and on GroupMe chats targeted at both college and graduate students.

Once participants were recruited, they would schedule a meeting time based on their availability, and they would meet the investigator at a location of their choosing. Some of those locations included coffee shops adjacent to campus, such as Barnes and Noble on Oxford Road, as well as Bread Coffeehouse, located on the edge of Emory's main campus on the corner of Clifton and North Decatur Road. The coffee shops were located on campus and had several private spaces in which an interview may be conducted for participants' safety and comfort. Private conference rooms at the Rollins School of Public Health and Candler School of Theology were also reserved 48 hours in advance for students who expressed desires to meet there instead.

Before the interview, participants were first given baked goods and caffeinated beverages. They were asked eligibility questions, read a consent statement, and gave verbal informed consent as well as permission to record their interview. Participants also chose pseudonyms that could be used in the study for discussing findings and contextualizing their perspectives with prior research. Upon completion, participants were asked if they could identify anyone else who was food insecure, and if so, if permission could be granted to contact those people. Additionally, participants received their monetary compensation of $5 CVS gift cards.

Measures

The interview guide was developed after conducting a broad literature review and examining both scholarly articles and grey literature on the resources and challenges facing those with food insecurity in the Atlanta metro area. Questions were then derived from the literature and from discussions with gatekeepers at the food pantry. The initial interview guide was piloted on three graduate students experiencing FI. However, the final guide, which was refined after conversations with

the pilot students and professors, was not piloted before its initial use. Instead, it was refined during data collection. As interviews progressed, participants would note distaste for questions, prompting re-phrasing of questions like "What strategies have you not used but would like to use in the future?" to "What strategies have you not used, but have heard of?" Another question changed from "Which grocery stores do you prefer to shop at?" to "If you had unlimited time and money, which grocery store would you shop at?" upon realizing that participants misunderstood the question.

The interview guide consists of four domains: dietary habits and grocery shopping, experiences with food pantries if applicable, coping strategies, and perceptions of food insecurity. If participants had not utilized the services of a food pantry or food bank, then that domain was omitted. Interview topics were ordered in a logical, conversational matter so the interviewer and participant could build rapport (Hennink et al., 2011). Refer to table 3 for the full interview guide.

Interview Domain	Questions
Dietary Habits and Grocery Shopping	**I. So, what's your typical diet like?** **a.** Which meal (or meals) are most important to you? **II. Where do you go grocery shopping?** **a.** If you had unlimited time and money, which grocery stores would you shop at? **III. How often do you buy groceries?** a. What do you consider staple items? **IV. What would your typical grocery budget look like?** a. How do you plan for your grocery trips, if at all? **V. Can you describe what your typical diet was like prior to entering graduate school?** a. What meals were most important to you in undergraduate? b. What meals were most important to you growing up? **VI. How has graduate school affected your eating habits, if any?**

	a. Describe how your workload affects your eating patterns. b. What about breakfast? Lunch? Dinner? Snacks? c. How does your current schedule affect your eating patterns?
Experiences with Food Pantries	**Experiences with Food Pantries (if applicable):** **I. When did you first use a food pantry?** a. Describe the details of your first visit, including interactions with staff members. b. How did you hear about the co-op? **II. Why did you first use the food pantry?** III. **How often do you visit the food pantry?** a. Can you describe a typical interaction with a co-op staff member? IV. **What kind of food do/did you usually obtain from the pantry?** a. If they don't have the food you want, how would you go about obtaining that food? **V. How can food pantries better address food insecurity?** a. What resources would you like to see, in an ideal world? b. What organizations would you like food pantries to partner with, in an ideal world?
Coping Strategies	I. **How do you deal with any physical stress related to getting enough food to eat?** a. What strategies work best for you? b. What strategies have you not used yet, but have heard of? **II. How do you deal with any emotional or mental stress related to getting enough food to eat?** a. What strategies work best for you? b. What strategies have you not used yet, but have heard of? **III. How do you manage your resources?**

	a. What sorts of strategies do you use to avoid experiencing running out of food?
Perceptions of Food Insecurity	**I. In the past, whether before graduate school or during your childhood, if you have struggled with obtaining food, could you tell me about it?** **II. What comes to mind when I say the words "food insecurity?"** a. Probe: If needed, explain food insecurity as the inability to consistently afford nutritious food. **III. What sort of person comes to mind when I say they're food insecure?** a. What does that label say about that person? b. How do you feel about applying that label to yourself or anyone you know? **IV. How would you describe Emory's attitude towards food insecurity?** a. What attitudes do your peers hold with regard to food insecurity? b. What attitudes do your professors with regard to food insecurity? c. What attitudes do your work colleagues hold with regard to food insecurity? **V. Can you tell me about any other food insecurity-related resources that you utilize?** a. What are your experiences regarding those resources? b. How did you learn about these resources? c. How often do you use those resources, if at all? d. What made you consider utilizing them either as well as or in the place of Emory's resources? VI. **Is there any advice you would give to someone who is currently food-insecure**? a. What would you tell them? b. What do you wish you had known before you became food insecure (if recent)?

Table 3. *Interview Guide Questions Divided by Domain.*

Ethical Considerations and Consent Procedures

Primary risks to participation are a loss of privacy or breach of confidentiality; however, the overall risk to participating in the study was estimated to be very minimal. Prior to participation, participants gave oral consent both to being interviewed and recorded. All interviews were audio-recorded utilizing the Voice Recorder mobile application (TapMedia Ltd., 2016). All participants chose a pseudonym to protect and maintain their confidentiality, and their information was de-identified on all audio files, electronic and hard-copy transcripts, and digital copies of field notes. All electronic data, including audio files, digital copies of field notes, and transcripts, were stored on a password-protected data management software account on a password protected computer only accessible to the researcher.

This study was classified as non-research by the Institutional Board Review (IRB) as it did not meet the definition of "research" with human subjects or "clinical investigation" as set forth by the university's procedures and policies.

The in-depth interview guide included questions regarding participants' financial situations in regard to food budgets, as well as probes on how food insecurity has affected their physical and mental health. These topics may have brought some participants discomfort, and to protect against discomfort during the interview, the PI explained during the consent process that participants may refuse to answer any questions as well as end the interview at any time without providing a reason.

Data Analysis

Data collection and analysis occurred concurrently. All interviews were transcribed verbatim into Microsoft Word and then imported into MAXQDA, a qualitative research program that supports qualitative research through collecting, organizing, visualizing, and analyzing qualitative data (MaxQDA: the art of analysis, 2017). With the help of a peer coder, a codebook was developed with

codes and definitions based on the first few transcripts. All transcripts were double-coded based on intercoder agreement. Coders met periodically throughout the process to discuss how the coding is being approached and how discrepancies in coded segments of text may have occurred (Bazeley, 2013). Consensus was reached through conversations about how or why coders chose different codes, particularly if whole sections emerged with different code uses and frequencies. Additionally, the PI periodically de-briefed with the transcriptionist after interviews to discuss emerging and recurring themes.

Consistent, similar insights from participants' interviews as well as field notes were then coded as either deductive or inductive codes, based on whether the topics described originated from concepts in the literature or organically emerged from participants' experiences (Hennink et al., 2011). Deductive codes were based off the literature and thus the interview guide. For instance, "budgeting" was a topic that emerged from the literature, where 73% of participants visiting metro Atlanta Food Banks often reported choosing between purchasing food or tending to medical needs (Mills et al., 2014). This statistic informed the decision to incorporate questions – and codes – asking about participants' spending habits as it relates to food and food insecurity. Inductive codes, on the other hand, were formed from unexpected recurring patterns from field notes and interview transcripts.

The codebook has seven categories: dietary habits, food pantry use, lack of awareness, barriers and resources, coping strategies, improvement, and social life and support. Within each of these categories are several sub-codes. Dietary habits, for example, was defined as "how the respondent consumes food and drinks; this may include the frequency with which an individual consumes food, as well as the most common items consumed," and has the sub-codes budgeting, location, past dietary habits, and change in dietary habits. Lack of awareness, defined as "How others do not know of or do not perceive food insecurity," has the sub-codes peers, instructors, work colleagues, and institutional

attitude. Coping strategies, defined as "how individuals handle tangible resources or intangible emotions or feelings regarding their food insecurity. This may also include the use of a professionally trained individual who listens to food insecure individuals and gives them advice or help regarding their situation," has the sub-codes physical, emotional, and resource management. To see the codebook in further detail, including the code tree and which codes were inductive or deductive, refer to the appendix.

The overall analytic approach to this study is a thematic analysis with the additional use of data matrices. Matrices with codes, sub-codes, and identity numbers were also developed using summary data to identify relationships between various codes, if any, and to cluster responses into groups with similar responses. It was a cross-section of both codes, such as coping strategies or budgeting, with participant numbers, such as #01, #02, #03, and so forth. From these matrices, summary responses for each group were created through categorization of responses where applicable and combination of responses, if possible, to see patterns of association more closely (Bazeley, 2013). Finally, a summary combining statements from these matrices was made to summarize patterns found within the data.

Sample Codes	**Graduate students (n=8)**	**Undergraduate students (n=8)**
Skipping meals as a coping strategy	Fi, Rachel, Rose, Roda	Kaycie, Sally, Aria, G,
Had never experienced FI prior to Emory	Rose, Fi, Eugene, L, Jay, Rachel, Sierra	Aria, Sally
Food Pantries should have nutritious/compatible (and culturally-relevant) food	Rose, Sierra, Rachel, Fi,	Sally, Janet, Natalie, EG, Kaycie, G, Jazmine

Figure 1. A sample case-based matrix to explore relationships between codes and participants, using Excel.

Although 16 individuals were interviewed, saturation was not fully reached for all interview domains. Some areas, such as attitudes towards food insecurity and dietary habits, reached saturation by eliciting no new responses by the 15th and 16th interviews; others, such as the coping strategies domain

and food pantry use, still had a wide variety of response. This lack of saturation could be attributable to how not every participant used the services of a food pantry. Some respondents, after the interview, admitted that they had no idea a third-party food pantry existed near campus, let alone the breadth of resources available to them as a student.

To increase the trustworthiness, or validity, of the data and this study's conclusions, several strategies were utilized: the findings of this study were compared to previously published results, including the university's own quantitative survey on FI students, and this paper explained its process in plain English in an attempt to achieve transparency with readers. Additionally, where possible, respondent validation was attempted by seeking agreement with participants (Bazeley, 2013). This said, respondent validation has its own drawbacks. For instance, only one respondent had time to read the results at time of analysis. While multiple participants expressed interest, they had competing priorities that prevented them from validating the study's findings. Finally, peer validation was sought where possible: the initial results from an earlier pilot study were presented at a student club meeting, and conclusions were tested with peers when possible (Bazeley, 2013).

Findings are presented within five main topics: 1) perceptions of food insecurity, 2) prior experiences with food insecurity, 3) individualized coping strategies, 4) varied knowledge of resources, and 5) advocacy through accessibility. As this qualitative study follows an inquiry framework of phenomenonology, targeting the lived experience of FI among college and graduate students, the "emphasis [is] on the essence of the lived experience" (Kegler et al., 2019).

Chapter 4: Results

Sixteen students participated in this study: eight undergraduate and eight graduate students. Among graduate students, four were enrolled at Candler School of Theology and four were enrolled in Rollins School of Public Health. Among undergraduate students, seven were enrolled in Emory College, and one was enrolled In Goizueta Business School. Additionally, 15 of these students identified as either African-American, Hispanic or Latino, or Asian (see Table 4).

Demographics	**Undergraduate (n=8) (frequency, %)**	**Graduate (n=8) (frequency, %)**	**Total (n=16) (frequency, %)**
Ethnicity			
Asian	0	2 (25%)	2 (12.5%)
Black / African-American	5 (62.5%)	5 (62.5%)	10 (62.5%)
Hispanic / Latino	3 (37.5%)	0	3 (18.75%)
White	0	1 (12.5%)	1 (6.25%)
Gender			
Male	1 (12.5%)	2 (25%)	3 (18.75%)
Female	7 (87.5%)	6 (75%)	13 (81.25%)
FI during childhood			
Yes	6 (75%)	1 (12.5%)	7 (43.75%)
No	2 (25%)	7 (87.5%)	9 (56.25%)
College Attended			
Candler School of Theology	0	4 (50%)	4 (25%)
Emory College	7 (87.5%)	0	7 (43.75%)
Goizueta Business School	1 (12.5%)	0	1 (6.25%)
Rollins School of Public Health	0	4 (50%)	4 (25%)
Domestic or International			
Domestic	8 (100%)	6 (75%)	14 (87.5%)
International	0	2 (25%)	2 (12.5%)
Scholarship Status			
Work-study	0	3 (37.5%)	11 (50%)
Work-study + scholarships	8 (100%)	0	8 (50%)
External scholarships	0	1 (12.5%)	1 (6.25%)
None	0	7 (87.5%)	7 (43.75%)
Grocery Budget Range / week	$12.5-$50	$10-$37.5	$10-$50
Receiving SNAP benefits			
Yes	1 (12.5%)	1 (12.5%)	2 (12.5%)
Uses Food Pantry			
During childhood	6 (75%)	0	6 (37.5%)
During time at Emory	4 (50%)	2 (25%)	6 (37.5%)

Table 4. Demographic Information on Study Participants.

Participants discussed several aspects of their FI status, including their current and previous diets and the motivations for said diets, previous FI experiences, current stresses and struggles, social support or lack thereof, and perceptions of FI both on and off-campus. Findings are presented within five main topics: 1) perceptions of food insecurity, 2) prior experiences with food insecurity, 3) individualized coping strategies, 4) varied knowledge of resources, and 5) advocacy through accessibility.

Perceptions of Food Insecurity

Students defined FI in two broad categories when asked what FI meant to them towards the end of their interviews: not knowing where their next meal would come from and a lack of access to food either because of price or location. Other definitions included the psychological stress of paying for food, lack of healthy food, food banks, hunger, helplessness, and need – an overall reminder of their childhoods. When asked who they believed would be food insecure, students named a wide variety of people, ranging from homeless people, those living in poverty, those living in food deserts, those living in inner cities and urban areas, people of color, women, middle-aged-to-older single mothers, and even their own parents. However, some students drew clear distinctions between the stereotypical FI individual and those who experienced FI, noting that the reality was a lack of an archetype and that even at an institution that costs $70,000 per year, basic human needs are not being met, so if students here can be FI, anyone can be.

When students described their own struggles with FI, they noted the disconnect between their perception and the reality of their situation. As Roda, a graduate student who had previously encountered FI both in childhood and high school, conveyed it, “I might be hungry, but I know tomorrow I'll get something to eat, right, so it doesn't feel like what I'm going through is that big of a deal.”

Undergraduate and graduate students alike also expressed dislike about labeling themselves food insecure for several reasons: the label connotated stigma, pity, and implications of poverty; students felt as if their situation "could be worse"; and they felt embarrassed and disheartened about their perceived helplessness. In more severe cases, students expressed a strong dislike for the overall term and its use in academic circles. As Jasmine elaborated, "it's such a sugarcoat, like, 'insecure?' … Like, mm, I just feel like the word insecure, insecurity makes this seem less serious than what it is." They also expressed silence around the label, noting that students and faculty alike chose not to discuss insecurity and to view it as a confidential, taboo topic.

Shame and Stigma

Despite feeling like the need to eat – the need to be nourished – was a basic human right, students described feeling a sense of shame or stigma associated with FI, as well as a desire to avoid pity from others. "I don't want people to think lesser of me or look down on me because of that or pity me because of that. So, I'm not very vocal about it," Aria admitted when articulating her feelings on FI. Grad student Fi theorized that this negative connotation arose from the connection between FI and SNAP benefits, while Natalie shared sentiments that students do not disclose their status out of embarrassment and the fear that they would be viewed as freeloaders. Kaycie also witnessed pantry patrons hide their food bags in their backpack, and other students remarked on the silence around FI. While it occurs on campus, and all students knew others in their situation, they knew very few people who openly commented on such issues.

Emory's indifference

All participants emphasized either the indifference or complete lack of understanding Emory, as a private institution, held towards FI. While smaller communities within the university, such as the on-campus pantry and the Office of Student Programs and Student Success (OSPSS) may care about the

issue and deliver services to those students, students feel that the larger institution has not given them a stance or opinion. Aria mentioned that she doesn't feel like financial aid or financial resources at Emory care, saying, "I applied for the hardship fund and I was rejected and I was told that my circumstance was not catastrophic enough." She elaborated on this: she had applied for hardship funds after the loss of her mother's job, which had resulted in her terminating a study abroad experience and losing the necessary on-campus housing. In the end, she noted, "I think I have to have someone in my family die, for my mom to file bankruptcy, or for me to be in an emotionally traumatizing event, for them to care."

To further illustrate Emory's inattention to the issue, students used the example of food prices on campus. When the undergraduate campus tore down the former dining hall, they also removed the presence of a Dunkin Donuts, the least expensive option on campus, forcing students to frequent Kaldi's for coffee. If students wish to purchase food there, their cheapest option was an estimated $7 to $10. As EG explained, "that doesn't change the realities of the people who are on campus and do face food insecurity and cannot afford to purchase food from the foods that are on campus." Students also expressed a desire in reducing food prices at campus establishments and dining halls, noting that the least expensive items at an estimated $7 at a campus restaurant were also the unhealthiest options, while the most expensive items at the campus dining hall, while healthier, would cost an estimated $15. Even at the Rollins Café, a banana costs over a dollar, while a whole bunch of them weighing over a pound could cost 50 cents at a grocery store. The price of convenience, to them, was not worth the amount they would have to pay. When a graduate student asked a Dean about these prices, she was told to "take it up with Rollins Café" rather than the administration. An undergraduate student, on the other hand, was told that students serving the student government determined prices for on-campus establishments. She thus believed that the student governments should have more economic representation, if only to set fairer prices that reflected students' financial realities.

Other students noted the hypocrisy in programs at Emory teaching nutrition and FI in a global context, when the university does not address the issue within its own walls. The public health school prioritized other issues, such as HIV, obesity, and global issues. This confused Jay. She explained, "something I don't understand about that is that food and food insecurity is an aspect of all of those things [previously discussed]."

Despite all of their concerns, students acknowledged the limited efforts made thus far by Rollins and the larger institution, such as an email sent in early December that offered boxes of food to FI students remaining on campus over the winter holidays. While they see these efforts, students like Kaycie believe,

> "there's definitely, like, there's a push for, like, mental health and stuff, but, like, when it comes to, like, finances or, like, food insecurity, there's not really, like, a push to address that. And mostly, they think about, like, their student population is not necessarily, like, low-income."

Students also expressed a lack of conversations with their professors about their personal lives, and a lack of knowledge regarding their professors' opinions on FI. Their perceptions depended on their fields of study: business students like Aria felt as if her professors did not care, while sociology and public health students like G, Fi, Roda, and Jay felt as if their professors would have sympathy for students experiencing FI. However, most students excluded personal conversations when discussing their academics with professors. One student, however, noted that professors knew about FI and its prevalence on campus:

> "When [professors] hold sessions without food, they get asked "oh is there food involved?" I think that on some level, there's like a little bit of a trope. Some of the younger professors might be like, "I know what you're talking about" you know, being the hungry grad student. Um, and then I think that there's also like the iensy bitsy piece of them that's also like 'this is the rite of passage.'

In general, students did not disclose their status with professors, unless they had a close mentorship with them.

Peers' Perceptions

While students felt like their friends face the same struggles, they acknowledged the financial privilege of their peers in the larger Emory community. Among friends or peers from more affluent families, FI didn't seem to even exist, and one undergraduate student recalled a conversation in her introductory anthropology class the summer before her freshman year, where her white classmate attempted to argue the affordability of veganism, believing that this diet was the best and healthiest option for everyone. The student argued in front of the whole class:

> "Buying a hamburger costs less than buying lettuce, okay, and when you're in a place where you're low income, you're not thinkin' about--you're not always gonna be thinkin' about what is the healthiest option for me to eat if you don't have the resources to buy those healthy options. You're about--you're thinkin' about 'okay, what can I do to make sure that I'm full? …. There are literally people who live in food deserts who don't have access to fresh fruits and fresh vegetables and so, like, maybe you think being vegan is, like, the best, but it's not affordable."

Given the stark difference in classmates' financial backgrounds, several students surrounded themselves with friends and peers who either held similar beliefs or had similar ethnic, racial, or financial backgrounds. These peers provided tremendous emotional and social support, sharing information about free meals on campus or managing the stresses about their situation with humor. Students felt as if no one would be against addressing FI; however, they expressed that their wealthier peers would not think it existed on campus, and that they did not hold conversations with the general student body outside of relevant classes or classwork.

Prior experiences with Food Insecurity

Before matriculating into Emory, almost all undergraduate students had experienced FI during childhood or adolescence. These students described a variety of experiences, such as parental divorce, loss of housing, and/or parental employment, that motivated their families to seek assistance via food stamps or food pantries. In their experiences, pantries supplemented their family's SNAP benefits or were used in the event that SNAP or WIC benefits took too long to process. Students described these experiences as temporary, rather than receiving consistent assistance. Kaycie, a senior at Emory College who had experienced FI for a year in high school, noted the sustained use of food pantries as she transitioned from temporary to stable housing. She explains, "We still were using the food bank to kind of, like, subsidize our, like, meals," she explained in her interview. As for how often her family used those food banks, she said "I think it was the same [amount of time]. Every two weeks or so".

In contrast, just over half (seven graduate students and two undergraduate students) had never experienced FI before their time at Emory. One student, who had experienced FI as a child but not as an adult, mentioned the gap in her knowledge regarding food insecurity, specifically how it may affect her perspective:

> *"Um, I think when I think of food insecurity, I'm thinking of the fear that I may go hungry for a long period of time. Not that I'll go hungry for, like, eight hours. So, it doesn't--I just don't feel like my struggle is at the level, I guess, of what I've been taught food insecurity is. So, it just feels like they're different and I'm just, like, making--it's almost like what I'm doing is kind of optional, whereas what I thought food insecurity was is, like, not an option. It's just that's the situation, the hand that you've been dealt."*

In that same vein, students rejected the label of food insecurity, noting that they do not feel as if they are FI. This perspective is further illustrated by Fi, a graduate student at Rollins School of Public Health who is experiencing FI for the first time:

> "I do think that there is a good number of people, um, particularly ones that have never been food insecure, who say "oh, this – this isn't me." You know, like, and even if they are, you know, um… sometimes it's hard to see where you are when you're like, in the woods."

Others expressed an understanding of their situation, noting that while their situation was not an extreme like they had been taught in class, "you can't look at someone and tell if they're food insecure" (Sierra). FI could occur to anyone, anywhere, at any time.

Individualized coping strategies

Problem-focused coping strategies

Students managed the stressors in their daily lives in a variety of ways. For example, students described the physical stress of hunger-related migraines that would occur potentially from muscle tension or low blood sugar. To minimize or mitigate these migraines, students would take over-the-counter medications like Advil, drink water or coffee to fill their stomachs, or fall asleep for long periods of time. They reduced the amount and types of foods they ate, describing how they consumed only bagels or bananas for breakfast. Others relied on whatever food was available in dining halls or on-campus during events, including junk food or other nutrient-deficient foods, to fill their stomachs, or asked friends, significant others, family, and Internet dates found through apps like Tinder to pay for their meals. Some distracted themselves from the physical sensations of hunger by performing physical exercise such as lifting weights or going on walks. Additionally, all students mentioned attending on-campus events offering free meals. They would read their emails every day, going through a compiled PDF full of every event on-campus that week and noting which ones offered free lunch or dinner for participants. Fi even noted, "It's just something I never thought I would end up doing… 'let's see who's going to feed me today?'"

Fasting and skipping meals as a coping strategy

A common problem-focused coping strategy was fasting or the act of skipping meals throughout the day. While fasting was mentioned as part of a faith tradition, other students mentioned fasting in reference to reducing their food intake or coping with physical stress by reframing their perspective on hunger. Often, skipping meals was a natural consequence of a busy schedule, but these students noted that their skipped meals had become a deliberate choice to avoid spending money at campus establishments or nearby restaurants. Eugene even emphasized, "in my home country, I -- there -- I'd never eat only banana and milk. I always eat soup, rice, and at least one meat dish," when describing the changes in his diet upon matriculation into graduate school. If students had to skip a meal, lunch was the most commonly cited one, followed by either breakfast or dinner. Only a few students ate one meal a day; the rest attempted breakfast and lunch, or lunch and dinner on a consistent basis.

Emotional coping strategies

As with physical coping strategies, students had varied responses to managing stress related to food. Some students, like Sierra and Fi, struggled to address their stress and feelings. Sierra noted that in regard to managing her stress and emotions, "we're just, like, workin' on just, like, coping strategies and things, because I don't think that, like, I necessarily deal. I think that, like, a lot of my stress, I like, I tend to just, like, bury instead of, like, actually, like, dealing with it".

"Distraction is the main thing," Janet explained in her interview, elaborating, "I used to spend a lot of time at the library because, like, you know, you could be there for free, you could read a lot of books, and you'd be distracted all day." Other emotion-focused strategies for physical stress included relying on friends and significant others, or even "staying connected to other people who are not necessarily having food struggles but are having financial challenges in this time of transition." Social support – from peers, significant others, and relatives – thus manifested as both a physical and emotional coping strategy.

In that same vein, the use of talk therapy was inconsistent. While some students regularly spoke to counselors and indicated the utility of those services, others did not use CAPS (Counseling and Psychological Services) provided by Emory, citing reasons such as discomfort, lack of cultural knowledge and awareness, and internal judgment of those providing talk therapy. However, social support was unanimously mentioned by every participant as important to endure FI.

The participants all had friends both in their hometowns and at school who knew their situations, and with whom they could joke and discuss FI. The humor in these conversations, as a student observed, allowed them to broach the issue without directly acknowledging the severity of their hunger:

> It's weird because that honesty is very much veiled in humor. Um, it's extremely veiled in humor. "Ugh, man, I'm so hungry, ugh, this, you know like," and you know, like, there's a network of people being like "free food in this! Free food in that!" …. I have had friends who were like, "we go scout events and see if there are – is there food," but it's kind of an open secret."

Following this sentiment, other emotion-focused coping strategies included conversations with significant others, friends, and family members who knew students' situations, as well as journaling and finding quiet spaces to wait out the hunger.

Faith as an emotion-focused coping strategy

Six students discussed reflecting on their faith traditions through scarcity theology, acts of meditation, and self-reflection as an emotional or emotion-focused coping strategy. They would preface their strategy first by mentioning their faith tradition, which was Christianity in all named instances, then how they incorporated that tradition into their stress management. Of these students, four were theology students, one was a graduate student, and one was an undergraduate. Sierra, a graduate student from a religious family in the Southern US, reframed her perspective through her faith. She said, "I think that, um, something that also helps me is just, like, thinkin' about myself bein' blessed and like, how, um,

like I said, like my--about my reference towards, like, my situation is, like, I know how bad it can get and, like, I'm not there."

Theology students not only referenced their faith traditions but also named the specific tenets of their studies, such as scarcity theology. Rose, a first year Master of Divinity Student, defined scarcity theology as such:

> *"Um, that whole idea is, like, um, a lot of mentality that we see now, um, can be basically all that happens now has happened before, so, um, the ancient Israelites that went through, um, slavery were, um, then they were wandering the wilderness. "Let my people go." They all ran away, blah, blah, blah, so anyway, they had no food and then they acted like assholes and they were gluttons and everything.*
>
> *And right when I was learning about all of this, it's actually a lot cooler when I can actually think straight, um, I was realizing how much money I did not have for food. And for, like, I could've eaten more than I did, but my brain was going into hypersaving mode and I just thought it was, like, really interesting, because they were, like, eating and taking as much as they could and I was, like, not eating anything.".*

Reducing the amount and frequency of meals was a strategy utilized not only by the 6 participants who discussed their faith and the perspective their faith brought them, but also other students.

Resource management

As food was the largest portion of most students' overall budgets, they expressed concerns and stresses over acquiring their meals. Jay, a student who experienced FI for the first time in graduate school, described her stress as such:

> *"I've never really had to worry about food like this and whether or not I was going to have enough to eat or, like, constantly be stressed out if I go over, like, my $40 or $50 threshold, if I'm--how that's gonna impact the other things that I have to pay."*

Accordingly, students' resource management skills and appraisal of those skills ranged from those who didn't plan their grocery trips and relied on credit cards to those who planned a week's worth of meals in advance and aimed to freeze leftovers to stretch meals. When asked about resource management, every student discussed financial resources first, including from where they receive income, how they manage that income through budgeting, and then the stresses involved in maintaining that self-imposed budget. Even the students who relied on campus-provided meals described rationing their dollars to make their meals stretch an entire semester; undergraduate students living in apartments would also ration their campus dining plans, limiting the use for emergencies or special events. The most common method to extend their resources was to attend on-campus events; there, students could enjoy meals provided by student organizations as well as potentially return home with leftovers that they could eat for the next two or three days.

Other resource management strategies included reducing the amount and types of food consumed, reducing the frequency of visits to campus dining halls, using coupons to reduce grocery prices, eliminating all external restaurant or material purchases, or purchasing foods that will last them longer. One student mentioned use of a banking app like Qapital, which takes spare change from other purchases and places it into a savings account, allowing students to unconsciously save money.

Declining social events, or suggesting less-expensive meal options, was another common resource management strategy. Students acknowledged that they lacked the disposable income to spend $20-$50 on a single meal and would rather stay home or purchase fast food. Discipline, as these students noted, was a "huge portion" of resource management, as was knowing how much money they held in their bank accounts at any given time.

Varied Knowledge

The only on-campus resource named by every participant was an on-campus event that offered a free meal. In general, awareness of on-campus resources varied between a total lack of knowledge and full and total awareness of all that Emory had to offer. Named resources included on-campus events offering free meals, student-run group chats advertising free meals, an on-campus food pantry, and social workers working with the Office of Student Success Programs and Services (OSSPS). Beyond these, the 7 undergraduate students living on campus were required to have a dining plan; they all cited the use of the cheapest plan available, which allotted students $500 on-campus dining, or Dooley Dollars, for the semester. This plan, however, would not last students the entirety of a 13-week semester:

> "you can't spend 13 Dooley Dollars every week when there're five days of classes per week and you have things that are, at Dooley where one meal is like six dollars, so if you spend six dollars a day, you can't spend 13 dollars for an entire week for ten weeks…
>
> I think the purpose of having Dooley Dollars was to be supplemental to you, like, getting other income, that you are--it's basically the meal plan for people that are gonna cook for themselves and so you're just, like, adding 500 Dooley Dollars because you have, like, other means of, like, taking care of yourself, because there are other meal plans where you can get meal swipes, but… it just would've been a waste of money for me to get that."

Off-campus resources known to most participants were food pantries, WIC benefits, and SNAP benefits, named as food stamps or EBT. Other named resources that participants had used to reduce FI were coupons, internet dates from online apps like Tinder, homeless feedings at churches, weekly potlucks at churches, the Georgia Fresh for Less program available at local farmer's markets, babysitting mobile apps like Usit, and banking mobile apps like Qapital. One participant, an undergraduate student from a low-income background, named shoplifting as a former resource; however, she preferred other methods and used this only if all other food-acquisition methods failed.

Food pantries and motivation for use

While most of the undergraduate students had used food pantries during childhood, only two of those students used them during their time at Emory. Three students either relied on campus dining plans or their extracurricular activities for meals, while one student's schedule did not coincide with the pantry's operating hours. Furthermore, undergraduate students like Sally and Aria learned about the pantry through on-campus counselors. Only two students used food pantries both during childhood and their studies at Emory. No graduate students used food pantries during their childhood; however, two students used food pantries between college and graduate school to supplement their incomes.

Overall, students named numerous reasons for using a food pantry, such as knowing about the food pantry, lacking the necessary financial resources, and "needing something to eat." Although the on-campus food pantry has no set limit for frequency of use, students used once or twice in a semester, with a self-imposed maximum of one visit per month, believing that if they returned to the pantry more often, they would take resources allocated for someone in greater need. Natalie explained the general motivation for visiting a pantry, noting,

> "It's just an easy option to get food when you feel like you don't know where you're gonna get food and it's kinda hard to get food and that's just an easy solution where this is someth--someplace where someone's giving you food and it's free and it's no questions asked."

Another motivation for food pantry use arose through volunteer efforts. Sierra accessed food pantries through a volunteer opportunity with other college students, noting that volunteers received excess food after their shifts, and that the food pantry allowed them to receive that food because of their student status. However, while some students expressed awareness of the existence of food pantries, they also expressed reluctance to use them, believing that the food given would either be culturally irrelevant or incompatible with their dietary needs, such as maintaining a Kosher or gluten-free diet.

Finally, international students like L and Eugene did not know the definition of a food pantry, or services provided by one, as well as the types of resources Emory could provide. L, an international graduate student who was raised in an Asian country until she was a teenager, explained the gap in their knowledge as such:

> "[food pantries] does not culturally universal, right? Not everywhere have that kind of service. Maybe in the States they have something called food pantry, but like where they from, like they don't know it and then, yeah, they just didn't know that this resource available for them, or they can use it."

Overall, while students used food pantries to reduce their insecurity, 10 (62.5% of) participants – or over half of participants – did not use a food pantry, either in childhood or during their time at Emory.

Other on-campus resources

All students attended on-campus events offering free meals; however, the frequency of attendance depended on the student and his or her schedule. Some mentioned attending events that catered to different schools – for instance, they would attend a graduate student dinner even as an undergraduate, but most attended those affiliated with their college. Students learned of these events through university emails, campus flyers and bulletins, and student-led social media platforms that advertised events. Occasionally, students obtained leftovers from these events in various campus break rooms.

As mentioned earlier, undergraduate students also met with social workers from OSSPS. These employees provided students with free meal swipes into the campus dining hall, contact information for the food pantry, and sustainable food access plans for the rest of the semester. While students did not describe the process to establish need for these services, they did cite time and scheduling constraints. For instance, one undergraduate student intended to create a sustainable food access plan with an

employee but could not ultimately fulfill that need because of conflicting schedules. Additionally, no graduate student mentioned OSSPS as a resource.

Beyond OSSPS and events, students named social support through social media groups advertising those with leftover food after campus events or extra meal swipes at the end of the semester. Through these platforms, they often acquired extra food that could stretch their meals for an extra day or two. Overall, however, knowledge of on-campus resources ranged from those who only knew about on-campus events to those who knew of food pantries and offices like OSSPS.

External resources

Students cited the use of external resources such as SNAP benefits, coupons, banking apps like Qapital, babysitting apps like Usit to earn extra money, external food pantries, the financial and emotional support of their families, and local faith communities. Faith communities held communal meals for their congregations, such as weekly potlucks and fish fries that students attended; whatever food they couldn't finish, they would package and take home. One student mentioned that the communal benefits of the congregation outweighed the distance of the church from his home:

> "Originally, I went to Baptist church nearby my house. But I found that they're very nice, but the cultural differences and diet differences made me hard to adjust to their culture. So I tried to find this, the Korean church. Which is, I can easily assimilate into the culture. And food was definitely one of the reasons I came."

However, not every student leveraged the external resources available to them. While they knew about SNAP benefits or food pantries, they conveyed a lack of knowledge about the eligibility criteria and application process, as well as with whom they should make initial contact. One student mentioned that she could not receive SNAP benefits because she currently lacked health insurance as well as the ability to pay for that insurance. If she applied for SNAP benefits, she would have to not only notify the school of her lack of insurance, but also make exorbitant insurance payments. Her choice, in the end,

was to reduce her food intake rather than to apply for SNAP benefits and receive the benefits for which she believed she was eligible.

Budgeting and Meal Planning

Students' grocery budgets, in that vein, ranged from $10-$50 USD per week; for undergraduate students, this budget would be in addition to their meal plan of $500 campus dollars a semester. Two students, Natalie and Janet, lived in dormitories and relied on campus dining plans rather than grocery stores for meals. As such, their budgets depended on the frequency of their visits, the types of food they purchased, the external resources they could access, and finally, the preparations they undertook before each trip. Those plans ranged from packing re-usable bags and finding time after school or classes to writing lists to extensive meal-planning for each week.

They visited a variety of grocery stores: Sprouts, Publix, Kroger, Aldi's, Your Dekalb Farmer's Market, and Wal-Mart. Walmart was the most commonly cited by students for its low cost. As students like Rose noted, "when you realize that your wallet is shrinking, you figure out all the different little places [to get deals]." Other reasons included the convenience and locations of these stores, as most are within one or two miles of campus or their homes. However, students would prefer to shop at locations like Target, Trader Joe's, and Publix, noting the balance between freshness and quality, along with the perceptions of fair compensation for employees and variety of food offered to consumers.

Some students, such as Jay, EG, and Fi mentioned a desire to eat healthier plant-based diets, noting an attempt to eat more vegetables and produce; however, they also noted the speed in which those plants spoiled, and how much more often they would have to visit the grocery store. Others, like Aria, relied on frozen foods to last them throughout the month after each trip.

Students' knowledge of budgeting and strategies to manage their money varied: most students made a list of the foods they needed, along with the types of meals they would want to make with that

food. “It's kind of thinking about how--how much I can get before the food spoils,” EG noted when describing her meal planning process. Other students planned their time rather than their meals, determining when they could visit the grocery either by taking the bus or receiving a ride from their roommate, or packing re-usable bags to take with them when they walked to the store. Unlike on-campus resources, however, students knew when sales at their usual grocery stores occurred and planned their trips according to those sales or manufacturer coupons.

Overall, while students’ knowledge differed depending on the type and nature of resource available, they expressed a desire to learn more and to use whatever resources would help reduce their FI.

Advocacy and improving accessibility

While students may not use food pantries or SNAP benefits, they all advocated for greater access and awareness of all services available, as well as information on how they could access those services. Students like Rose, who had used food pantries in the past between college and graduate school and who currently volunteered at food pantries, expressed a desire to learn more about the resources available, specifically how to access them:

> *“I don't even know how I would access a food pantry right now. Um, so it's one of those things where if I knew how to access one, my next possible barrier would be--like, I would definitely try it once and see how it works, 'cause every food pantry's different.”*

Save for current patrons of the on-campus food pantry, students mentioned a lack of general understanding of the services provided. They lacked information about the pantry’s location, its operating hours, the types of food provided, and how often students could access the pantry. The international students especially lacked both awareness and knowledge of food pantries and similar services, noting that food pantries were not a universal or widely known service across the world. Other

students mentioned an incompatibility with the pantry's hours and their lifestyle: they either didn't know the pantry's operating hours on weekdays or they lacked the time to visit within those hours of operation. Further still, students like Roda lacked the transportation necessary to visit the pantry, believing the pantry was too far from her home. "it's not widely advertised," she said when asked about the campus pantry. "Like, I can't even really tell you a lot of information about them, but it seems pretty secret."

Despite these barriers, students acknowledged the importance of food pantries. EG, whose family maintained a food pantry for several years and thus relied on the food provided by said pantry, discussed the prevalent need:

> "this is sometimes the only people--way people would eat. Um, and it would help cut grocery costs, because a lot of people, like, living day by day, living, like, at the end of the month when rent's due or--and not having money for groceries, this was kind of a way for people to be able to have food."

While students understand the reliance on donations, they also advocated for diversity in food pantry choices. Students mentioned that food pantries should provide culturally-relevant food – for instance, food necessary to maintain Kosher, plant-based, or gluten-free diets, along with more produce and healthier options beyond pasta and carbohydrate-based foods.

Beyond food pantries, other on-campus improvements included more reliable transportation to grocery stores or malls, noting the inadequacy of those currently provided; providing feminine hygiene products free of charge; communal meal plans for both undergraduate and graduate students; easier access to nutritionists and clinicians; maintaining relationships with FI students that utilize on-campus resources; and reducing food prices in campus establishments. One specific on-campus improvement was an increased representation of students from low socioeconomic backgrounds in student government and other spaces that determined prices. Students cited high and unaffordable prices at

school cafes and campus dining halls, noting the percentage mark-up of a banana in a grocery store and in the school cafeteria. One student especially believed that if these spaces had higher representation, prices could accurately reflect the student experience.

Raising awareness

To better address FI, students also stressed a desire to normalize the conversation. They acknowledged that FI "just kind of highlights a bigger issue than a lot of people are wanting to accept," as Jay explained through examples of FI arising from students' homes or financial backgrounds. She also said, "I've learned that [the number of FI students is] a lot higher, and so, um, it's just been shocking to know that ... there's so many people out here struggling to eat."

As other students mentioned, the label of FI describes a character or archetype that does not necessarily exist in the current population. Students recognized that anyone, from parents from middle-class families to millennials holding full-time employment to even students attending a wealthy university where professors made six-figure salaries, could be food insecure at any time.

However, students like Sally and Rachel felt that unless institutions like Emory feel responsible to ensure students' basic needs and act as caregivers, then Emory will "never gonna create those widespread changes that would need to happen for this kind of problem to not be a thing."

Conclusions

This study is among the first to examine the experience of food insecurity among undergraduate and graduate students in the United States, and as such, this study had several important findings. Namely, this study demonstrated the difference in financial backgrounds between undergraduate students and graduate students and yet the similarity in their racial and ethnic backgrounds. It also demonstrated the variety of problem-focused and emotion-focused coping strategies used, the more-often used emotion-focused coping strategies, the widely used strategy among both undergraduate and

graduate students of reducing and skipping meals, and the importance of faith as a coping strategy. This study further highlighted the gaps in students' knowledge regarding available resources, indicating the need for further education and awareness on efforts to reduce FI. Finally, all students advocated for increasing awareness and accessibility of resources, and desired to normalize conversations on FI and highlight the perception that FI is not a person's personal failing so much as a reflection of the society in which they live.

Chapter 5: Conclusions, Implications, and Recommendations

There is limited qualitative research on both undergraduate and graduate student FI. While research exists on FI undergraduate students, no research has been conducted among food-insecure graduate students (Bruening et al., 2017; Nazmi et al., 2018). This study, using qualitative methods to explore academic, social, and food-related experiences of both undergraduate and graduate students as well as their coping strategies, provides rich and thick narrative data on students' lived experiences. Their knowledge and prior experiences with or without FI, in turn, determines how they manage the situations they experience. Study results may identify future research questions for these populations, as well as potential interventions and recommendations to university officials to improve current services offered to students.

The results were presented in five main categories: prior experiences with FI, individualized coping strategies, perceptions of FI, varied knowledge of resources, and advocacy through accessibility. The first primary finding highlighted that while most of the participating undergraduate students had experienced FI before, most of the participating graduate students were experiencing FI for the first time while at Emory. There was a stark difference in financial backgrounds between undergraduate and graduate students, and in this study, a difference in their current experiences with FI. While participating undergraduate students had more familiarity with seeking resources and utilizing them, graduate students knew less about the processes and methods to access those resources. Undergraduate students, in discussing their familial struggles, alluded to wanting to break out of the intergenerational cycle of poverty and food scarcity, similar to young adults with a previous history of FI (Chilton, Knowles, & Bloom, 2017). Despite the differences in their family histories, both populations faced difficulties in accessing on-campus resources.

To date, only one study has highlighted the specific difficulties of both undergraduate and graduate student experiences with FI or their difficulties in accessing resources: a series of focus groups among California public university students to uncover the difficulties and struggles specific to FI students (Watson et al., 2017). Although Emory students attend a privately-funded institution outside of the state school system, they identified the same perceptions as University of California students: not everyone is willing to discuss FI, not everyone looks like a stereotypical food insecure person, and food is always on their mind, sometimes to the point of detriment. Prior research in the form of an exploratory ethnographic study conducted among both food-secure and FI students also confirmed the sentiment that food insecure students could be anyone (Henry, 2017). The poorer academic outcomes described by students like Fi, who struggle to balance her personal expectations with her professor's expectations, was confirmed in earlier articles examining significance between FI and undergraduate students' self-reported academic performance. In this study, researchers noted that FI students were 3.49 times more likely to consider dropping out of college and 3.58 times more likely to reduce their courseload due to financial constraints (Phillips et al., 2018).

This study also examined students' coping strategies to overcome FI-related stress. As in Lazarus's and Folkman's Stress and Coping Model, students have already performed primary and secondary appraisals: they have determined the situation stressful and determined insufficient resources to manage their threats, so they responded to their perceived threat with stress (1984). As such, Emory students managed their stress through coping strategies; however, no student has overcome their stress to reach reappraisal, or their re-examining of their perceptions of their situation. They remained under constant stress, exactly like the young adults in previous research who had prior experience with FI (Darling et al., 2017). Also, similar to University of California students, Emory students did not necessarily choose clearly defined coping strategies so much as use complex and individualized

approaches to managing their specific FI. Previous research focusing on Australian university students similarly noted the frequency of individualized strategies such as part-time jobs; budgeting and meal planning; and relying on friends and family for both social and tangible support. Both Emory students and Australian university students had asked friends, family, and their institutions for money or meal swipes, and both a small percentage of Australian university students and participating Emory undergraduate students resorted to last-resort measures such as shoplifting to obtain food (Hughes et al., 2011; Kempson et al., 2003).

Unless specifically asked about physical stress, students did not discuss the physical aspect of hunger. At most, they discussed migraines and pangs of hunger, which was solved through problem-focused coping strategies like drinking water or coffee or taking over-the-counter medication. The emotional aspects of hunger – with their hunger-induced anger, with their stress, with the increased burden of procuring enough food – was far more prevalent in students' experiences. This correlated with previous research, where focus group participants focused more on food acquisition practices than the physical stress of hunger (Kempson et al., 2003; Watson et al., 2017). However, there may also be the possibility that students either normalized the physical sensation of hunger, or that their cognitive appraisal had not deemed hunger as a stressful situation. In that sense, physical hunger seemed less prevalent than the emotions associated with hunger. Additionally, cross-sectional surveys focusing on undergraduate students discussed emotional struggles and stresses more than physical symptoms of hunger (Payne-Sturges et al., 2018). That said, students often cited problem-solving coping strategies when asked about emotion-focused strategies, and vice-versa. The difficulty in teasing the two types out may stem from students' use of both methods, and in them choosing individualized methods rather than clearly defined approaches.

Using the framework of the stress and coping model, participants mentioned emotion-focused coping strategies more often than problem-focused coping strategies. These emotion-focused strategies included physical exercise, discussing their situation with social workers and therapists, journaling, maintaining faith traditions, and talking to friends and family. One potential reason for the increased use of emotion-focused strategies would be because students cannot remove the ultimate source of their stressors: their financial state. All participants also implemented problem-focused strategies such as reducing the amount and types of food they consume, falling asleep for long periods, drinking water or coffee to fill their stomachs, and participating in events that served free meals. Additionally, six students visit food pantries both on and off-campus, two utilize food stamps, and one uses manufacturer and grocery-made coupons to reduce her grocery bills. None of these methods address the true underlying issue of poverty, as students are more than aware of their financial states. Despite no students reaching the appraisal state, they held resilience and hope, believing in God, themselves, and their support systems – just like previous research on resilience and food insecurity (Younginer et al., 2015).

As for their peers, students held two important insights: their friends and trusted peers held sympathy and positive opinions towards those suffering from FI. They also believed that students from wealthier backgrounds lacked both experience and perspective to have conversations about FI. One student cited an argument from a class where a peer, specifically a white girl from a wealthy family, believed that veganism was an affordable diet despite its expense compared to a typical American diet. This coincided with an anthropological study comparing FI students with their food secure counterparts, where lack of awareness was a major finding (Henry, 2017). Emory students also mentioned that while food-secure students may want to help, they lack the experience to truly understand the stresses and emotions of FI students. This tracked with previous research among University of California students (Watson et al., 2017). Both Emory and UC students discussed the lack of knowledge and awareness

among food-secure students, particularly in how they felt reluctance to disclose their status to everyone in their lives. The UC students, like Emory students, discussed how students cannot discern who is food secure and who isn't, and as a result, how FI can be an invisible status.

Students, however, perceived their universities as either inattentive or uncaring about students' financial difficulties. Previous research on several institutions highlighted the overall university's indifference or lack of support, including the California university system. Students both at Emory and University of California schools expressed difficulties in purchasing food – the planning in purchasing their groceries, the time necessary to buy food, and the events they must attend to feed themselves – as well as barriers to food access (Martinez et al., 2018). These expressed difficulties, in addition to students' lack of knowledge about resources available to them, also indicated the gaps in students' knowledge of both on-campus and off-campus resources; the only consistently named resource was on-campus events that offered free meals. Emory students, especially graduate students experiencing FI, knew little about the food pantry, let alone offices like OSPSS, and other resources designed to help them. While undergraduate students had experienced FI in childhood, and thus knew the pathways through which they could access food, graduate students had no such prior knowledge. For many, this was their first time experiencing FI for an extended period, and the perceived connotations of the label may have prevented them from purposefully seeking out resources designed to help them.

While on-campus food pantries attempt to de-stigmatize the process through granting students agency and choice (Twill et al., 2016), students at Emory reported feeling stigmatized and ashamed. Kaycie still recalled students who hid food pantry bags in their backpack before leaving, even if she makes no secret of her pantry visits. However, those who visited the pantry reported kindness and consideration from staff members, and only listed time constraints as barriers for returning again. This speaks to a gap in perceptions between those who do not access a food pantry and those who do,

particularly as students self-prohibit themselves from accessing resources designed for them because of a perceived moral duty to leave food for those with a greater need.

Although this study was not a needs assessment, participants stressed the importance of more varied hours, and of wider and more frequent advertisements regarding the pantry and its services. Students like Rose did not even know how to access food pantries, despite wanting to try and use it to see the resources it could offer.

These findings correlated with a survey among FI students in the University of Florida, where stigma, insufficient information being disseminated, and a lack of convenient hours were main barriers to pantry access (El Zein et al., 2018). A more cost-effective approach, both regarding time and money, may be to have student liaisons between the pantry and various schools within Emory, and for more frequent email, Canvas, and other online advertisements, beyond the posters and placards scattered around campus. Another potential approach would be to describe the types of regular donations they receive, or how they accommodate those with religious or dietary restrictions, in their bulletins or advertisements. As previous research note, if students understand that food pantries, and other short-term resources like campus meal swipes, can accommodate their varied needs, they may be more likely to use the services provided to them (El Zein et al., 2018; Watson et al., 2017).

Beyond increased advertisement, students also wished for an increased familiarity with the wider Emory community, and for the food pantry to know how to best serve students by maintaining relationships with them. Students like Sally noted a lack of follow-up, while students like G witnessed the importance of cultural familiarity and humility in his own work with food pantries.

Although students perceive Emory as a wealthy institution where faculty and students alike are from “the upper echelons of society,” Emory may not meet the basic physiological needs of all of its students. Although the school has admitted students from diverse backgrounds, not every student has the

same financial capacity to nourish his or her body. Given that we know FI children's academic scores decline, and that the difference in academic scores between FI and food-secure students disappears when both groups are given adequate nutrition, we should ensure all students are adequately fed (Jyoti et al., 2005). In an ideal world, students noted that hunger like theirs shouldn't exist, because the United States produces enough food to feed everyone. FI, in their eyes, is an issue of distribution and access, rather than one of wealth.

Conclusions

In short, this study's findings corroborate previous literature on FI among this population, highlighting not only students' social, academic, food-related experiences but also the difficulties in accessing services designed for this population. Undergraduate students have more knowledge and awareness of services than graduate students; however, both populations face time and knowledge constraints in accessing food pantries. While FI may affect a third of students at Emory, students also revealed several coping mechanisms, and the emotional and social support they receive from peers. Additional research is needed to determine potential interventions for this population, as well as to investigate potential differences in both knowledge and access between international and domestic students. Finally, a future research question from these efforts could inquire about policies regarding SNAP benefits for students at state and federal levels, and how greater transparency about the eligibility process and criteria may affect this population.

Strengths and Limitations

The main strength of this study draws upon the inquiry framework of phenomenonology, where the essence of lived experience matters, and the data collection methods of in-depth semi-structured interviews accomplish this. Another strength was the interview guide, which was refined over the course of four months through feedback from advisors and students experiencing FI. All participants expressed

the guide covered every topic they wished to cover. In using phenomenonology, this study provides a foundation for defining the problem and the issue, which can be used by future studies for further research and potential interventions. The study's validity was also increased through the use of a second peer coder. A transcriptionist was employed not only to transcribe every interview but also to debrief on participants and discuss themes and similarities between interviews. Throughout the study, an iterative and inductive research process was used in the design and implementation, following the framework of the stress and coping model. This model is another strength for the study, as it highlights behaviors that students use to manage their stress, and also more importantly, note how no student has reached reappraisal.

The findings reported here cannot be generalized beyond Emory University. As students were asked to self-identify prior to meeting with the researcher, these interviews capture students who are not only fully aware of their status, but also have had time to understand the nuances of their situation. Additionally, not every student was asked for their demographic information, so it was hard to capture ages, or impossible to calculate parental socioeconomic statuses. Despite having an equal number of graduate and undergraduate students represented, 87.5% (or 14 out of 16) participants were female. The primary researcher was also unable to target students attending Oxford College, Emory Law School, Emory School of Medicine, and Emory Woodruff School of Nursing. These students' perspectives were neither captured nor reflected in the data, and thus does not fully encapsulate the student experience.

As questions relating to past experiences with FI or past dietary habits relied on memory, the experiences in their transcripts are potentially vulnerable to recall bias – specifically, forgetting events or misremembering the sequence in which they occurred. However, their past experiences bring an invaluable context as to how or why FI students may or may not rely on the services food pantries or

other on-campus resources provide. Additionally, they highlight the pressing need for students from all economic backgrounds to have sufficient amounts of food, no matter where they study.

Reflections

Over the course of this academic year, the author learned a tremendous amount about FI – not only in how students managed their resources, but also in how grounded and realistic they were about their circumstances. Their experiences humbled me, especially as I was fortunate enough to remain food secure my entire life. Instead, I listened, and I tried to treat my peers with the utmost sincerity and respect as they opened up to me about harrowing experiences and difficult stresses often reserved for a therapist. Their worries and stories reframed my own perspective. That said, I also recognized that I am a woman of color – and that my in-group racial status allowed me to talk to these students in a way that I might not have if I was white or white-passing. Most of my participants were people of color, and their racial status reflects the disproportionate amount of people of color who experience FI every year, both in general and student populations.

Since I cannot determine who among my peers may be experiencing FI, and thus would not know if I alienated anyone, I have re-framed my social interactions: I stopped inviting acquaintances for restaurant dinners, and I began to suggest low-cost ideas like coming to my apartment for tea and cookies, or renting a movie and pizza, or walking in Lullwater Preserve on a warm day. Friends have asked me to walk them through food insecurity screeners to determine their current status, or to see if they may have experienced FI in college without realizing it. My transcriptionists told me that they changed their food purchasing habits after finishing their transcriptions, and even my student organization's executive board changed how they purchased food for events, upon realizing that their meal may be all a student eats that day.

In designing and executing this study from the beginning to its final conclusion, I learned a tremendous deal about the research process – how nothing ever goes according to plan, how recruitment can happen in fast bursts, and finally, how the field has grown and gained national attention in the past two years. When I matriculated into Emory and told people I wanted to study food insecurity, they assumed that I wanted to study global populations, or low-income vulnerable populations like single-parent households or inner-city children. Even back then, I knew that I wanted to act and research locally, and to see and understand the subcultures that I identified with.

The starving student stereotype has existed for decades, and college and graduate students alike have joked about taking Tupperware to events or surviving entirely off of ramen noodles for weeks at a time. With rising college costs, this joke seemed soon to become a reality, and what I had not realized was how many students it affected, let alone how little various institutions did to alleviate that burden.

In conducting this study, and in turn writing this thesis, I can only hope that this sheds light on the issues facing students – and the public health problem that awaits us if we do nothing to help.

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Appendix

Codebook

Key:
cells in green = inductive codes
cells with no colors = deductive codes

Code	Subcode	Definition	Inclusion/exclusion criteria
Dietary Habits		How the respondent consumes food and drinks; this may include the frequency in which an individual consumes food, as well as the most common items consumed**.**	**Include** for general information regarding dietary habits. **Exclude** when discussing past dietary habits, changes in dietary habits, budgeting, food pantry usage, or location (use codes 1a-1e).
Dietary Habits	Budgeting	How respondents spend money in relation to their food/beverage consumption.	**Include** when discussing finances in relation to food/beverage consumption. Exclude when discussing other financial stressors.
Dietary Habits	Location	Where an individual may go to purchase food and/or drinks for consumption.	**Exclude** when discussing perceived barriers or facilitators.
Dietary Habits	Past Dietary Habits	How and/or when an individual consumed food and drink before enrolling in Emory.	**Include** when respondent speaks about their diet *prior* to matriculation at Emory, and how that diet differs from their current dietary habits.
Dietary Habits	Change in Dietary Habits	How an individual has altered his/her consumption of food and/or drinks since enrolling in Emory.	**Include** when the respondent describes how his/her dietary habits have shifted from either high school, college, or the workforce to their current situation in graduate school.
Food Pantry Use		How an individual utilizes the resources available in a food pantry.	**Include** for general information regarding food pantry usage.
Food Pantry Use	Location	Where an individual may go to acquire food from a third-party food pantry.	**Exclude** when discussing perceived barriers or facilitators.

Food Pantry Use	Past food pantry use	How an individual utilizes the resources available in a food pantry before enrolling in Emory (either as an undergraduate student or child).	Include when respondent describes experiences and perceptions relating to food pantry use *prior* to their matriculation at Emory.
Food Pantry Use	Use of Food Pantry Resources	How an individual utilizes, or doesn't utilize, the resources available to them in a food pantry at any point in his or her life.	**Include** when respondent describes experiences and perception relating to items, assistance, or conversations held within a food pantry.
Food Pantry Use	Motivation for Use	How an individual utilizes, or doesn't utilize, the resources available to them in a food pantry at any point in his or her life.	**Include** when respondent mentions the underlying reasoning for the use or non-use of food or other resources offered to them. **Exclude** when respondent describes experiences and perceptions relating to items or assistance from a food pantry.
Lack of awareness		How others do not know of or do not perceive food insecurity.	***Exclude***. Use codes 3a-3d to describe lack of awareness among peers, instructors, work colleagues, and Emory as an institution.
Lack of awareness	**Peers**	How other students do not know of or do not perceive food insecurity.	**Include** when the following is mentioned: peers' perceptions of food insecurity, and descriptions of peers' reactions to food insecurity.
2b. Lack of awareness	Work colleagues	How coworkers do not know of or do not perceive food insecurity.	**Include** when the following is mentioned: work colleagues' perceptions of food insecurity, and descriptions of work colleagues' reactions to food insecurity.

2c. Lack of awareness	**Institutional attitude**	How societal norms and expectations among students, professors, and administrators at Emory contribute to individuals' perceptions regarding food security.	**Include** when respondents provide general descriptions of events and classes at Emory. **Exclude** if respondents mention peers' reactions or perceptions, professors' reactions or perceptions, and work colleagues' reactions or perceptions.
Barriers and Resources	**Time**	The inability to prepare foods and/or acquire them as part of one's schedule.	**Include** when respondent mentions lack of time, whether in regard to food insecurity or in general.
Barriers and Resources	**Transportation**	Either not having the proper methods or the resources to move from one location to another.	Include when the respondent mentions how transportation hinders his/her ability to acquire food.
Barriers and Resources	**Money**	Financial difficulties, or financial constraints that may hinder respondents' ability to be food secure.	**Include** when respondent mentions how lack of money prevents them from acquiring the foods they need. **Exclude** either when participants describe how they shop and/or factor money into dietary habits (use code 1a) OR when respondents describes mental or emotional strain from lack of money (use code 4d).
Barriers and Resources	**Stress**	Feeling strain or tension for any sort of reason, including reasons relating to food insecurity.	**Include** when respondent mentions either a lack of money or financial stressors. **Exclude** when respondent mentions financial difficulties in general (use code 'money') or shopping habits (use code 'budgeting').
Barriers and Resources	**On-Campus Resources**	A supply of money, items, staff members, or other tangible goods that are available on the buildings and grounds of Emory University.	**Include** when respondent mentions any resources provided to students on Emory's campuses. **Exclude** when respondent mentions either increasing awareness (use code 4a) or lack of awareness (use codes 2a-2d)

Barriers and Resources	**Off-Campus Resources**	A supply of money, items, staff members, or other tangible goods that are available on the buildings and grounds outside Emory University.	**Include** when respondent mentions any resources provided to students outside Emory's campuses.
Coping Strategies		How individuals handle tangible resources or intangible emotions or feelings regarding their food insecurity. This may also include the use of a professional trained individual who listens to food insecure individuals and gives them advice or help regarding their situation.	**Include** when respondent describes methods they use to handle their situation, including in regard to food insecurity. Also **include** when respondent mentions a therapist, needing therapy, or any professional help relating to mental health.
Coping Strategies	**Shame or embarrassment**	Feelings of humiliation or distress or inadequacy brought about by respondents' socioeconomic standing in relation to that of their peers or colleagues.	**Exclude** when mentioning lack of awareness or cultural norms regarding food insecurity (use codes 2a-2d instead).
Coping Strategies	**Physical**	How individuals manage or minimize the physical and/or physiological strain or tension they feel for any sort of reason, including reasons relating to food insecurity.	**Exclude** when respondent mentions coping strategies related to emotional and/or mental tension.
Coping Strategies	**Emotional**	How individuals manage or minimize emotional and/or mental strain or tension they feel for any sort of reason, including reasons relating to food insecurity.	**Exclude** when respondent mentions coping strategies related to physical stressors or tension.
Coping Strategies	**Resource Management**	How individuals take stock of their tangible and intangible assets (food, money, transportation, etc.), and how they may prioritize certain needs over others.	Include when respondents describe how they handle their assets, as well as when they describe their process of prioritization.
Improvement		Advice directed at Emory, its administrators, instructors, or students regarding food insecurity.	**Include** when respondents have general advice towards Emory, either as an institution, groups of individuals, or specific people. **Exclude** when respondents describe informing more people of resources, accessibility, or advocacy.

Improvement	Raising Awareness	Advice directed at Emory, its administrators, instructors, or students regarding how to inform people about resources regarding food insecurity and to educate them about food insecurity.	**Include** when respondents describe how and when Emory could inform more people about the resources available to its students. **Exclude** when respondents talk about improving access to resources (use code 4b).
Improvement	Accessibility	Advice relating to how participants can easily obtain and use resources regarding food insecurity, either on Emory's campus or outside campus.	**Include** when participants describe how to improve the ease and/or convenience of obtaining resources related to food security. **Exclude** when respondents mention support for any ideas or causes mentioned (use code 4c).
Improvement	Advocacy	Support for ideas or causes regarding food security either on or off Emory's campus.	**Include** when respondents describe supporting anyone who experiences food insecurity. **Exclude** when respondents describe how to more easily obtain or use resources.
Social Life and Support			***Exclude***. To specifically mention socioeconomic differences, use code 'class difference'. To discuss support, acquiring support, or lack of support, use the following subcodes.
Social Life and Support	Class difference	How respondents perceive their socioeconomic status compared to that of their peers or instructors.	**Exclude** when the respondent discusses budgeting (use code 1a) or names "shame or embarrassment".
Social Life and Support	Support	Sources of assistance regarding food insecurity, including where and how participants receive that assistance.	**Include** when respondents mention receiving physical or emotional assistance from various sources, as well as assistance securing food from their communities.
Social Life and Support	**Acquiring Support**	The process in which individuals receive either physical, mental, or emotional sources of assistance, including how or when they receive those sources.	Exclude when specifically discussing support or lack of support.

Social life and Support	**Lack of Support**	The absence of assistance, understanding, or information regarding food security.	**Include** when respondents mention a lack of tolerance or acceptance; this can also include indifference. **Exclude** when discussing peers', colleagues', or instructors' perceptions.