

Studying on Empty: A Qualitative Study of Low Food Security Among College Students

Trellis Research Series on Collegiate Financial Security & Academic Performance

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ABOUT TRELLIS COMPANY

Trellis Company (formerly TG) is a nonprofit 501(c)(3) corporation with the dual mission of helping student borrowers successfully repay their education loans and promoting access and success in higher education. For nearly 40 years, Trellis Company has provided individualized services to student loan borrowers and support to institutions and communities. Today we are expanding our commitment and helping improve the financial education and wellness of all we serve.

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Trellis Research provides colleges and policymakers insight into student success through the lens of college affordability. With more than three decades of experience on the forefront of issues such as student debt, student loan counseling, and financial barriers to attainment, our research team continues to explore the role of personal finance and financial aid in higher education. Our latest initiative, the Student Financial Wellness Survey, provides a free service to participating colleges interested in learning how their students think about finances, debt, basic needs, and financial literacy. For more information about how to participate, please go to www.trelliscompany.org/research/trellis-company-student-financial-wellness-survey or contact Kasey Klepfer, Senior Research Analyst, at trellisresearch@trelliscompany.org.

RECENT PUBLICATIONS

- Klepfer, K., Cornett, A., Fletcher, C., & Webster, J. (2019). Student Financial Wellness Survey Report: Fall 2018 Implementation. Trellis Company. Retrieved from: <https://www.trelliscompany.org/student-finance-survey/>
- Klepfer, K., Ashton, B., Bradley, D., Fernandez, C., Wartel, M., & Webster, J. (2018). Student Financial Wellness Survey (SFWS) Spring 2018. Trellis Company. Retrieved from: <https://www.trelliscompany.org/research/>
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- Fernandez, C., Fletcher, C., Klepfer, K., Webster, J. (2016). Effective Counseling, Empowered Borrowers: An Evidence-based Policy Agenda for Informed Student Loan Borrowing and Repayment. Trellis Company. Retrieved from: <https://www.trelliscompany.org/research/>

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EXECUTIVE SUMMARY

Recent research suggests that the combination of high and rising college prices, stagnant family incomes, and increased enrollment of lower-income students leaves many college students struggling to meet their basic needs, including adequate, regular nutrition. This report explores the lived experiences of students with low food security, how students cope with its challenges, and how these strategies influence academic performance. Students in our study demonstrated commitment to their education through pronounced levels of sacrifice. They were more likely to approach their education aspirations once their basic needs were met.

SHIFTING FOOD SECURITY

- Over the course of the nine-month study, it was most common for students to experience degradations and/or improvements in their food security that were significant enough to shift them into either a lower or higher food security status.
- This fluidity provides important context around this topic in higher education, as it shows that collegiate food security is not a static condition. Our observations suggest that drivers, such as access to dependable social networks, changes in employment, alterations in financial resources, and fluctuations in expenses, can either degrade or stabilize food security (see Figure 1).
- Far from being a fixed station, collegiate food security among the study group was attained through beneficial programs, informed and empathetic administrators, and, for some students, personal growth in managing finances and time.

FIGURE 1. COMMON DRIVERS OF SHIFTING COLLEGIATE FOOD SECURITY

DECLINING	DRIVERS	IMPROVING
Erratic work hours; loss of job; receives low pay; long commute; underemployed	EMPLOYMENT	Stable pay; receives a living wage; easy commute; work schedule accommodates school
Loss of financial aid; insufficient aid package; loses academic or merit-based scholarship; classified as dependent student when actually independent	FINANCIAL RESOURCES	Gains access to federal, institutional, or supplemental aid (e.g., Pell grant or SNAP); financial aid disbursement (beginning of semester)
Parent loses job or becomes ill; is a single parent or has dependents; abrupt changes in childcare (i.e., lost access or increased cost); sibling or parent(s) requires financial support; separation/divorce from romantic partner	SOCIAL NETWORKS	Parent(s) send money; student returns home to live with parent(s); moves in with sibling; parent(s) visits and buy groceries; friend(s) give meal "swipes" or pick up the check; romantic partner helps pay for and prepare meals
Car needs repair; unexpected medical bills; price of daycare rises; cost of textbooks; lab fees; roommate moves out or doesn't pay share of rent; rent increases; utility bill spikes	EXPENSES	Finds time to grocery shop and plan affordable meals; family member provides childcare; moves to less expensive apartment; receives transportation voucher from school; has classes with open resource textbooks



ABOUT LOW FOOD SECURITY

- This first report focuses on students who indicated low food security (LFS), an intermediate magnitude of food security between high/marginal (HFS) and very low (VLFS), as classified by survey instruments and scaling methodology used by the United States Department of Agriculture (USDA).
- Low food security is defined as, “reports of reduced quality, variety, or desirability of diet, little or no indication of reduced food intake.” Very low food security consists of “reports of multiple indications of disrupted eating patterns and reduced food intake.”

CONTRAST WITH VERY LOW FOOD SECURITY

- Like students with low food security, students with very low food security regularly discussed issues with money, stress, and lack of time, but these issues occurred more frequently and with greater severity.
- Very low food security also tended to be more persistent and longer lasting than low food security. These students often experienced summer disruptions to their level of food security, suffered more academically, and, out of necessity, engaged in more hands-on financial management or skipped basic purchases.

CONTRAST WITH HIGH/MARGINAL FOOD SECURITY

- **Social and educational benefits of high/marginal food security:** Students enjoying high/marginal food security often reported experiencing college more fully than those struggling to meet their basic needs. Food secure students had time to build stronger social networks with classmates and faculty. They also had the financial resources to save time by living close to or on campus thus minimizing commutes to classes, tutoring labs, school cafeterias, libraries, and faculty offices.
- **Employment:** While students with secure access to food may work, they typically worked fewer hours and in jobs more related to their career interests.
- **Physical and emotional readiness to study:** When students were able to become food secure, they often reported increased sleep, reduced stress, and higher levels of energy.

WHAT CAUSES LOW FOOD SECURITY?

- **Finances and employment:** The necessity of work for most students with low food security contrasts with its inconsistency; while most students with low food security must rely on income from work to meet their basic needs, only some have jobs they can truly rely on. Others adjust their eating practices to adapt to income fluctuations, sometimes dropping into very low food security as a result.



- **Students with dependents:** While students with low food security often rely on social connections, like family and friends, to make ends meet, these obligations can also reduce food security when the balance of support reverses. Students with dependents sacrifice and sometimes neglect their basic needs to stabilize and support life for their children.
- **Eating poorly to study more:** Students with low food security sometimes made time-saving food choices to acquire a margin for rest and relaxation but more often did so to reallocate the time and mental energy to schoolwork. We observed that learning requires focus on things beyond immediate material need which can only happen when students either feel no anxiety regarding their needs or are somehow able to push anxiety away, if only for a time. Some students channeled this anxiety into motivation to budget more carefully.
- **First-time students and incomplete expectations:** Many 18- to 22-year-old students begin higher education with little appreciation for the daily responsibilities of independent living. While many students in our study knew how to prepare meals, some were unprepared for the associated logistics and expense, especially when also assuming responsibility for housing and/or academic costs.

HOW LOW FOOD SECURITY IMPACTS STUDENTS

- **Personal stress:** While many realize that students must balance time and money, preserving mental energy and managing stress are also keys to a healthy equilibrium. Unfortunately, students with low food security endure persistent stress related to work, academic demands, and uncertain control of expenses.
- **Social outlets:** To relieve this stress, students with low food security may opt for dining out with friends and family despite the unmanageable cost.
- **Faculty interactions:** Instructors and other student-facing employees can exacerbate these anxieties and circumstances or help ameliorate them with flexibility and understanding.

HOW STUDENTS COPE WITH LOW FOOD SECURITY

- **Inferior substitutions:** As students seek to satisfy constraints from their financial, time, and mental energy budgets, they often choose food options that are less healthy, filling, fresh, or otherwise appetizing. These choices frequently prevent students from experiencing significant hunger or lack of food but are linked to unbalanced eating.
- **Housing arrangements:** While food insecure students often took on roommates to lower costs, these housing arrangements could also lower food security due to roommates skipping out on lease payments, incompatibilities regarding cleanliness, and landlord issues. Depending on a rental unit's cost, proximity to campus and groceries, physical condition, and inclusion of a functional kitchen, rental living could stabilize or weaken food security. Making on-time rent payments drove dietary patterns over the course of the month.



- **External resources:** The far majority of students with low food security relied on assistance from external resources (i.e. friends, families, and institutions) to help meet their food needs. In their discussion of their behaviors as well as their comments on hypothetical situations, students showed a clear preference among external resources to utilize for food-related needs: social connections before institutions or organizations.
- **Academic shortcuts:** Students adapted their academic practices to changing material circumstances, varying the amount of time they apply to studies given the available time, their energy level, and a declining standard of academic performance. Our study documents the realities of life with marginal finances which reduces scholastic expectations.
- **Money management:** The stress induced by precarious finances led some students to avoid their finances instead of taking more active control, like making a budget. Many avoided student loans as a matter of course despite significant hardship; others reevaluated their aversion to student loans.

ABOUT THE FINANCIAL SECURITY STUDY

- From January 2017 to October 2017, 72 current students in Texas and Florida participated in interviews on their basic needs and academic experiences.
- Of those 72 students, 36 were found to be low and/or very low food secure at least one time during the nine-month study.
- Trellis Research conducted 499 interviews which produced 291 hours of recordings documenting how student circumstances changed over a nine-month period, including the previously under-researched summer period.
- Topics discussed with students included: academic goals; degree plans; personal, financial, and academic challenges; class attendance; grades; the effects of higher education on personal finances; perceptions of student loans/student loan debt; housing; food security; interactions with school agents; and strategies for success.

RECOMMENDATIONS

Our study suggests that food security among college students is typically fluid. For many students, this fluidity is driven by irregular access to financial resources and unpredictable expenses. Based on our observations of the students in this study, colleges and policymakers can take positive steps to sustain food security of students and that such efforts can translate into improved student success. For our complete recommendations, see Promising Practices for Supporting Students with Low Food Security on page 102.



1 INTRODUCTION TO COLLEGIATE FOOD SECURITY

"Food has played a big part of [my] stress. I didn't realize how stressful food could be along with school. I feel like that's a very important factor that people don't understand when they go to college...that you're basically on your own and keeping food is harder than you expect. It's hard to keep it balanced and sufficient.

Yes, you can have food, but is it a real meal?"

18- to 22-year-old, full-time, first-generation public student



1.1 INTRODUCTION

Recent research suggests that the combination of high and rising college prices, stagnant family incomes, and increased enrollment of lower-income students leaves many college students struggling to meet their basic needs, including adequate, regular nutrition. This report explores the lived experiences of students with low food security, how students cope with its challenges, and how these strategies influence academic performance.

This report first summarizes background literature on food insecurity in general and among postsecondary students. In particular, the report introduces the Financial Security Study, a longitudinal interview-based research project that Trellis Company conducted between January and October of 2017. By pairing standard food security survey questions with a broader examination of students' circumstances and challenges, this study was able to analyze student experiences at different levels of food security, the factors that often preceded observed shifts in food security, and potential consequences of food security shifts.

Next, this report identifies who becomes low food secure by examining responses to the USDA food security survey questions and the demographic characteristics of study participants. A conceptual framework is introduced to acquaint readers with the precarious balancing act that low food secure college students endure as they juggle financial, time, and energy "budgets".

In chapter three, the many causes of low food security are explored, while chapter four describes its consequences to students. How students cope with these consequences are covered in chapter five, including how these strategies might differ by students classified as very low food secure.

Studying on Empty follows students for nine months and captures the shifting nature of food security in a college setting. In chapter six, the reader will learn about the experiences of students with declining food security and, in turn, the students with improving food security.

The report concludes with a discussion of the study's implications for college leaders and higher education policymakers in chapter seven.

This qualitative study describes the dynamics that can affect students' level of food security as well as the mechanisms through which food insecurity can harm students' academic performance. Students' everyday experiences provide windows into the circumstances and challenges that mark their struggle with food insecurity and into the measures they take to pursue academic and career goals in the face of significant barriers. Often desperate, their words reveal glimpses into a world that helps explain the persistently wide gaps in postsecondary educational attainment by income level. They can also be understood as a message across a generational divide, a plea for understanding from one generation which lacks access to affordable college to another for whom it was commonplace. Can the latter hear in the voices of these students the faint song of a canary in a mineshaft?



1.2 FOOD INSECURITY AMONG POSTSECONDARY STUDENTS: A LITERATURE REVIEW

An accurate understanding of the insights and themes developed by this study requires a brief introduction to food insecurity, especially as it occurs among postsecondary students. This study, like most others on the topic, defines food insecurity according to guidance from the United States Department of Agriculture (USDA), which describes food insecurity as various degrees of difficulty purchasing food for adequate, balanced meals (Feeding America, 2018). It can be experienced at the individual or household level and is not synonymous with hunger (the physical discomfort of consuming too few calories and/or too little food mass), although hunger can be a sign and symptom of food insecurity.

While much of the food insecurity literature focuses on its impacts on the health and well-being of developing children, there is a growing, albeit limited, understanding of the prevalence and severity of food insecurity among postsecondary students. The Current Population Survey (CPS) shows 11.8 percent of American households are food insecure (Gundersen & Ziliak, 2015). Blagg et al. (2017) estimated that the food insecurity rates among households with students enrolled in four-year colleges and vocational programs tend to roughly mirror the national rate although rates for community college students tend to be relatively higher. Though their most recent data placed food insecurity among households with at least one two-year college student at 13.3 percent (not statistically different from the national rate), the rate was 17 percent for the period 2011-15, including a peak at 23.8 percent in 2012. The data also indicate stark disparities based on student dependency. Food insecurity rates were far higher for the roughly one-third of students classified as heads of their household (or their spouse) than for children of the household head: 21 percent vs. 14 percent for two-year students; and 15 percent vs. 8 percent for four-year students. This suggests a major divide between adult college students who live at home as dependents and those classified as independent adults. When food security is measured using household-level data, as is done with CPS, prevalence rates appear much lower than those recorded in surveys exclusively for students themselves.

In the most comprehensive student-level survey of collegiate basic needs covering nearly 86,000 students from 123 colleges in 24 states, the Hope Center for College, Community, and Justice recorded low or very low food security rates of 41 percent for four-year university students to 48 percent for community college students (Goldrick-Rab et al., 2019). Using an equivalent measure of food security in a survey of more than 17,500 students at 58 colleges in 12 states, Trellis Company found low or very low food security rates of 55 percent for both four-year university students and for community college students – even higher than those reported by the Hope Center. While the Hope Center and Trellis surveys lack the representativeness of the CPS, they do survey students themselves – and many of them. The disparity between household-level and student-level rates of food insecurity may suggest that the student's food experiences may be poorly understood by heads of households responding to the CPS.



When the U.S. Government Accountability Office (U.S. GAO, 2018) examined 31 studies of postsecondary food insecurity, they found an even larger range of food insecurity rates on college campuses – from nine percent to rates greater than 50 percent. These dramatic differences in food security estimates among college students have led some researchers to advocate for a standardized approach to assessing food security for this population (Nikolaus, Ellison, & Nickols-Richardson, 2019), an approach that may come to fruition in the next round of the National Postsecondary Student Aid Survey by the National Center for Education Statistics.

Despite higher rates of food insecurity, college students face barriers to accessing federal food aid through the Supplemental Nutrition Access Program (SNAP) (U.S. GAO, 2018). Research has shown SNAP to be successful at ameliorating food insecurity, though less often eliminating it, even for recipients (Gundersen, Kreider, & Pepper, 2017; Gundersen & Ziliak, 2015). However, postsecondary students enrolled at least half-time have limited eligibility to SNAP (Lower-Basch & Lee, 2014; U.S. GAO, 2018). In fact, the most recent iteration of Trellis' Student Financial Wellness Study found that only 19 percent of surveyed undergraduate students utilized public food assistance programs, like SNAP, in the past 12 months (Klepfer et al., 2019).

Limiting students' access to SNAP benefits is premised on the notion that students receive a variety of resources from their families and schools, resulting in far less deprivation and vulnerability than a meager income might otherwise imply. However, as reflected in the research of Blagg et al. (2017), students are often heads of households, and rely on low incomes to fund both their living and educational expenses. Dubick, Matthews, and Cady (2016) found that 64 percent of students experiencing food insecurity also experienced housing insecurity, contributing to a college student poverty rate nearly five times the national average. Students with low food security often work low-wage jobs. Alexander and Haley-Lock (2015) note that many employers of low wage jobs adjust employee shifts and hours to maximize flexibility to customer demand, calling in workers during peak demand, but keeping many in reserve when business is slow. Goldrick-Rab (2016) describes students "on call" without pay and how this limits their earning power and constrains their available time. These results reflect the numerous costs of college, the decline in the portion of costs covered by financial aid, the difficulty of scheduling work while enrolled, and the low wages that most students earn. Despite greater exposure to poverty, college students have only limited eligibility for key anti-poverty programs.

Among college students, research has identified subgroups who tend to be disproportionately food secure. Accumulated household wealth, access to reliable transportation, the existence of strong social networks, and access to healthy, affordable groceries contribute to food security across income groups and help households weather income shocks (RTI, 2014). The absence of these factors largely explains higher rates of food insecurity among racial/ethnic minority students, even when controlling for income (Nam et al., 2015). The greater frequency with which students from low-income families are employed while enrolled causes food insecurity to be more common among working poor students (Goldrick-Rab et al., 2018; *ibid* 2013).

Prior studies have also shed light on how students experience and deal with food security issues. Shortages of time, money, transportation access, and kitchen access were found to contribute to food insecurity, leading students to substitute inferior foods (Crutchfield & Maguire, 2018; Henry, 2017).



Broton et al. (2018) echoes these studies in finding that a lack of time and money are the roots of most food insecurity issues and that few food insecure students either seek or utilize public benefits, turning instead to friends and family for assistance.

The relatively sparse amount of literature on the impacts of college food insecurity points to a variety of medical, academic, and potentially legal consequences. Goldrick-Rab et al. (2015) found that 24 percent of food insecure students reported postponing medical care, 23 percent reduced their utility use, and 15 percent did not buy class materials. Food insecure students also reported declines in mental health tied to increased stress. Research by Payne-Sturges et al. (2018) found that food insecure students were exceptionally likely to experience hunger (69 percent) and unbalanced eating (80 percent) and engaged in a variety of desperation strategies to get by, including seeking temporary shelter in campus buildings or with friends, donating plasma, and stealing food.

Research strongly suggests that food insecurity is connected to adverse academic consequences. Goldrick-Rab et al. (2018) found that over 50 percent of respondents who failed a class were food insecure. About one-third of food insecure students researched by Dubick, Matthews, and Cady (2016) felt that their education had been adversely affected by their circumstances, including 25 percent who had dropped a class. In the most narrowly focused study, Phillips, McDaniel, and Croft (2018) found that students with food insecurity had a decline in average GPA of .15 points and were about 3.5 times more likely to reduce their course load, devote insufficient time to studying, and consider dropping out.

While quantitative studies report the prevalence and causes of low food security among college students, focused qualitative approaches are needed to describe the range of experiences and the coping strategies adopted by students who struggle with low and very low food insecurity. This study attempts to address this gap by examining the interplay between collegiate food insecurity and its nuanced effects on students' academic, physical, and mental well-being.

1.3 USDA FOOD INSECURITY METHODOLOGY

Most of the food insecurity literature, including this study, either utilizes or adapts food security survey instruments developed by the U.S. Department of Agriculture (USDA). The USDA food security surveys provide field-tested question sets with a standard methodology for categorizing respondents into food security groupings that are comparable across populations.

The USDA's *U.S. Household Food Security Survey Module: Six-Item Short Form* uses a series of six questions about somewhat specific experiences to assign respondents a level of food insecurity. In the original format, subjects are first asked whether the following two statements were often, sometimes, or never true for themselves or their household:

1. The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more.
2. (I/we) couldn't afford to eat balanced meals.



The original survey then asks three yes or no questions, one of which has a follow-up:

3. In the last 12 months, did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?
4. [If yes above] How often did this happen – almost every month, some months but not every month, or in only one or two months?
5. In the last 12 months, did you ever eat less than you felt you should because there wasn't enough money for food?
6. In the last 12 months, were you ever hungry but didn't eat because there wasn't enough money for food?

Depending on the number of affirmative responses (where "often," "sometimes," "every month," and "some months but not every month" code as affirmative), the methodology categorizes respondents' food security according to the following rubric:

- 0-1 affirmatives: high or marginal food security (HFS)
- 2-4 affirmative: low food security (LFS)
- 5-6 affirmatives: very low food security (VLFS)

See below (Figure 2) for student narratives that correspond to each level of collegiate food insecurity.

FIGURE 2. FOOD SECURITY RUBRIC WITH ILLUSTRATIVE QUOTES FROM RELEVANT INTERVIEWS





Surveys using the USDA questions and scale can differentiate magnitudes of food security, but tell us little about what it actually means for a student to exist at a given level of food insecurity, either on its own terms or relative to other levels. When a study reports, for example, that 20 percent of college students have “very low food security” and 30 percent have “low food security,” we know about half of the respondents struggled to some extent to getting food and that the struggles of the 30 percent were probably more significant than the struggles of the 20 percent. But what can we imply about life within those two groups? What issues do students with “low” or “very low” food security face? How do they cope with those issues? How is academic performance affected?

1.4 TRELLIS FINANCIAL SECURITY STUDY METHODOLOGY

In January 2017, Trellis launched the Financial Security Study (FSS) to shed light on a broad set of research questions:

1. How do students understand the obligations and responsibilities that require their time and/or money?
2. What tactics and strategies do students employ to meet their basic needs and pursue academic goals?
3. How do students understand the short and long-term relationships and trade-offs that govern their use of time and money?
4. How do students respond to unexpected issues that require additional time or money?
5. How do students perceive and utilize assistance resource in their community and campus?
6. What are the events and conditions in students’ lives that influence their academic and financial behaviors?

Working with 11 institutions across three sectors in Texas and Florida, researchers recruited subjects through relationships with college and university staff, who disseminated recruitment materials through mass emails and posting notices on physical and digital campus news bulletins. Interested students followed a link to a website where they downloaded a consent form. After submitting the form, they received a link to an online intake survey, which collected basic demographic and academic information as well as interview scheduling preferences. Open recruitment during January 2017 yielded a research cohort of 72 undergraduate students.

Admittedly, this cohort was a convenience sample whose characteristics did not align with national proportions, although key populations of interest were well represented, and alignment was closer to the regional undergraduate population. For example, about two-thirds of respondents were pursuing associate degrees at community colleges.¹ There is an unavoidable possibility that students who volunteered for

¹A more detailed breakdown of the composition can be found in Appendix.



the study, as well as the 90 percent who persisted through its duration, differed from the general student population in ways not readily apparent in the data (e.g. levels of campus engagement). The timing of the study – late January to October 2017 – also has implications for the sample, which was composed entirely of students who had already completed at least one semester of postsecondary education. As such, the study misses the experiences of the often-significant number of students who drop out within their first semester; however, it was also able to examine students' lives over the summer and in the transition to the next semester, both of which produced valuable observations regarding relatively unobserved periods in the academic year.

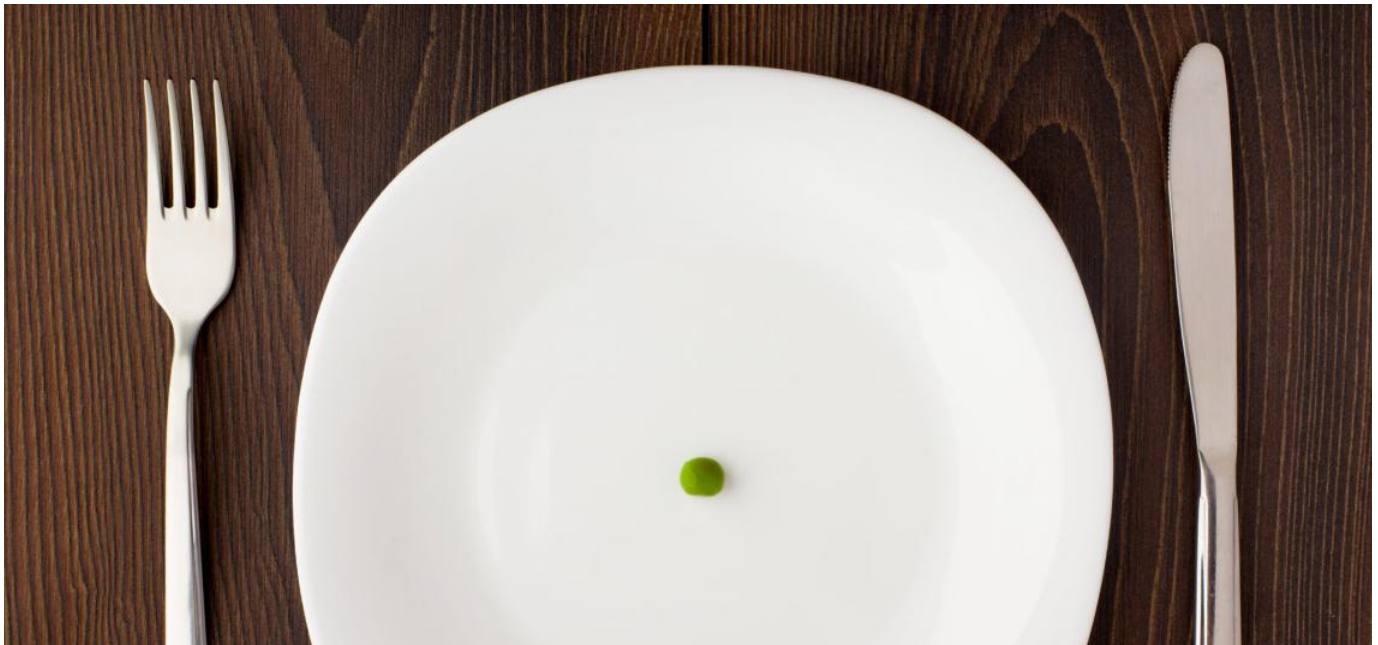
From late January to October of 2017, as many of these students as possible were interviewed every 30 days or so to discuss their recent experiences with academics, finances, work, meeting basic needs, and anything else identified as significant in their lives. Interviewers followed a semi-structured protocol designed to last no more than one hour that ensured all relevant questions were asked each month of all participants, while providing flexibility for follow-up questions. Given that some subjects were unable to conduct an interview every month, and a few dropped out of the study entirely, the study tallied 499 interviews with an average duration of about 35 minutes.

The interviews were conducted over the telephone, recorded, transcribed, and uploaded to a mixed methods research platform for storage, coding, and analysis. A team of coders implemented the code scheme, which consisted of both predetermined, "a priori" codes and codes developed out of a review/memo process informed by grounded theory.²

These interviews contain a great deal of information about the lived experiences of students at different levels of food security.³ Among the questions in the semi-structured protocol were the six core questions from the USDA food security short form instrument, adapted for the 30-day timeframe and modified so that all questions were declarative statements that could be answered on a five-point frequency scale. Responses to these questions describe the different categories of food security related to students' circumstances and challenges, and how students respond in turn.

² Additional information on coding and analysis can be found in Appendix.

³ This report focuses on the subject of food insecurity among undergraduate students. Trellis is currently analyzing the interviews further and will publish findings on other aspects of students' experiences and perspectives on finances, basic needs, and academics in future reports.



2 WHO BECOMES LOW FOOD SECURE?

*"I'm doing as much as I can. I have friends who take me to the grocery store and my parents are giving me a little bit of money. I'll buy cup noodles and drinks and snacks. I haven't really been – eating meals per se – sandwich items, cereal, stuff like that...I tried to apply for EBT and SNAP, but they said [that] **because I was a student, I [didn't] qualify.**"*

18- to 22-year-old, full-time, first-generation public student



This chapter describes students with low food security. It begins with the USDA food security scale that sorts students into food security classifications, including the frequencies of responses among students in this study. Common risk factors for low food security found in numerous studies reviewed by the U.S. Government Accountability Office (U.S. GAO, 2018) are listed, as well as available demographic characteristics of subjects in this study. The chapter ends with a conceptual framework describing how students with low food security balance their finances, time, and energy.

2.1 USDA SURVEY RESPONSES

At the most basic level, low food security is caused by engaging in enough of the behaviors that constitute food insecurity according to USDA definitions. These responses are not a focal point of the analysis but do provide some context for better understanding the situations of the students under scrutiny as well as a point of reference for comparison to other research.

TABLE 1. Prevalence of Food Insecure Behaviors (“Sometimes” or more frequent) among Subjects with Behaviors Associated with Low Food Security (n=52)⁴

Behavior (each corresponds to a USDA survey question)	Percent
Cut meal size or skipped meals because not enough money for food	56%
Ate less than felt they should because not enough money for food	52%
Couldn’t afford balanced meals	46%
Food didn’t last, no money to get more	37%
Hungry but didn’t eat because not enough money for food	27%

Meeting the technical definition of LFS was driven most often by affirmative responses to:

- Cutting the size of or skipping meals (a contributing factor in 29 of 52 cases)
- Eating less than the student felt they should (27 of 52)
- Eating unbalanced meals (24 of 52)

The least common qualifying affirmatives were⁵:

- Not eating despite hunger (14 of 52)
- Not having money to buy more food (19 of 52)

⁴Given the small sample size and qualitative nature of the study, these data should not be interpreted as representative of all students with low food security and are provided only to illustrate the response pattern within the sample.

⁵‘Not eating despite hunger’ and ‘Not having money to buy more food’ are most commonly associated with VLFS.



The high rate of shrinking or skipping meals is an especially important contributor to the rate of low food security, as the USDA methodology effectively double-weights it by including a follow-up question on the frequency with which it occurred over the time period being studied. Responses to the survey questions suggest that the experience of low food security generally involves changes in the types and amounts of food purchased and consumed but less often entails the inability to buy any food or unrelieved hunger.

Low food security represents the group between high/marginal food security and very low food security, which can make it the most ambiguous. Because students' level of food security is rarely static, low food security is often a state that students pass through as their circumstances change. This section seeks to address this ambiguity and fluidity by providing an empirical outline of life as a college student with low food security. Who becomes low food secure?

Recent research (U.S. GAO, 2018) has identified certain demographic traits and characteristics that correlate with a higher risk of experiencing food insecurity. Many of the students with low/very low food security in this study experienced at least one of the following risk factors:

- Having a low income
- Receiving SNAP benefits
- Having a disability
- Being a first-generation college student
- Being a single parent
- Being homeless or housing insecure
- Being a former foster youth

The next section presents available demographic data on the 36 students in this study who consistently or intermittently experienced low food security and very low food security.



2.2 DESCRIPTIVE STATISTICS OF SAMPLE

Using the modified USDA scale introduced in chapter one, we found that 36 of our 72 participants entered a state of low/very low food security at least one time during the duration of the study. More than half of these 36 students indicated they were low food secure (2-4 affirmatives), with another 19 percent reporting a state of very low food security (5-6 affirmatives). Twenty-eight percent of our participants lived in a more dynamic, shifting state of food security, and experienced low and very low food security in separate interviews. Relevant demographic information for all 36 students are provided below, along with national statistics for additional context.⁶

TABLE 2. Age in Years of Food Insecure Subjects

Age Category	%
18-22	53%
23-27	22%
28-32	3%
33 or older	22%

n=36

More than half of the low/very low food secure students in our study were 18-22 years of age during January 2017. Many of the students in this age group are first-time college students who entered precarious food states after enrolling in college and encountering the true costs of higher education (see chapter 3.4). An additional 22 percent of our sample were 23-27; three percent were 28-32; and 22 percent were 33 years or older. The most recent data from the National Center for Education Statistics (NCES) estimates the average age of an undergraduate student at 26 years, meaning our sample is slightly younger than the population. Although the majority of our food insecure participants were 18-22, 22 percent were aged 33 or older. Oftentimes, these older, nontraditional students were single parents; a situation which presents its own unique set of challenges where student-parents must juggle an inconsistent or suboptimal food supply with their academic course load – all while providing care for one or more dependents.

TABLE 3. Gender of Food Insecure Subjects

Age Category	%
Male	28%
Female	69%
Other	3%

n=36

Sixty-nine percent of the food insecure participants were female, 28 percent were male, and three percent identified as other. In terms of the national student population, 43 percent of college students from 2015-2016 were male, and 57 percent were female (NCES, 2018). This indicates an overrepresentation of females in our sample, a common occurrence in social science research.

According to Dubick et al. (2016), food insecurity is more prevalent among students of color than non-Hispanic white students. Twenty-eight percent of the students in our food insecure sample identified as Black/African-American, 33 percent Hispanic/Latino; another 33 percent as white; and three percent as Asian or Pacific-Islander. This varies from the national population of all postsecondary students

⁶ It is important to note that this cohort was a convenience sample whose characteristics do not necessarily align with national proportions, though key populations (i.e. community college students) are well represented.



TABLE 4. Race/Ethnicity of Food Insecure Subjects (n=36)

Race/Ethnicity	%
Black/African-American	28%
Hispanic/Latino	33%
White	33%
Asian/Pacific-Islander	3%
Other	3%

n=36

TABLE 5. Current Class Standing of Food Insecure Subjects (January 2017) (n=36)

Current Class Standing	%
Freshman	31%
Sophomore	39%
Junior	8%
Senior	8%
Unsure	14%

n=36

TABLE 6. Generational Status of Food Insecure Subjects (n=36)

Generational Status	%
First generation	72%
Continuing generation	22%
Unknown	6%

n=36

(regardless of food security status), where 15 percent are Black or African-American; 20 percent are Hispanic or Latino; and eight percent are Asian or Pacific-Islander (NCES, 2018). When compared to the national population, our sample over-represents students who are Black/African-American and Hispanic/Latino, while under-representing the other three groups.

Thirty-one percent of the food insecure students in our study were freshman; 39 percent were sophomores; and eight percent were juniors and seniors, respectively. An additional 14 percent were unsure of their class standing. This differs from recent NCES (2018) data, which found 38 percent of college students in the U.S. were freshman; 29 percent were sophomores; 13 percent are juniors; and 17 percent are seniors. Only one percent of the national population was unsure of their class standing.

Nearly three-quarters (72 percent) of this sample were first-generation college students. Recent reports indicate that first-generation students are more likely to be food insecure compared to students who had at least one parent graduate from college (U.S. GAO, 2018; Dubick et al., 2016).

By highlighting the demographic information of our participants and providing relevant national-level data, we intend to demonstrate the extent to which the sample mirrors the population for each category. This diverse subset of students may not perfectly align with the national population, but their rich, nuanced experiences with collegiate food insecurity are as invaluable as they are enlightening.



2.3 CONCEPTUAL FRAMEWORK: FINANCIAL, TIME, AND ENERGY BUDGETS

Feeding oneself involves not just the money to buy food, but also the time and energy to plan, shop, prepare, cook, and clean up after meals (see Figure 3). The importance of all three types of costs in determining students' food security was evident throughout the interviews.

While the USDA survey questions frame food insecure behaviors around the availability of money for food, many subjects with low food security commented on the extent to which lack of time for food preparation affected their eating patterns. On reflection, these responses do not deviate from the letter or spirit of the questions; though analytically distinct, time constraints often work in tandem with financial limits to shape students' range of food options. Some subjects made this connection explicit, like this traditional college-aged student living alone:



During finals, I don't know what food I had in my fridge or if I had food in my fridge. And then just like random... I hate it 'cause I really don't like fast food, but I had Wendy's and Burger King coupons and so I would use those. I was like, I'm saving money, and I can get a lot of these. This is terrible for me, but it's cheap, and it's ready now and so I was using those during finals week.⁷

— 18- to 22-year-old with part-time employment and off-campus housing

For the student above, a lack of money combined with lack of time resulted in overuse of fast food during a pivotal week. Others may refrain from eating entirely for long periods. The same student who used fast food expenses during finals reported that typically:



I don't eat until the end of the day because I have to go to school, and I have to go to work, and I just don't have time, and I don't have money. Eating out is so expensive, that's not worth it.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, solo housing

The combined lack of time and money can also affect the quality of the food that students keep in their homes, compelling them to choose foods that are inexpensive and require minimal time for meal planning, shopping, or preparation.



"I hate it 'cause I really don't like fast food, but I had Wendy's and Burger King coupons and so I would use those. I was like, I'm saving money, and I can get a lot of these. This is terrible for me, but it's cheap, and it's ready now and so I was using those during finals week."

⁷Throughout the report, direct quotations that occupy two or more lines appear in their own paragraphs indented a further half inch. The interviewer's words are labeled. When multiple quotations are provided at once, they are divided. Quotations have been lightly edited for clarity, readability, brevity, and to redact details that could be used to identify an individual or school. Selected data on the speaker is provided for context.



FIGURE 3. BALANCING MONEY, TIME, AND ENERGY AT VARIOUS LEVELS OF FOOD SECURITY

LEVEL OF FOOD SECURITY	SCENARIO 1		SCENARIO 2	
	DIMENSION		DIMENSION	
HIGH/ MARGINAL	 	Affluent, eats out as desired, dependable car, lives in on-campus apartment	 	Middle income, borrowing heavily - including private loans, modest apartment near campus with no roommates
	 	Full-time student, works 10-15 hrs per week at on-campus, work study job, studies an above average amt. of hours per week, plays intramural basketball	 	Full-time student, doesn't work, short commute to school, enjoys both studying and pleasure reading
	 	Gets adequate sleep, enjoys time with friends in sports and study groups, eats out with friends, exercises	 	Gets adequate sleep, moderate exercise, eats regularly
LOW	 	Moderate income family with some financial support from parents, 7-year-old car, lives in shared apartment	 	Moderate income family that occasionally provides support, borrowing for school, lives with romantic partner
	 	Part-time student, works 20-30 hours per week off-campus, has friends at work and at school	 	Full-time student, works part-time, does the cooking at home, rides bike to school and work
	 	Hours of sleep fluctuates with erratic hours at work and exam schedule, drives to school/work, eats poorly during busy weeks at work	 	Gets exercise from riding bike, struggles to fix meals as a full-time student with a job, often resorts to microwave meals/fast food, positive social outlet with romantic partner and other friends
VERY LOW	 	Low income family that provides no financial support, occasionally requests help from siblings, financial aid is insufficient	 	Low income family that provides no financial support, has two children, financial aid and income doesn't last through the end of the month
	 	Part-time student, works part-time, lives in rural area 30 miles away from school	 	Full-time student; works full-time; alternates bringing baby to mother, grandmother, and ex-husband; lives in suburb and takes public transportation; studies during lulls in work
	 	Gets poor sleep and sometimes falls asleep in class, skips meals to save money for rent and car payment	 	Gets by on 4 hours of erratic sleep a day, often falls asleep during class, grabs food from vending machines, doing poorly in school but lacks time to talk to faculty or advisor

Money Time Energy



This single parent and student occasionally could not afford to eat balanced meals:



I haven't been doing super consistent grocery shopping, partly financial, partly time management and so the stuff in the house was probably not the most nutritious. It was like a pop tart for breakfast and like a hot dog for lunch so not the best on some of the days but most of the days were fine.

— 23- to 27-year-old, full-time public student with part-time employment

These quotes suggest that students engage in the eating patterns that most often constitute low food security based on the intersection of available funds and available time. Based on costs, tastes, health, and perhaps other concerns not mentioned above, students often prefer well-balanced meals at home. Despite having the money and skills to prepare nutritious meals, a critical lack of time and energy narrow their food options. In such cases, students may spend more money to achieve a lower level of food security than they could if they had the time and energy to plan, shop, and cook at home.

One student living alone off campus reported how meal preparation disrupted study and led to unmanageable food expenses:



It's been rough being consistent with studying because there's always something that knocks you off your schedule... Like having to cook and make sure I eat because sometimes I'm so focused on what I have to do rather than eating or making sure I have food at home. I've been putting off grocery shopping for so long, and I was just eating out, eating out and spending a heap of money which I didn't really have.

— 23- to 27-year-old, full-time public student with off-campus, solo housing

The combination of responsibilities and deadlines, in this case from work and school, can cause drastic increases in students' burdens and stress levels, resulting in a similarly rapid deterioration of their food security.

When asked if there was anything that the student could have used more help with, this traditional age student living with roommates shared:



Yeah. Money management. Yeah, money and time management I guess. Always need more of that.

Interviewer: But how would you have wanted that help to formulate itself?

I always had all my assignments due when I had to work. It was inevitable and then no one could pick up my shift. I would have to get food. I would pick up food a lot as opposed to making it just because it was quicker. And that cost me more money which made things tighter overall. And stressful.



When asked if any of these decisions influenced this student's health, the subject didn't hesitate:



Oh yeah. I was pretty freaking healthy for a month-ish or so. Usually I go into binge... I'll eat takeout or something for like a week or two and then I just feel like trash and I'm like I can't do this anymore. I have to eat something that will make me feel good. And then I'll get back into cooking. But yeah, I definitely had more of those binges where I was constantly getting food for a week as opposed to making it.

This mentally worn-out, perpetually busy student longed for a little more time to make affordable, healthy meals:



Taking the time to just meal prep because it's not that hard to do. It's just thinking about it on top of other things that I had to do. I was just like, 'Oh god no I can't.'

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, shared housing - roommates

Time and energy constraints regularly prevent students from grocery shopping and home meal preparation, which tends to be the more cost effective and nutritionally superior option. Within these limitations, the primary means of acquiring higher quality, nutritionally balanced food is restaurants. This strategy may provide food that satisfies time, energy, nutritional, and quality concerns, but is often financially unsustainable as a regular practice. Students who relied on restaurants often engaged in behaviors that resulted in low food security, like eating irregularly or buying inexpensive but unhealthy snack foods to save money for restaurant meals.

2.4 LONGITUDINAL PROCESS: CAUSE, IMPACT, COPING STRATEGIES, AND OUTCOMES

Our study track students over time. This allows us to: 1) identify the major causes of low food security; 2) assess how low food security impacts the lives of students; 3) document the coping strategies employed by students to restore food security; and 4) describe the outcomes of these strategies. The next four sections explore the steps of this process.



Figure 4 helps illustrate this process with examples within each step, accompanied by characteristic quotations from one of our participants, "Maria".

Subjects in our study talked about balancing limited – and often shifting amounts of – money with difficult to predict work and study schedules, energy levels sometimes depleted by stress, sleep deprivation, and poor nutrition. The next chapter shows some of the drivers of low food security among the students in our study.

FIGURE 4. COMMON CAUSES, IMPACTS, COPING STRATEGIES, AND OUTCOMES ASSOCIATED WITH LOW/VERY LOW FOOD SECURITY

CAUSE
<ul style="list-style-type: none"> • Loss of financial aid, such as scholarships, grants, or access to loans • Separation or divorce from romantic partner • Loss of job and/or inconsistent income • Financial emergency or unexpected expense <p><i>Maria*, a single mother and non-traditional student living with her parents and son in Texas, faced a difficult situation when her child was attacked by a neighbor's dog and sustained head injuries. To make matters worse, her parents were out of the country at the time, leaving Maria as the sole caregiver and provider for her son.</i></p>
IMPACT
<ul style="list-style-type: none"> • Degraded food security • Increased stress and feelings of guilt or shame • Decreased academic performance • Disruption of social life <p><i>Maria's food security severely degraded (from High/Marginal to Very Low), her savings account (\$500) was drained, and she missed two weeks of work.</i></p>
COPING
<ul style="list-style-type: none"> • Applying for SNAP or other public assistance benefits • Reaching out to family members or friends for support • Inferior food substitutions • Utilizing on-campus resources, such as food pantries or emergency grants <p><i>Maria leaned on her social network for support, including friends and neighbors who would bring her supplies like gauze and diapers. She also borrowed money from her parents and utilized Medicaid benefits for her son's medical treatment(s).</i></p>
OUTCOME
<ul style="list-style-type: none"> • Increased food security • Decreased stress • Increased academic performance • Improved self-esteem <p><i>As of the interview, Maria had "two dollars in her pocket." Her food security returned to High/Marginal, but the effects of her son's injuries (medical bills, emotional trauma) lingered throughout the remainder of her interviews.</i></p>



3 WHAT CAUSES LOW FOOD SECURITY?

*"I was working on \$7 in my bank account for a good five days... I was worried some hidden thing would suddenly come out of my bank account and it would bounce. I was not a happy camper. But I knew I could last the week with that. Just with what we had. I lived off my tip money for meals at work. **And if I didn't get enough [tips] that day, I just didn't have anything [to eat]."***

18- to 22-year-old, full-time, public student



This section outlines a variety of dynamics, behaviors, and other factors that may contribute to low food security among postsecondary students. It focuses on common themes across the 52 interviews in which the subject's coded, categorized responses indicated low food security according to USDA methodology (as adapted). Significant deviations from these themes are also noted.

3.1 FINANCES AND EMPLOYMENT AMONG STUDENTS WITH LOW FOOD SECURITY

Students' financial situations are often closely connected to their challenges and behaviors with food, though not always explicitly. The finances of students with low food security could generally be described as stable but somewhat precarious. Most were somewhat concerned about having enough money for food, housing, education, and other necessary expenses in the near term, but they also generally had reliable backup plans (often involving parental assistance) in case they were unable to cover essentials. The relatively narrow margins of their budgets significantly constrained their day-to-day consumer options.

Some students with low food security described situations in which lack of money and time (often connected to working long hours as a result of the lack of money) prevented them from using otherwise optimal solutions. The same low income causing a student to experience low food security also prevented him from qualifying for an auto loan. He then selected the least expensive apartment he could find and decided not to pay for home internet. He later regretted both decisions, concluding that the extra costs in time and money for having a longer commute to campus and having to go to the library or patronize a café for internet access exceeded the value of the money saved. By causing disruption and inconvenience and leaving students perpetually on narrow financial margins, these short-term choices – some necessary, some avoidable – create conditions of financial precariousness.

In keeping with this vulnerability, students with low food security sometimes experience budget gaps, for which they often turn to family. As in the examples below, students generally requested assistance from parents only after or in conjunction with other strategies, which almost always involved the changes to eating behaviors that resulted in the low food security designation.

This full-time student with multiple part-time jobs sought "food money" from both parents and friends, while also relying on trail mix and pasta:



So, I would have to ask my parents, 'Hey, can I have a little bit of money to buy some food? Because I don't have any in my bank account...' I would try to figure out ways to make it work. So, I would try to ask my friends, 'Hey, can you use some of your meal plan and buy me food?' I pretty much try to like not spend a ton of money on food, so I like to eat sandwiches a lot, and then just kind of like... I like trail mix. So, I have a big bag of trail mix and I have my sandwiches, and then I try to buy dinners that cost more like a dollar. So, like Spaghetti-Os or something, or ramen, or just pasta.

— 18- to 22-year old, full-time private student, with multiple part-time jobs and off-campus, shared housing - roommates



A part-time student experienced food insecurity when seasonal expenses, like higher utility bills, became challenging:



I did run short and I'm not really... I'm not even really sure why I was so short this month. I don't know if it's my bills were a little higher, it's the summer. I don't know. I wasn't that sure, but my brother was able to come and rescue his big sister, so all is well.

The part-time student below describes juggling bills and negotiating with her landlord:



I was kinda late paying my rent which has kinda put me over a little bit, but she was able to work with me because it was so much work they had to do to the townhome that they didn't get to. So, they kinda worked with me as far as some of those late charges and stuff like that, but I guess my light bill was a little higher. I guess starting school back again and it's kinda far away from me, and not really having the extra income to suffice with the gas and stuff like that, getting to school. After I paid everything there was no groceries. It was a little bleak. So, I was able to reach out to some family.

— 33+ year-old, part-time public student and single parent with part-time employment, and off-campus, shared housing – family

Low food secure students sometimes had to prioritize among bills and necessary expenses, engaging in the stressful work of trying to puzzle out when and how much to pay to avoid catastrophic consequences. Many students live paycheck to paycheck, and slight delays or misunderstandings in the timing of their income can result in missed payments, often accompanied by late fees that can perpetuate a cycle of financial vulnerability, keeping them in a food insecure status.

The monthly financial puzzle can become even more challenging with the addition of medical expenses. Healthcare costs and insurance coverage can be both financial threats and time distractions for traditional college students, like this full-time student, who we will call “Veronica”:



Oh, I totally did not pay my health insurance before. I was just hoping that I have it. I do. I still have it. But, I had to double up on that and I actually need to pay.

Interviewer: How'd you deal with that?

Well, I'm gonna have to... I actually have to pay, like, which I mean I don't have to pay a ton out of pocket, but sometimes paying anything is too much when you don't have any money... Well, today, I'm gonna have to log online and catch up with my dental plan. I should be up to date with my regular insurance, but I have to check that too, so I don't... I'm kind of, because I'm not used to being an adult, I'm kind of afraid that I'll miss a payment and I'm gonna be arrested or something, which is irrational, but I feel like that's how it'll work. Or, when you see the bankers come and red-tag your stuff on TV to sell it all, they sell your assets. I don't know. I'm gonna miss two health insurance payments and I'm just gonna come home and everything's red-tagged.

— Veronica, a 18- to 22-year-old, full-time public student with part-time employment and off-campus, solo housing



Students with low food security who encountered unanticipated academic expenses often reached out to parents for help with those costs. Textbook costs were often higher than anticipated, but out-of-pocket costs for other course supplies also caught students off guard. These included:

- Tools and safety equipment for trades courses
- Medical scrubs
- A drug test and background check fee for a nursing practicum
- Computer hardware and software

Many had received enough financial aid for tuition, books, and standard fees but relied on wages (with periodic parental supplements) for living expenses, and this income could not absorb significant added costs. In a similar vein, Veronica attempted to make do with outdated, unreliable technology because she could not afford to replace it.



I can't buy a new laptop right now. It's not gonna happen. I'm now borrowing a laptop. It runs on Windows XP. My great-grandparents, they're like, 'I have a laptop.' It works. It works for the moment and that's what matters. — Veronica

Even an expense that a student knows is coming, like the software costs discussed below, can cause issues when it is relatively unusual, not budgeted, and painful to simply absorb. When asked about unexpected situations occurring in the past month, Veronica admitted to poor planning as one cause of her low food security.



Not unexpected, but I just did not plan well enough for it. So, because I'm taking... Are you familiar with MyMathLab? It's like \$100 and basically if you take any math class you have to get it because that's how they grade a lot of your work and I had to... Since spring break is over and I started my new eight-week, my pre-calculus class, I had to buy MyMathLab again. I was just not ready for \$100 to be whisked away from my account. It was expected, I just didn't plan for it. That's probably the biggest thing. — Veronica

Some food insecure students discussed how inconsistencies in their work hours and incomes sometimes contributed to disrupted eating patterns and made budgeting seem futile. Though often assured that their work hours would never conflict with their courses, students' shift assignments could vary widely from week to week. Veronica spoke of the uncertain cash flow in her job.



That's the only thing that sucks about retail jobs. You just don't have a consistent schedule. So how much money you spend in the week could really make or break whether or not you have enough money for the rest of it because if you didn't work the hours you worked last week, then you could be \$30, \$40 shorter than you were the week before.— Veronica



“That’s the only thing that sucks about retail jobs. You just don’t have a consistent schedule. So how much money you spend in the week could really make or break whether or not you have enough money for the rest of it because if you didn’t work the hours you worked last week, then you could be \$30, \$40 shorter than you were the week before.”

The necessity of work for most students with low food security contrasts with its inconsistency; while most students with low food security must rely on income from work to meet their basic needs, only some have jobs they can consistently rely on. Others adjust their eating practices to adapt to income fluctuations, sometimes dropping into very low food security as a result. While students have other means of coping, they generally turn to food choices as the primary means of managing changing circumstances, especially where finances are concerned.

3.2 FOOD AS AD HOC BUDGET BALANCER

While energy and especially time can significantly influence students’ eating options, financial resources still tend to be the most salient factor leading to low food security. Students who experience low food security often make food choices in response to the current state of their finances on a near-daily basis, treating their food expenditures as a short-term, variable cost that can be adjusted to match changing circumstances. When money is plentiful, whether due to a paycheck, financial aid disbursement, family assistance, or some other source, food becomes healthier and more consistent, often even elevating the student to high food security. When money is scarce or will be soon (as when rent is coming due), food spending constricts accordingly, and chaotic, unbalanced eating results. In response to the USDA food security survey question pertaining to food not lasting and not having money to get more, one student with seasonal employment described the ebb and flow of cash:



That close to the end of the cycle, things start running out and I have to wait ‘til the next check to buy more things and be more gluttonous.

– 18- to 22-year-old, full-time public student with seasonal employment and off-campus, shared housing - family

As this quote suggests, students with low food security sometimes struggle to create and/or stick to a budget. While they are acutely aware of upcoming major expenses, especially recurring, roughly fixed costs – e.g. rent and utilities, car and credit card payments, the next tank of gas, etc. – many struggled to translate expenses into the concrete amounts that they can afford to spend in a given day or week. Inconsistent expenses and/or incomes severely complicate formal budgeting. Consequently, low food security persists.



For students who have not made detailed budgets or devoted time to meal planning, the instinct to default to inexpensive, low-quality foods can be predictable, but less than optimal for nutrition. The student quoted below knew the total amount of money she could allocate to food but did not do the planning to make sure her food budget could last all month given the healthy decisions she decided to make. The result was that her diet degraded severely toward the end of the month. This student who lives alone described her grocery shopping.



I think this time I was basically just picking up... I didn't really have a list with me. I didn't really make recipe plans and stuff like that, what I was gonna cook throughout the month, so that's what pretty much what messed me up. Also, I was trying to eat more healthy. So, I was eating a lot of healthy stuff, and healthy stuff seems to be a lot more expensive.

— 23- to 27-year-old, unemployed, full-time public student with off-campus, solo housing

Some students so thoroughly ignore any consideration of their diets or food budgets that food becomes an afterthought. For students who know that money is limited but have not made detailed budgets, limiting food expenses as much as possible, even to the point of normalizing hunger, seems like the best available option.



Interviewer: I notice that compared to last time, there have been a lot more food issues?

Mm-hmm.

So, how have you dealt with that?

I guess, I really haven't been dealing with it, really. I just go about my day.

— 23- to 27-year-old, full-time public student with off-campus, solo housing

Another full-time student only ate regularly when she was feeding both herself and her daughter:



Monday through Friday, my daughter is at daycare from like 7:00 in the morning until 6:00 at night, most of the time. And so, I make her breakfast and then I send her to school and they feed her all day, and then we eat something at home before I put her to bed. And so, it's like all that time in the middle there, who knows where I am or what I'm doing. And so, during those times, it's like, I don't know, it's partially... It's like I'm planning on not losing money by not buying food. Does that make sense?

Interviewer: Mm-hmm.

I'm like, I know I might lose money by buying too much food, so I just don't buy any. It's very much afterthought eating, and I can enthusiastically eat as long as I don't have to cook it, but I can't afford to eat out all the time, and so I'm just not eating. So, it's partially money, and it's partially not changing my eating habits to match my money.

— 23- to 27-year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family



In the quote above, the student contrasts how she feeds her daughter with how she feeds herself. When her own hunger is the only thing at stake, the fear that she “might lose money by buying too much food” becomes her overriding concern. Yet, she also recognizes that this is partially a matter of eating habits that are not well-suited to her financial circumstances as a single mother who works part time and has a full course load. Whether because she lacks the time, the ability, or the willingness to create and maintain a more efficient method of eating, this student maintains solvency through hunger. Many students with low food security had difficulty predicting and/or adjusting to the realities of life as a self-supporting college student with dependents.

3.3 LOW FOOD SECURITY WITH DEPENDENTS

While low food secure students often rely on social connections, like family and friends, to make ends meet, social obligations can also reduce food security. Students with dependents sacrifice and sometimes even neglect their own basic needs to stabilize and support life for their children.

Students’ efforts and sacrifices on behalf of their dependents contributed to their low food security. This occurred primarily through straightforward additional burdens on money and time but has more idiosyncratic qualities as well. For instance, student-parents may avoid eating during the day to save time and money for the meals they serve to and eat with their children. The loss of subsidized school cafeteria meals for dependents during the summer can also contribute to the budgetary strain that some student-parents experience during the summer months. Children may also have tastes and preferences that do not align well with available resources, especially when students make an effort to prepare economical meals at home, potentially putting pressure on students to opt for less efficient and/or nutritious options. A single parent with a part-time job describes economizing meals for her daughter (and herself):



It’s been difficult for me to meal plan in a way that is actually effective without my food going bad. I don’t want to waste food. And so I’ve been trying to buy less broadly, instead of less food. I’m trying to focus on meals, with a little bit of produce, and then eating what’s in my pantry. Because I have a lot of food just in my cabinet, it’s just that it doesn’t necessarily make meals. And so, I’ve been kind of doing, ‘Okay, we’re eating rice, and then also... I sautéed some bell peppers.’ My daughter is not happy about it. She thinks that’s super lame. But she’s just gonna have to deal.

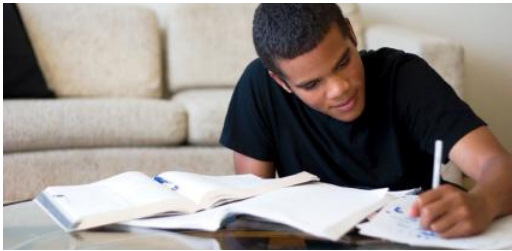
— 23- to 27-year-old, full-time public student and single mother with part-time employment and off-campus, shared housing - family

Although this study cannot quantify the prevalence of food insecurity among students with dependents relative to those without, the data echo findings of previous research (e.g. Blagg et al., 2017) showing that students who are also heads of household, as opposed to dependents of others, are at greater risk of low food security. The observed experiences of our subjects suggest the additional expense of dependent children is not the sole contributing factor to low food security among student-parents; rather, they often make food choices that sacrifice personal food security so their children may eat regular, nutritious meals.



3.4 FIRST-TIME STUDENTS AND INCOMPLETE EXPECTATIONS

Though far more of today's college students possess adult experience and life skills than has been the norm, 18- and 19-year-olds directly out of high school are still a fixture on most campuses. Comments made by low food secure participants in this age group suggest that many students begin higher education with little appreciation for the daily burdens of independent living. Most of our Texas participants attended community colleges, which is typical; roughly 80 percent of all freshman in Texas attend two-year public colleges (Fletcher & Klepfer, 2019). These schools seldom have the residential and dining services common at four-year colleges. While many students knew how to prepare meals, they didn't feel ready for the associated logistics and expense.



Most of our Texas participants attended community colleges, which is typical; roughly 80 percent of all freshman in Texas attend two-year public colleges (Fletcher & Klepfer, 2019).

This first-time student who lived off campus with roommates expressed some alarm at the new expenses associated with college:



Interviewer: Since you started college, has anything been a whole lot more expensive than you were expecting it to be?

Yeah, rent. I was living at home back then and now I'm on my own, so rent was something I never really had to pay for, so that's definitely taken a toll on my expenses. And paying for my own groceries and stuff like that.

— 18- to 22-year-old, full-time public student

Even after attempting to prepare for the challenges of paying for college, unexpected living expenses and academic costs can catch traditional students off guard.



Interviewer: Why do you think you had those initial expectations [college being less expensive]?

Just after doing some research and stuff I figured, it shouldn't cost me this much and if I know exactly how much I'm getting from the government grant, how much would be left over. I didn't calculate extra expenses that I didn't think about.



When you say those extra expenses, what are you referring to?

Like food on the daily. Books. I didn't think about the books. I didn't think about transportation. Stuff like that.

— 18- to 22-year-old, full-time, first-generation public student

For another first-time student, low food security appeared to have more to do with time than money, although both were implicated since part of her lack of time was the necessity of a job. When asked about initial expectations for daily life in college, this student underestimated the time commitments required by college life.



I thought that I would go to class, and I would be making all of my own food, and I would go home and play with my dog. That I would probably volunteer some, and maybe have a job.

What's the reality of your experience like?

I do not usually cook my own food. I still play with my dog, but not as much as I would hope. And I do not have any free time, which was surprising... I just assumed in college I would find more balance... But then I realized, there really is no balance.

And, what's the major cause for that lack of balance?

It's all the expectations of, well you have to be involved, and you have to volunteer. And I need a job, so I have to have a job.

— 18- to 22-year-old, full-time private student with multiple part-time jobs, and off-campus, shared housing

The dynamic of unexpected costs surprising students may also damage food security for first-generation college students. The excerpts above suggest how a lack of familiarity with both the financial and time demands of college attendance can pair with unanticipated or poorly understood living expenses. Although college-educated parents likely faced far lower prices for their own educations, they would be more familiar with the set of expenses involved in college attendance and better equipped to ensure that their students had all of their budgetary bases covered.

First-time and first-generation students were more likely to underestimate the time, money, planning, and other inputs required to regularly prepare home-cooked meals. Facing higher than expected academic costs, housing costs, and time demands from school, work, and other sources, students generally turn to food choices as the primary way to “balance” their schedules as well as their finances. While all students in this study had completed at least one semester of college, their comments suggest that many students who fail to persist may have been unprepared for the burdens they would encounter and the impact of those burdens on both their quality of life and academic capacity.



3.5 CAMPUS DINING AND ITS DISCONTENTS

Many students classified as having low food security raised issues with campus dining options as a factor in their food challenges. Perceived inadequacies of campus dining were reflected in responses to multiple food security questions. For instance, some indicated that their occasional or frequent practice of skipping meals was a result of being on campus for long periods of time and not wanting to spend money on available food options. This dynamic was sometimes responsible for students not eating despite hunger and eating unbalanced meals, as the more affordable near-campus food options tend to be of lesser nutritional quality. One student over the age of 33 brought up the inadequacies of food on campus in response to an open-ended question on the most helpful improvements their school could make with additional resources.



And maybe, the other thing would be, is to be able to provide more healthier, balanced type of restaurants, food type things at the school level versus vending machines or unhealthy food options.

Interviewer: Yeah, that's a good thought. Do you feel like it's hard to get healthy food around the school?

I think so. Especially with [restaurant] closing at the end of the semester there. They closed down the café...Even the café that was in there wasn't healthy at all, everything was nuked in the microwave or wasn't made fresh. Having a place where you can offer a salad bar or something that's not nuked in the microwave would be a whole lot better.

— 33+ year-old, full-time public student, and military veteran, with full-time employment and off-campus, solo housing

Campus dining is unavailable at certain times or on certain days. This can cause food insecure behaviors for students living on campus who rely more on campus dining and may have even prepaid for a meal plan. This full-time student lived off-campus but worked in dining services. The student reflected on the consequences of its limited hours.



Another thing that really bothers me about the school that I go to, it's a community college but you have dorms for athletes and you know the other students that want to live on campus and from noon on Friday until 7am on Monday there's no hot food service. There's no food service period. And you know you either learn to live on cheese and crackers or you know stretch your scholarship money and run to McDonalds or whatever and I think that's wrong.

— 33+ year-old, full-time public student with off-campus, solo housing



Low food secure students with access to pay-as-you-go cafeterias were far more likely to eat a small snack or go hungry rather than purchase food. This student saw the efficacy of the Free Lunch program in public elementary and secondary schools and saw that model as having great potential in college.



Interviewer: If you were a super-rich person who wanted to give a lot of money to your school to help students, what do you think would be the best way for your school to spend that money?

Free lunches. Kinda like meals and things. I don't know, maybe I said that last time. Yeah, because people do have situations where they will skip meals or whatnot so like having snacks and if there's water and things like that available, I think it's good. I kinda like the whole idea [of] free lunches in public schools. People really don't get to eat all the time. Sometimes they'll skip on their meals. And I think that would just be a great service. And the people that do have money, but don't have a lot of money that takes the stress away from figuring that meal out for them. That would be cool. Public lunches for colleges, or free lunches for colleges, not just public school.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, solo housing

It will likely come as no surprise to school staff that students are often enticed by opportunities for free and low-cost food; however, they may not fully appreciate the extent to which this enthusiasm may be rooted in significant need, even approaching reliance on such opportunities. Multiple students mentioned the importance of free snacks on campus to keeping hunger at bay.

Although students' responses to the USDA survey suggest that relatively few endure hunger, in contrast, their stories and personal narratives indicate that many regularly experience hunger for short periods of time. The paradox between these comments and survey responses may have two explanations: the survey question includes the qualifier "because there was no money for food," and students tend to downplay the severity of their circumstances. Some students experience hunger (or refrain from eating for long periods) not because they cannot afford any food but because, in the words of one student, "a lot of the food that is readily available is extremely cheap and not good for you so there were dates that I went without eating". Given the affordable, available options, some students prefer not to buy food, even if they must then rely on snacks to "not waste away", as one student characterized it.



3.6 PHYSICAL RESOURCES AND LOW FOOD SECURITY

In keeping with the frequent lack of effective campus dining options, some students with low food security discussed how the lack of certain physical resources impeded their ability to eat regular, balanced meals. Some lacked access to a kitchen with adequate appliances or implements; others had such a kitchen but were sharing it with several roommates who frequently occupied it but less often left it clean. Having staple ingredients on hand was also an impediment for some students. In a sense, these are financial challenges, but other interventions might be better suited to address these important needs. A student with roommates had food, but lacked sanitary conditions in which to cook:



I have food at my house, so I've been able to go grocery shopping, and depending on where I'm at, for snacks throughout the day. But as far as cooking goes, because I can't cook in a dirty kitchen, I, for the most part, have either just avoided eating dinner, or I was eating dinner outside.

— 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – family

Living with others can defray housing costs but add to food costs when roommates frequently use the kitchen but fail to clean up after themselves or have other habits that prevent others from using it as often as they would like.



Well, I'll be honest, pretty much we've been eating out a lot. I'll get something to cook every now and then, but my boyfriend has a roommate and they have a dog and I don't like the smell of it, so when he doesn't clean up, I can't cook, and then he smokes [and] leaves ashes all over the top of the stove and I just... I can't, I can't. Every time I go in the kitchen, I find myself cleaning up. My boyfriend gets mad, he says, 'Don't clean up behind him, he's a grown man.' And I say, 'Well we gotta eat.' So now we don't really go in the kitchen too much, because of that situation.

— 23- to 27-year-old, full-time private student with full-time employment and off-campus, shared housing – romantic partner

Students benefit from resources like nearby groceries and prepaid campus dining largely because it enables them to focus time and energy on academics without overly compromising their diets and health. For those without access to these resources, however, low food security is often a direct consequence of the pursuit of academic success.



"I have food at my house, so I've been able to go grocery shopping, and depending on where I'm at, for snacks throughout the day. But as far as cooking goes, because I can't cook in a dirty kitchen, I, for the most part, have either just avoided eating dinner, or I was eating dinner outside."



3.7 EATING POORLY TO STUDY BETTER?

Low food secure students sometimes made time-saving food choices to acquire a margin for rest and relaxation but more often did so to reallocate the time and mental energy to schoolwork. They went to great lengths to make room in their various budgets – money, time, and energy – to be students outside of the classroom, to complete reading assignments, take their time with homework and papers, and study to learn and master concepts rather than only pass a test. Some succeeded, but most frequently came up short. The student quoted below reflects on this dynamic in the context of having transferred from a community college to a four-year, private university.



I took less courses a semester so I had a lot more time when I could work. I didn't need to have a bunch of time off to focus on school. I needed to have some, but not a ton. So it's like I accepted all that extra money to live on just so that I could kinda be lazy and focus on school. It's like at [university]... I mean, I got enough to live on, but man, I just didn't realize how good I had it at [community college] because, like I said, I was getting about \$5000 to live on after tuition, and at [university] I think I got \$2000, if that, to live on for the past two semesters. So \$2000 is really kind of nothing for five months. Because you know, when you have rent and bills and food and doctor visits and all that stuff \$2000 might last you a month, if that. So it definitely didn't pan out how I thought it was going to.

– 28- to 32-year-old, full-time private student with part-time employment and off-campus, shared housing –romantic partner



"It's kind of like, 'Okay, what do I have in the house?' Because I don't want to overspend at the grocery store. There's money in my bank account but I don't feel like I can afford to buy more food, especially not when I've got these weird spending habits, where I'm splurge-spending on food at restaurants and then not buying enough to eat in my own house. It's like I can't figure out a balance."

In a broader sense, this preference for investing as little as possible in food may be symptomatic of the general difficulty balancing academics with self-sufficiency under trying circumstances. Many students desire the time and material security to devote themselves more fully to academics. When asked about the biggest barrier to success for most college students, this student suggested tilting the work/study balance more towards school.



Honestly, just the amount that you have to work. Because school isn't a hard thing to do, I think, for a lot of people. It's just managing that with work. And so I think when you're in a place where you want to take as many classes as possible, but you also need money to survive, it's striking that balance that's probably one of the hardest things to get right.

– 18- to 22-year-old, full-time public student with part-time employment and off-campus, shared housing - roommates



For this student and many others, focusing on academic work requires a degree of insulation from material concerns, even if their material circumstances are objectively concerning. Asked about their approaches to dealing with food and financial issues, many low food secure students discussed practicing a selective, strategic avoidance, allowing their food security to remain low or degrade further to save time and mental energy for school, even though they may have had enough money for more consistent, healthier eating. They commonly spoke of “not thinking about it”, “focusing on what I have to do”, “trying not to worry about it”, “just getting through the day”, and similar variations. For some, this appears to be a response to knowing that finances are limited but not knowing exactly how limited; the stress may be a deterrent to doing the difficult, often stressful work of determining exactly how much they can afford to spend on food. Their comments reflect a deeper principle: learning requires focus on things beyond immediate material need, which can only happen when students either feel no anxiety regarding their needs or are somehow able to push anxiety away, if only for a time.

In addition to the financial and academic implications, the stress of financial insecurity can impact students’ food security directly. The transition to higher education generally involves an abrupt, drastic change in circumstances for which students’ “eating habits” are not well-suited. Facing uncertain, stressful circumstances, students may default into low-effort, food insecure eating patterns that minimize investment in detailed planning and large grocery bills but can result in low food security without realizing financial savings. This was the case for the student below. A full-time student and single parent described the thought process that led to eating unbalanced meals.



It’s kind of like, ‘Okay, what do I have in the house?’ Because I don’t want to overspend at the grocery store. There’s money in my bank account but I don’t feel like I can afford to buy more food, especially not when I’ve got these weird spending habits, where I’m splurge-spending on food at restaurants and then not buying enough to eat in my own house. It’s like I can’t figure out a balance.

— 23- to 27-year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Without placing undue emphasis on a single word, the use of “feel” corroborates the manner in which many students talk about their daily food and financial practices. Fear of overspending and financial crisis can cause food spending to take on a chaotic, impulsive character that ultimately fails to effectively avoid stress, save money, or provide a healthy diet.

3.8 NON-COMPULSORY LOW FOOD SECURITY

As seen in the quotes above, circumstances often compel students to cut back on food expenses; however, some choose behaviors that qualify them as having low food security through their spending preferences – they could afford to eat more and/or better food if they chose. The distinction between “voluntary” and “compelled” food insecurity rests on whether the expense/need being prioritized above food qualifies as a want or need, and this can be a matter of some interpretation. In raising the difference between the two, this analysis takes its cue from students themselves, who sometimes questioned whether their own eating practices truly qualified as low food security given that they felt they had some choice in the matter. Concluding that the student quoted below should not qualify as



having low food security because he/she chose to eat less to save for “going out to eat with friends” and purchasing clothing would rest on highly questionable assumptions about the legitimacy and necessity of certain purchases. Furthermore, limiting the definition of legitimate neediness to the inability to afford bare bones survival would ultimately be counterproductive with regard to students’ academics, social development, physical and mental health, and long-term financial success. The student below needed/wanted clothing and a meal out with friends badly enough to endure hunger; the more salient question is what the necessity of this trade-off says about financial security, which has far-reaching implications.



[Interviewer reading USDA prompt] In the last month I ate less than I felt I should because there wasn't enough money for food.

Sometimes, but it's like my own choice.

And why is that?

I'd go out to eat with friends or do something else like purchase something like clothes. I don't know. I have no problem eating like a snack or something lighter for dinner. Just kinda snacking my way through the day.

And in the last month I was hungry but didn't eat because there wasn't enough money for food.

That's kinda like falling under the same thing as the previous question, so I guess sometimes.

Would you say that that was your main way of budgeting?

I guess so, yes.

– 18- to 22-year-old, full-time private student with part-time employment and off-campus, shared housing - roommates

The student below prefers saving money or purchasing coffee over the food available on campus. This raises another version of the same question: what types of spending can be prioritized over food for the affirmative answer to the USDA question – all of which specify that the behavior must be caused by lack of money – to be valid? When does a savings margin or a morning coffee stop being a prudent, even necessary budget item and become a luxury? When asked the last USDA prompt about not eating due to lack of money, one student in our study shared:



Sometimes. I guess skipped a meal would be a 'sometimes' instead of a 'rarely'. The only time that was the case is just if I forgot to bring something from home to work for lunch, and I didn't want to spend money at the café or something, because I'd rather save it or spend it on caffeine, which at the time felt like it helped me live a lot more than food did.



Do you feel like sometimes you prioritize saving money over eating?

Sometimes. I definitely have, yeah. Because if I have two meals a day it's not optimal. But if it's the difference of skipping [and] buying food at work or picking up fast food while I'm out or something, then I figure it's probably for the best.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, shared housing - roommates

Though the circumstances surrounding their choices differ, these students illustrate an important point: study participants often turned to food as their first means of finding extra space in their budgets. Students often adjust to changing financial circumstances (or their increasing realization of static circumstances) first by varying the type, source, and amount of food purchased and consumed. This phenomenon can be observed in response to improving as well as declining circumstances; increased food expenditure is often among students' first responses to new income, especially among students who had been living with a constrained food budget. We explore this further in the chapter on changes in food security status, but this quote from an older student living with a romantic partner is illustrative:



I had extra money out of nowhere and it was pretty awesome because I wasn't totally poor. But that obviously went away extremely quickly because it's just like to me, \$1800 is like \$10,000. So, it was real exciting, but it goes so fast. We got stuff for our apartment, we paid bills, we just went crazy with the groceries. So, we spent that money real fast.

— 28- to 32-year-old, full-time private student with part-time employment and off-campus, shared housing –romantic partner

The very human ways that students become food insecure should not trivialize the significant consequences of living with low food security, especially while trying to earn a degree.



4 HOW LOW FOOD SECURITY IMPACTS STUDENTS

"It's a really hard balancing act...to have money for food that is good for you. A lot of the food that is readily available is extremely cheap and not good for you, so there were days I went without eating or people would make food for me...There were definitely times where I didn't have the money to eat the things I needed to."

23- to 27-year-old, first-generation public student



This section describes ways in which low food security, often in conjunction with financial circumstances, appeared to affect the students experiencing it. Analysis of students' comments suggested that low food security affected them personally, socially, and academically.

4.1 PERSONAL STRESS

While many realize that students must balance time and money, preserving mental energy and managing stress are also important to a healthy equilibrium. Though students' comments often emphasized the effect that tight budgets and schedules have on eating patterns, some suggest that limitations on stress tolerance can also play a role. Students, like most Americans, have stress budgets and these are far from unlimited.

Students' comments regarding food and other aspects of life suggest that many students feel mentally overburdened by their daily tasks. This is not to say that they find schoolwork too challenging; on the contrary, the far majority of students consistently responded that they rarely felt confused by their course material. Rather, it seems to be a product of the cumulative amount of time spent on activities that require at least a measure of mental labor; ironically, this includes managing a full schedule of these tasks. One student described the result as "four years of low-level buzzing stress of never finishing anything completely" and "always [having] something on my to-do list". Living on narrow financial margins compounds these issues by further constraining students' choices (e.g. how many hours to work, what food to buy, whether to spend on enjoyment) and by adding a further source of anxiety. We return to Veronica, the full-time student with part-time employment who describes the interconnected nature of stress of a college student struggling to make ends meet as well as the depth of her determination to succeed:



Fearing I wouldn't have enough money to pay where I was living, because if I don't have enough money to pay for housing, then I don't have enough money to pay for food or anything else. So sometimes I would get my housing paid and maybe I wouldn't have very much money for food, but I could skip a few meals. But if I didn't have enough money to pay for the apartment, that made me the most stressed.

Interviewer: Academically, do you feel like this financial stress impacted your grades?

I guess sometimes, which I don't know if it was necessarily the financial stress itself but just all of the stress together. I wouldn't be able to focus or I would lose sleep, I would just be really anxious. And so I would be lying in bed trying to sleep and I couldn't because I was stressing out about money or where I was gonna get it, and I wouldn't be doing homework because I needed to sleep. And so, I would just be angry because I was wasting time being awake.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, shared housing - roommates

Sometimes the ever-present, low-level buzz of stress can boil over into decision paralysis as students look for a way to release the pressure. Students place a high premium on surplus time and mental energy; if they can gain some by replacing grocery shopping, cooking, and dishwashing with frozen



food, fast food, or snack foods⁸, they often will. In economic terms, students who make this choice are implicitly (and sometimes explicitly) saying roughly that they value the time, mental energy, and possibly money saved more than they value home-cooked food. On the other hand, foods chosen for the sake of saving time and mental energy, can result in additional stress and anxiety, especially when the kitchen becomes a place to be avoided, like it was for this single parent living in shared housing.



I make just under enough to genuinely cover everything and the way that I live. So now, I'm having to totally gut the way I have been living. Okay, I need to just slow down and stop eating out basically... which is mostly out of necessity but sometimes for fun.

When you say out of necessity, what do you mean by that?

Like, no time to go to the grocery store, or... stress isn't the right word. I have like really serious anxiety and sometimes I can't be in my kitchen, especially if my kitchen is already messy. I just can't do it. And so I have to go somewhere else or I will not eat. Sometimes I just don't eat because it's too stressful to think about.

— 23- to 27-year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

While time was certainly a factor here, this student places far more emphasis on the implications of his food choices for his mental state. He describes feeling overwhelmed by the thought of the tasks involved in preparing his own food. Though it does not say so explicitly, the comment “sometimes for fun” might also imply that certain food choices, such as eating out, might not only require less mental energy but also actively reduce stress and replenish mental energy, increasing students’ willingness to pay a premium for them. This also echoes comments suggesting notable negative impacts from the lack of time and money for social activities.

The majority of students with low food security feared eviction more than hunger and the looming rent due date raised anxiety at the end of the month.



Alright. And what do you think might be the biggest threats to your success?

I don't know. Work is pretty daunting right now, just because living is expensive. I don't get paid to survive here. And so right now, I have avenues, that I'm not gonna get kicked out or anything. But definitely want to be more self-sustaining. And it's just like a huge stress. It's more, it's like, I can get through it. But the mental aspect of it is the hardest thing.

And how worried are you about that getting in your way?

I think, I mean, I think it's not gonna stop me... It's just more miserable usually. I don't think it's gonna stop me from getting where I want. I'm just not gonna be a very happy person until I figure some of my financial woes out.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, solo housing

⁸ Multiple students told us that bulk quantities of trail mix constituted a large portion of their daily food intake.



4.2 THE SOCIAL LIVES OF STUDENTS WITH LOW FOOD SECURITY

While the interviews did not focus on students' social lives, some students with low food security did discuss social issues that were related to their material circumstances. Between school and employment, some students with low food security describe having so much work to do that they feel socially deprived. Lack of time often compounds with physical distance from campus (for commuter students) to impede campus social belonging (Lima 2014). The sense of needing to socialize can also have direct academic implications: social activities can rejuvenate students, at once providing a reprieve from stress and a community of support that helps them endure the next round of labor.

The tight finances common to low food security can constrain social participation. This is most often due to the costs involved in many common social activities, from meals and outings to the special occasion discussed below. A traditional-aged student living with roommates implies that she became food insecure on account of the costs of social participation.



So there was a bunch of little things that I guess happened at the end of the semester. Where like, it was towards, I guess, Christmas, and so everyone was like, 'Oh, let's do this and this.' So with my friend group, they expected me to buy a Secret Santa gift, and then for [team] I was expected to also buy a Secret Santa gift. And then for [team], they also wanted to have all the captains pay for our director to have a gift. And it's like all of those things that I was expected to do, and I was like, 'Hey, guys. I don't have a lot of money, can we not do that?' They're like, 'Oh, it'll just be like \$10,' but then the \$10 from everything adds up. So all of that was hard to deal with.

Students value friendships and are willing to deplete savings to foster relationships and avoid breaking social taboos. This quote below suggests a prioritization of social connection over affordability in food choices.



Interviewer: If you were rich and you wanted to give a lot of money to your school to help students, what do you think would be the best way for your school to spend that money?

I would fund more student organizations that the student body could be more connected. Maybe make a coffee shop or something inside the school 'cause the school I go to really doesn't have anything, just a cafeteria. But maybe just have one. It's like a high school cafeteria, basically. I'd put maybe a Starbucks or something where people can socialize.

— 18- to 22-year-old, full-time public student with seasonal employment and off-campus, shared housing - family

Another student's need for more time to socialize and rest, as well as her feelings that the lack of this time was harming her academics, came out as the result of her starting a new job that, ironically, provided precisely this opportunity.



Interviewer: How has it been going to work and being a student at the same time?

So far so good. I'm actually pretty pumped about it because I'm not like allowed to do any work while I'm there, which means like I finally have a block of time where I'm just supposed to like focus on one thing and that one thing happens to just be like casually



socialize with people so it's kind of nice, because I'm like being paid to like take time out to like enjoy being alive and I know that that's not what most people look for at work, but like my job is just to chat with people so I'm pretty pumped about it. And I feel like it's going to help my grades because I'll be happier if I just have time where I'm just not like overanalyzing everything all the time.

– 23- to 27-year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Several students with low food security expressed that they felt they were missing out on benefits of socializing. Social interaction has costs and, depending on the relationship and nature of the interaction, these costs can be nonnegotiable, debilitating, and hard, if not impossible, to avoid. Though they may be in dire need of “having time to be a person”, students with little time or money to spare can little afford social time. The effort to maintain social relationships – or inability to set social boundaries – under such harsh and inopportune circumstances can be severely damaging.

4.3 IT'S UP TO THE PROFESSOR: LOW FOOD SECURITY AND ACADEMIC INCIDENTS

Life always comes with some chaos, and students' lives are no exception. An immense range of more or less random, unanticipated events can disrupt students' academics by hindering their homework, sabotaging their studying, causing them miss class, etc. These incidents are by no means exclusive to students with low (or very low) food security, and this study cannot demonstrate conclusively to the rates at which they occur among students with different levels of food security. However, within the population of the study, students with low food security were more likely than those with high food security to experience not only academic disruptions but also significant academic consequences as a result.

In most of these cases, students reported that the consequences of the incident were ultimately at the discretion of the course instructor, whether through policies that the instructor established in advance or a determination made in the moment. An unemployed student with health issues shared how classes were going:



Tough. Because I had to be out for a whole week because I had to stay in the hospital, and I wasn't able to do anything in all my classes. I have more than five assignments that are time consuming, and they have deadlines. And some of those deadlines, my teachers, or professors, they don't allow me to make them up. There are certain timeframes for late work to be accepted, and with some of the work that had to be done was going to take more than maybe two days to do. That's why they give you a whole week to complete, and if it's not turned in within that week, you have maybe a day or two days to turn it in for it to be counted as a grade. If not, it's a zero.

– 18- to 22-year-old unemployed student who had to withdraw from the semester due to health issues.



In contrast, when another student missed a test because she was assisting her sick mother, a professor's willingness to offer a flexible make-up date spared her severe academic consequences. The full-time student living with family was asked if she missed any classes:



Yes, I had to miss two. I was helping my mom out, 'cause my mom got really sick this past month so I was helping her out at her office until I heard back from my, well, the place that I applied for.

Interviewer: Did professors accommodate for that?

Kind of? They kind of were just like, 'You already paid for the class so you can miss it, you miss it, get the notes from someone else.' But I had a really nice professor who was just like, 'Okay well, you're gonna be missing a test so just email me with a date and a time that you'd like to make it up,' and that was really nice.

— 18- to 22-year old, full-time public student, with off-campus, shared housing - family

The connection between low food security and unexpected academic disruptions seems to rely on the relationship between food insecurity, medical vulnerability, and financial precariousness. While even sufferers themselves may not know the cause(s) of an illness or other medical condition, attributing a significant percentage of student medical issues in the aggregate to the poor diets, lack of sleep, and high stress levels that generally accompany low food security is reasonable. Finally, students with low food security often maintain close ties to family support networks, and while these networks are essential to their survival, they can also make demands that disrupt academics.

Students with low food security endure unrelenting stress related to work, high academic demands, and uncertain control of expenses. Without sufficient outlets to relieve the stress, students often lose sleep, eat poorly, and become ill, a cycle that can repeat with growing intensity. Instructors and other student-facing employees can exacerbate these anxieties and circumstances or help ameliorate them with flexibility and understanding.



5 HOW STUDENTS COPE WITH LOW FOOD SECURITY

"I haven't really been dealing with [my food insecurity]. I haven't really been eating breakfast. I just wait until lunch time. My stomach will growl but I don't have the appetite to eat. So, when I finally do...when lunch time comes around, I'll eat, and then dinner and that's pretty much it."

23- to 27-year-old, full-time public student



Nearly all food insecure students responded by lowering their aspirations for academic engagement

Participants in our study respond to their food insecurity condition in a variety of ways. Some chose to modify their diets with inferior substitutions, while others changed their housing arrangements to better adapt to their vulnerable food situation. Friends and family can either provide vital support to low food secure students or introduce added pressures. Nearly all food insecure students responded by lowering their aspirations for academic engagement, while a small number use their food insecurity as motivation to improve their money management. Finally, this chapter concludes with a comparison between low food secure students and those with very low food security.

5.1 INFERIOR SUBSTITUTION IS HIGHLY PREVALENT AND HAS MULTIPLE DRIVERS

As students seek to satisfy constraints from their financial, time, and mental energy budgets, they often choose food options that are less healthy, filling, fresh, or otherwise appetizing. These choices frequently prevent students from experiencing significant hunger or lack of food, but they are linked to unbalanced eating and students eating less than they feel they should, both of which are considered food insecure behaviors. The most common driver of these behaviors was budgetary constraints, per the USDA. Students purchased lower cost food items for financial reasons, resulting in diets that they felt were poorly balanced or otherwise inadequate. Each of these quotations is a response to the USDA question which asks if during the past month they couldn't afford to eat a balanced meal. The first student is traditional college-aged and living with roommates:



Once.

Interviewer: Okay. In that one time that it happened, can you talk about what led to it?

Yeah, so it was just after I had to pay for my phone repair and also get my car to a mechanic, so I really didn't have much money to spend on food, so I just ate ramen.

— 18- to 22-year-old, full-time private student with multiple part-time jobs and on-campus, shared housing - roommates

While the student above was not able to afford balanced meals after a rough stretch of unexpected expenses, others, like the student below, a student living in off-campus, shared housing, purchased only bare minimum groceries, with no produce, on a regular basis.



Interviewer: Here is another statement: In the last four weeks, I couldn't afford to eat balanced meals. How often was that true?

That was true pretty often. Probably 70% of the time. I couldn't afford vegetables, but I still had... 'Cause pasta's way cheaper than vegetables. You can get a box of pasta for a dollar.

— 18- to 22-year-old, full-time private student with multiple part-time jobs, and off-campus, shared housing – roommate and romantic partner



The student below raises even more concerns, as he/she tries to balance affordability, availability (time), and nutrition. This full-time student attending a public college found that the food that met the first two criteria was often so poor that not eating at all was preferable.



I mean it's like a really hard balancing act to have money to pay for food that is good for you. I mean a lot of the food that is readily available is extremely cheap and not good for you so there were dates that I went without eating. I just thought of it as something I had to do kind of but yeah there are definitely times where I didn't have money to eat all the things I needed to.

– 23- to 27-year-old, unemployed, full-time public student with and off-campus, shared housing – roommates and romantic partner

The last quote shows that financial constraints, while significant, are not the only driver of inferior substitution in the food choices of students with low food security. For this student, availability is also an important factor: the food that was close at hand and required little additional time or effort to procure. Students often opt for lower quality food because it is the most affordable option (at times, the only option) that fits into students' schedules, which requires time to prepare and eat food between class, work, and other commitments.

The dietary quality of students with busy schedules often tracks closely with the state of their budgets; the amount of time and mental effort spent on food must always be kept roughly at a minimum. These fluctuations sometimes follow the monthly billing cycle, especially for students who regularly struggle to pay rent. Students discussed how they would often postpone grocery shopping and engage in more desperate eating patterns – patterns that met the definition of low food security – until they could be sure they would be able to pay rent or other major expenses. One full-time student living alone blamed poor planning:



It's a real rough week. I guess I didn't grocery shop well enough this past month or whatever. It usually lasts me throughout the whole month but this time it didn't.

Interviewer: So, how have you dealt with that?

I haven't really been dealing with [my food insecurity]. I haven't really been eating breakfast. I just wait until lunch time. My stomach will growl but I don't have the appetite to eat. So, when I finally do...when lunch time comes around, I'll eat, and then dinner and that's pretty much it.

Okay. And so three more days until the month is over. So you'll be buying the new groceries, the beginning of August, right?

Yes.

– 23- to 27-year-old, unemployed, full-time public student with off-campus, solo housing



Belt-tightening of this sort takes different forms depending largely on how tight the belt is and how much tighter it must become to maintain solvency. Students on narrow margins might start replacing meals with granola bars, while those, like this older full-time student who also works full-time, might simply cut back on eating out.



With finances, I'm okay. I'm still struggling a little bit, but bills are getting paid. I'm catching up on bills, which is great. I've had to ask for an extension on some bills, but the thing [is] that everything is being taken care of. I'm having to cut expenses on going out to lunch and cooking at home, which is totally fine because I really enjoy that. But overall, finances are getting better.

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

5.2 HOUSING ARRANGEMENTS OF STUDENTS WITH LOW FOOD SECURITY

Students with low food security generally reported that housing is their largest and most important regular expense. Though rent was certainly on their minds, they did not express serious concern about failing to afford rent (with notable exceptions), often because they either assumed they would be able to pick up more work shifts, solicited aid from their broader safety net or engaged in cost-cutting behaviors, including the behaviors that constitute low food security.

Having to confront the major, challenging expense of housing costs every month guarantees a regular source of stress and worry for low-income students living off campus.

Though far rarer than the rent dues that claimed priority on students' finances, housing start-up and initial utility expenses could also cause financial strain. Though few students moved during the course of the study, some, like Veronica, a full-time student living alone, discussed how they were caught somewhat off guard by costs and/or other disruptions that accompany moving to a new home or apartment.



Interviewer: What do you think are the most likely reasons that things might not go according to plan?

Since I'm subletting, I didn't have to do the whole application process and let's see, if we do move into this one I'll need renter's insurance. And I guess those aren't hidden, but they're extra. Renter's insurance and I have to open an account with gas, I have an electric. But we have gas and then there's the security fee and I'm just hoping that that's not too much too quick. I have a little, I have some saved up because I've been working extra but I'm just, I'm hoping that doesn't knock me out. I feel like that's the biggest hurdle, yeah. If we get into the apartment, and we've paid them the deposit and the application's \$50 a person.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, solo housing



Students experiencing low food security most often lived with roommates, including friends and significant others⁹. While these arrangements can provide an effective means of reducing housing costs and adding to a student's social support network (for instance, roommates may also share food expenses and assist each other with unexpected expenses), they sometimes introduce issues that threaten financial security. For instance, one participant's roommate moved out of their shared apartment unexpectedly, leaving the remaining resident, whose name was on the lease, scrambling to find another renter. Another student was hesitant to cook at home because her roommates tended to eat her food, while another's roommates frequently left the kitchen messy. One student with low food security had the internet, gas, and electricity accounts for a shared apartment in his name and expressed concern about what might happen if one or more roommates did not reimburse him for their shares. Efforts to pool grocery expenses and share food can be logistically challenging, which in some cases resulted in grocery shopping being postponed and unwelcome reliance on fast food. Students' attempts to use inexpensive housing can also cost them significantly in time, campus engagement, and quality of life, as they often settle for substandard facilities farther away from their schools and workplaces. When asked if there were ever concerns about housing, this full-time student living in shared housing detailed their anxieties about roommate turnover:



Yeah, I guess so. So in the next two or three months, there's gonna be a change in where I might reside just 'cause my roommate actually has gotten a job in California so he's gonna be moving out there pretty soon and then I'll have to decide what I want to do. So the next couple of months there will be more and more concern about where I want to end up but compared to other people I have a pretty good safety net, so I'll be able to find my way.

– 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – family

Policies that transfer risk from landlords and utilities to tenants also impact students, like this student in shared housing with a roommate and romantic partner:



I had abnormal expenses since I had to pay my energy deposit. I knew it was at \$200. So it wasn't too unexpected. I pulled it out of my cushion money, but that's why I have \$50 right now.

– 18- to 22-year-old, full-time private student with multiple part-time jobs, and off-campus, shared housing – roommate and romantic partner

Housing issues also disrupted the lives – financial and otherwise – of food insecure students who were not moving. Every lease renewal is another opportunity for rent to increase, seriously damaging students' budgets and plans, which can further jeopardize their academics in addition to their basic security. This full-time student with multiple part-time jobs felt financially threatened by rent increases:

I got a new job, to pay my rent, but the thing about my rent is it's not a fixed rate. When I got my job to pay my rent I was only paying \$180. I have a car note of \$252, that I pay. The money from school was only paying my car note, but it wasn't paying my rent. And so I had got a weekend job to cover those expenses. And so, it was okay but then, it was time for me

⁹Living with family was far more common in both the high food security and very low food security groups; the family household either has other adult earners and is fairly stable or relies heavily on the student and experiences fairly severe material insecurity.



to renew my lease. When I renewed my lease, my rent had went up to \$380 and so it's like I got a second job to be able to pay my rent since my school job was only paying for my car. Now that you raised my rent, I'm back to the same situation where it's either you pay your car or you pay your rent. But you don't have enough to do both.

— 18- to 22-year-old, full-time public student and single parent with multiple part-time jobs and off-campus, shared housing – family

Students also have little protection from landlord decisions that appear arbitrary and create unexpected hardships. A full-time student aged 23-27 explained how a change of move date disrupted plans:



Sure. It was great up until the point where our new apartment complex decided that we're not moving on the 20th, we're moving on the 31st which is the day that we have to get out of our other apartment. So we're gonna move and it's on a Monday.

Interviewer: Oh no, okay. And so you work half days on Mondays?

Yeah. I'm just taking off that day but basically it's more... We had friends and family coming to help us that weekend and now...They can't stay through Monday, so...

— 23- to 27-year-old, full-time public student with full-time employment and off-campus, shared housing – roommates

Just as the food available on campus (and the prices of that food) heavily influenced many students' food choices, so too did the food options near student's homes affect the quality of their diets. The quote below demonstrates that close proximity to groceries not only reduces the time investment required for home cooking but also provides a rare means for students to rely on grocery shopping without detailed planning or danger of inadvertently blowing their budgets. By significantly cutting down on the costs of home cooking in time, mental energy, and stress, a nearby grocery store can enable diets that are at once lower cost and higher quality.



Interviewer: Where did you get most of your meals and food over the last month?

Well, luckily, this place is a lot more convenient than it was in my grandma's place. So, there's a grocery store right in front of us, so I'm able to just actually... I mean I don't really... I can't really know for sure but it seems like I'm spending a little less money than I have been, just getting there, buying a whole bunch of groceries, and I usually don't let anything go to waste but sometimes things do go to waste. And this time, I can just shop as I go kind of thing, so that's been kind of effective so far.

— 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – roommates and romantic partner

The student below elaborates on benefits of living on or close to campus, including simplicity, social engagement, group study time, and having an advantage in hiring for campus jobs.



I want to be able move out into an apartment [on campus] ... I'll be able to be more involved on campus. And so the plan is to get an apartment, try to be an RA and live on campus as long as I can and save up money, so that way when I do graduate, I'll have money in my savings, so that way I'll be set to live on my own. But like I said, you never know what's gonna happen. I tried to be a RA last time and I didn't get it, and I feel like it's just because I wasn't as involved as everyone else.

Interviewer: And do you feel like that affects your academics?

Of course. I mean I don't have access to a lot of the resources on campus, and I know study groups, there's so many ways around it, you can do calls with people. But I feel like being with a group of people and studying with, yeah, you're gonna goof around and you're gonna do stuff, but that's part of building friendships, and part of bonding and getting through stuff. But, they'll have study groups until like three or four in the morning, and I know my dad isn't gonna drive all the way downtown to pick me up, and I know my friends are gonna be tired, and they're not gonna wanna bring me back.

I have stayed in my friend's dorms for tests and stuff, because I was late for a test my first semester, and it brought down my grade in that tremendously. And my teacher had told us, 'You can't retake it. You can't. There's no... No, unless you're dying in the hospital, you have to have a legitimate excuse for why you weren't here.' And I just woke up late, and like I said, it's downtown, so I couldn't get downtown in two minutes, it was a whole hour I had to wait. And, yeah, I went from like a 90 to a 50 in the class, and I only got a 70 because I did really well in the finals. But, I could have had an A in the class, and that could have helped my GPA at the end of the semester. But, like I said, I just wish I was right there.

— 18- to 22-year old, full-time private student, with multiple part-time jobs and off-campus, shared housing - family

The quote also underscores a typical, low-engagement approach to food budgeting, where students rely on memory and instinct to “feel” their way through their budgets in real time. As this student summarized it later in the same interview, “I kinda take life as I go, so I’m struggling with how to best survive”. This approach may be an unstable foundation for academic success for most students but becomes far more viable when groceries are a short walk away.



5.3 FRIENDS AND FAMILY

The far majority of students with low food security relied on assistance from external resources, i.e. friends, families, and institutions, to help meet their food needs. In their discussion of their behaviors as well as their comments on hypothetical situations, students showed a clear preference among external resources to utilize for food-related needs: social connections before institutions or organizations.

Students regularly mentioned having received support from friends and family (most often parents) to help with food-related issues. Help from parents generally took the form of cash assistance or shared meals, with parents contributing groceries relatively rarely. Parents were not only essential to maintaining simultaneous solvency and nutrition for many low food secure students but also generally students' first choice for seeking assistance with food, like this part-time student.



I did reach out to family. That's usually my first line of... My point of contact, either my brother or my father.

Interviewer: And they helped you?

Yeah. If it goes beyond that then I'll try to reach out to different services and stuff like that, but it didn't go to that. I was able to reach out to family and get help as far as food 'cause that's what was lacking. That's what was lacking this morning.

— 33+ year-old, part-time public student and single parent with part-time employment, and off-campus, shared housing – family

Although more resistant to seeking help, this younger student also reached out to family when assistance was needed.



Yeah, it's just the situation with the food. I was getting to the point where I don't want to ask anybody for anything, so I just try to hold out, but it's just like, okay, you get to a point where, 'Okay, you have to eat, you have to get things, you have to get that, you really do need it, so just ask for help.'

Interviewer: Who did you reach out to for help dealing with that?

My parents.

How did that interaction go?

Good. They gave it to me. They were more upset at the fact that I was not asking.

— 23- to 27-year-old, unemployed, full-time public student with off-campus, solo housing



“Yeah, it’s just the situation with the food. I was getting to the point where I don’t want to ask anybody for anything, so I just try to hold out, but it’s just like, okay, you get to a point where, ‘Okay, you have to eat, you have to get things, you have to get that, you really do need it, so just ask for help.’”

The presence of family who students can rely on to prevent starvation could play a key role in allowing students to live on narrow margins. Compared to students without family, those with reliable (and ideally local) family may feel more comfortable living on tight budgets that are often part and parcel of life as a student with unmet need. The understanding that there is a social “safety net” in place may allow students to stay enrolled and focus on academics when in a financial position that would compel other students to seek more work hours, withdraw from classes, and/or make counter-productive cuts to living expenses. This full-time student did not seek help from his school, but relied on family and friends in need of food:



I talked about a safety net earlier and a lot of my family lives around this area and also my girlfriend and stuff and so whenever I am low on something, I’m always welcome over there to eat or whatever.

– 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – family

The benefits of family support are both material and emotional. Pooling grocery expenses with family helped the student below afford food, but her family also serves as a backstop, such that the student never need to be concerned about going hungry altogether.



My mom, my sister, and I have all pitched in to go to the grocery store and get food and things like that. We’ve never gone without eating, ever. My mom won’t let that happen.

– 18- to 22-year old, full-time public student with full-time employment and off-campus, shared housing - family

For this full-time student living off campus, food dependence can be constrictive, sometimes preventing students from eating either what or when they would prefer.



When I’m there at my mom’s house and at my sister’s house, I eat when they eat because I don’t feel comfortable enough to just go and grab their stuff. So many times I just wait for them to cook or if they offer me something. My sister’s real good about feeding me, she doesn’t bother to tell me. She’ll just buy food and just make it and, ‘Hey, there’s your food.’ Or if they eat out, she’ll bring me something.

– 33+ year-old, unemployed, full-time public student and parent and off-campus, shared housing - family



While regular reliance on family for food significantly boosts students' food security, it does not make them invulnerable. Although students whose housing and meals were provided by parents rarely qualified as having low food security, a few did report that they lacked money to purchase food and so sometimes experienced hunger.

The end of a relationship illustrates a similar principle. The quote below describes how a breakup severely harmed a female student's material security; yet, her ability to rely on parents for housing prevented a further slide and likely kept her at low food security as opposed to very low. When asked about her financial situation, she responded:



It's pretty bad, I guess. I had a serious boyfriend for four years that kinda paid for most things. He didn't make excellent money, but he made enough money to where I didn't need to work a ton and could be in school, but we just broke up. And so I am living with my parents now and I work three days a week, but I don't make very much money and I have nothing, I mean, pretty much nothing. If I didn't have my parent's house, I don't know how I would be eating.

— 28- to 32-year-old, full-time private student with part-time employment and off-campus, shared housing – family and romantic partner

Another student with a roommate described how the benefits of splitting not only grocery expenses but also meal preparation with his partner, at least for one meal per day, has caused significant improvements.



With my girlfriend, we usually shop for both of us, at least for dinners, because she works in the morning and I work in the evening so we don't really have time to do breakfast and lunch together. But yeah, just being able to combine our resources, it's been okay.

— 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – roommates and romantic partner

To a lesser extent, students with low food security also sought out help from friends. Some split grocery bills and/or prepared food together; more often, a student in need would ask a friend for help, or a friend would offer to help unprompted. This assistance was rarely monetary; rather, friends would buy each other a meal or share food they had prepared. When asked if there were any times last semester where the student didn't have enough money to cover expenses, this private school student responded:



Yes. So I would have to ask my parents, 'Hey, can I have a little bit of money to buy some food? 'Cause I don't have any in my bank account.' I would try to figure out ways to make it work. So I would try to ask my friends, 'Hey, can you use some of your meal plan and buy me food?'

— 18- to 22-year old, full-time private student, with multiple part-time jobs and off-campus, shared housing - roommates



While pooling resources in this way helps students stretch their means and possibly avoid more severe food insecurity, the effort/need to limit food consumption to opportunities when food or food preparation costs could be shared caused other issues for some students, like Veronica.



Last time you told me that you were doing a grocery budgeting and list with your roommates. How's that going?

Well, life has been chaos the last couple weeks, so that's not going. I haven't been able to drag one of my roommates to the grocery store and we're the ones that both do grocery shopping for the whole apartment. And so, it is... No, it's not going.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, shared housing - roommates

5.4 INSTITUTIONAL RESOURCES

In contrast to their reliance on social connections, students with low food security rarely sought or received assistance from institutional resources, like government-run social programs, community programs, or their schools. Their reasons differed based on the type of program. Knowledge of government food assistance programs (e.g. SNAP/"food stamps") was mixed. Most students were at least aware of their existence but assumed that: 1) applying would be arduous, complicated, or time-consuming, 2) that the benefits would not justify the time and hassle, and/or 3) that they probably would not be eligible. This single parent's response was typical:



I don't know where to look. Obviously, I could use a little bit of a bonus, but I've been at this game for a long time and I feel like I've totally sourced out everything that is available to me within a 50-mile radius, with the exception of things that I know about but I haven't applied myself to...

Some of it costs more time than it's worth to apply. And so for people who they have nothing, which means they also have nothing to really to do, maybe they're unemployed, those are great resources for them. But even SNAP, it's an eternity. It takes forever even just to sit down and fill up the application takes two hours. It's insane. That's \$22 I could've just made at my job, which doesn't seem like a lot when you think about it, 'Well, this could be like a few hundred dollars in food every month.' But it's hard to commit the time to do it because a lot of the times it doesn't work out. So there's a lot of little resources like that.

— 23- to 27-year-old, full-time public student and single parent with part-time employment, and off-campus, shared housing - family

Only two students reported attempting to receive SNAP benefits at the time they were experiencing low food security in the study. Neither made it past the application process; one had a thorny eligibility issue involving dependents from different parents, while the other was derailed by employment changes¹⁰.

¹⁰ As will be presented later, this was a key difference between the experiences of students with low versus very low food security; students with very low food security were far more likely to seek and receive food benefits.



Well, I can't get food stamps, because the mother of my stepchildren claims all the children and doesn't let us claim any, and the food stamp office won't do anything about it. They said we have to sue her in court. And I don't qualify with only my two children, so...

— 33+ year-old, unemployed, full-time public student and parent with off-campus, shared housing - family

Job changes, combined with (previous) employer verification requirements, can hinder eligibility for assistance programs, like it did with this full-time student.



I started applying for SNAP and then in the middle of applying for SNAP, I quit one of my jobs and so now I have to reapply to SNAP. Especially because of the way that I quit, not like in a bad way, but I was like, 'Hey, you all can leave me on payroll if you want.' But they didn't tell me because they could call me in for emergency kind of things. I'm still receiving updates in my email from them, but personally my boss didn't email me and say, 'Yeah,' or, 'Nay,' to that idea. So I'm thinking I email them again and ask them, 'Hey, am I still on payroll?' Because technically I need to report to you all and you all have to sign paperwork, and blah, blah, blah. I'm hoping... I mean, if you report to SNAP that you lost the job, they want proof that you're not working it anymore. So then your ex-employer has to fill out paperwork and that's even more difficult.

Interviewer: You don't have a relationship with him anymore.

Yeah, legally they're required to do it. They're not allowed to say no or if they do, you can just waive it, but it's still a pain in the butt. It's kind of embarrassing like, 'I've quit my job and I want the government to give me free food.'

— 23- to 27-year-old, full-time public student and single parent with part-time employment, and off-campus, shared housing - family

Students' reasons for not using community food programs (e.g. food pantries) suggested a greater role of stigma and feelings of being undeserving or not truly needy as opposed to structural barriers. Their comments indicate that they thought such resources should be reserved for needier people, as indicated by homelessness, destitution, and severe, pervasive hunger. The following exchange with an unemployed full-time student illustrates the pattern. When asked if help from institutions had been sought to address low food security, the student explained why this wasn't pursued:



I don't think it's bad enough to warrant help, I guess.

Okay. Do you feel like you didn't have enough money to get the food you wanted or food, period?

Food period, yeah.



Alright. Can you talk to me a little more about when you feel like it would reach the breaking point of needing to reach out to someone?

When a day goes by when I can't eat anything 'cause I can't afford to eat anything.

Okay, okay. So a few meals here and there, not so bad, but a whole day...

Not so bad. Yeah, a whole day, when there's like a whole day where there's nothing to eat at all.

— 18- to 22-year-old, unemployed, full-time public student with off-campus, shared housing - family

Reasons for non-use of school resources to manage low food security combined elements of stigma and structural barriers with an understanding that food issues were beyond the school's purview or interest. Most students seemed perplexed by the thought that school could be a resource for helping with food-related issues, while fewer strongly preferred to avoid raising such issues with their schools at all. An unemployed student living alone compartmentalized their resources:



Interviewer: Do you feel like the amount you get from grants and/or loans is enough to support you through school?

Yeah, yeah.

You sound kind of uncertain about that.

Because I was thinking about the food thing, but as far as my bills and stuff, it's fine, but it's just the extra stuff, food, toiletries, that's when I'll have to ask my parents for help.

— 23- to 27-year-old, unemployed, full-time public student with off-campus, solo housing

This unemployed full-time student was more adamant in his refusal to look for help from his school.



I just don't. I have support. It's my choice as far as not asking. So, I wouldn't go as far as asking the school, that would be like an absolute, absolute last resort. I would never let it get to that point.

— 23- to 27-year-old, unemployed, full-time public student with off-campus, solo housing

These students' implicit and explicit assumptions about the lack of food assistance available from their schools may well be accurate; regardless, the assumptions prevented the students from seeking resources. As suggested in the quote above, some students also have a strong aversion to seeking help from their schools, which may be tied to questions of self-presentation in an academic setting. Where school is concerned, students seek to emulate, cultivate, and project intelligence, responsibility, and competence and may fear that seeking help would undermine their reputation or violate academic cultural norms.



5.5 ACADEMIC “SHORTCUTS”

As with food choices, students also adapt their academic practices to changing material circumstances. Students vary the amount of time they apply to their studies, as well as the approach they take to academic tasks given that time allotment. This is based on a variety of factors that might be called quality of life components – finances, work, how healthy/energetic they feel, food, housing – and their current academic status relative to their academic standards and self-expectations (see Figure 5 on page 66 for hypothetical schedules of two students, “Tom” and “Gwen”). When asked if she had enough time to study and sleep, Veronica responded:



I've been forsaking sleep. Last night I got the first full night of sleep I've had in few days, which is great. I really needed to go to school earlier this morning. I thought about just talking to you but sitting in my car. I was laying down and I was like, 'Oh, but I really need this rest.' What was I saying, yeah, I don't get enough sleep, that's for sure. I don't get as much studying done as I would like to get done. I think because I have decent grades in all my classes, it can be argued that I do have enough studying but I would like to study more.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, solo housing

Academic performance standards vary from student to student but depend largely on a similar set of factors, including student aspirations, a variety of cultural expectations, and institutional policies. These three factors are relatively static; however, students' academic standards often fluctuate somewhat in response to changes in quality of life components. Students seem to have a concept of how reasonable or realistic it is to hold certain expectations for their academic behavior and performance under different circumstances. The feeling that meeting a given academic standard would require too much of them (or might not even be possible to meet) while they are contending with precarious finances, an exhausting schedule, bad food or hunger, and/or debilitating stress causes them to modify their standards to fit their conditions. Exhaustion led this full-time student who was also working full-time to recalibrate his academic goals.



I did really well on all my tests except for one and that's because I kind of started... I felt like I started slacking towards the end of semester and not really studying for that exam. I got a low B and most of my tests were A's. I think it was that I was getting tired. I wasn't getting enough sleep.

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

The demands of adulthood and independence can also challenge students' ability to achieve their academic potential, at times by affecting their sense of what that potential might be. A 23- to 27-year-old full-time student shared how college realities, including low food security, were influencing her self-identity:



I thought that my scholarships would stick around and I didn't realize that my grades were gonna slip because it was just so easy for me to make straight A's in high school. And then when I came to college, it was a different ballgame.



Interviewer: *What's been the impact of classes being harder than you were expecting?*

It's not just that but also just trying to live life and start an adult life at the same time while holding down college. I have just been in school a lot longer than I've wanted to be and I'm not used to doing that I guess. So I don't know. My self-esteem's kind of suffered on that one.

– 23- to 27-year-old, unemployed, full-time public student with off-campus, shared housing –romantic partner

The difficulty of pursuing academics while contending with a busy work schedule (and the financial circumstances that necessitate it) impeded studying and learning for students across the food security spectrum but was especially noteworthy for those with food insecurity. These students consistently reported that they generally understood their course material but felt hindered and distracted by busy schedules and precarious situations. Without a trusted figure to intervene, as one did in the case below, the academic setbacks that result from this overload can seriously damage students' sense of their own abilities and threaten their persistence.



Interviewer: *When you say you made a big mistake at the beginning of the semester, what was that?*

It was my mindset. I went into the first couple of weeks feeling really good, I did really well on my clinicals. I don't know what the exact problem was, it was just that I also met the feeling [that] maybe I'm not as prepared. Maybe I'm not as smart as these other people in the class. It's not that I'm not as smart; it's just that I let myself get overwhelmed between work and school. And when I cut back on my work hours, that helped, but it still didn't do anything for my confidence. But I've talked to my advisors. Gotta love them. It's always nice when you have more than one. We discussed everything. They pointed out to me [that] I made good grades in LVN school, I made good grades in my prereqs. There was no reason for me to feel like I was inferior to anybody in the class. And it helped. My test grades have improved.

– 33+ year-old, full-time public student with off-campus, solo housing

Some students hold unrealistic expectations for the ease of academic success. When faced with the reality of the work required while living with low food security, they sometimes lower their standards and avoid confronting issues. The time commitment needed to make high grades surpassed this traditional college-aged student.



I think I expected to have a lot more free time. Like, 'Okay, I only have two or three hours of classes a day, and I have the rest of the day all to myself.' There's a lot more work outside of class than I assumed there would be.

– 18- to 22-year-old, unemployed, full-time public student with off-campus, shared housing - family



FIGURE 5. HIGH/MARGINAL FOOD SECURITY - TOM

DAILY SCHEDULE	
6 a.m.	Most days, Tom sleeps until 7:30 a.m., unless he feels like going to the gym early.
8 a.m.	Tom begins his day by having breakfast at the campus dining hall across from his dorm.
10 a.m.	Energized from eating breakfast, Tom heads to the library to meet with a tutor and study for an exam. Tom has lots of free time to study for classes and catch up with homework assignments before his first class.
12 p.m.	After his tutoring session, Tom eats lunch with his roommate at the campus dining hall.
2 p.m.	Tom attends his first class of the day.
4 p.m.	Tom eats a snack during his second class.
6 p.m.	Tom goes to practice for his intramural sports team.
8 p.m.	Tom and his girlfriend go out to dinner at their favorite spot. Tom brings home leftovers.
10 p.m.	Tom ends his night by studying for his upcoming exam.
12 a.m.	Sleep.
<p>Synopsis: Tom's hypothetical typical day is busy and reflects high/marginal food secure behavior. Meals are full, regular, and convenient. Sleep is adequate and Tom also fits exercise into his routine. Occasions for social interaction helps Tom manage usual collegiate stress. Tom has sufficient time and energy to study and attend classes thus maximizing his learning opportunities.</p>	

LOW FOOD SECURITY - GWEN

DAILY SCHEDULE	
6 a.m.	Gwen wakes up at 5:45 a.m. on weekdays to have enough time to commute to school and drop off her daughter at part-time daycare. She skips breakfast.
8 a.m.	Gwen gets to class 10 minutes late and misses a quiz. Her schedule doesn't allow her to visit the professor during office hours.
10 a.m.	Gwen attends her second class and eats a candy bar from a vending machine.
12 p.m.	Gwen goes to the on-campus food pantry and receives a microwavable meal. It's filling but not nutritious. She studies at the library for 45 minutes before she has to leave.
2 p.m.	Picks up daughter from daycare, and drops her off at parent's house.
4 p.m.	Drives to work. Gwen works part-time as a server at a local restaurant. Her take-home pay fluctuates drastically, so she tries to work as many shifts as possible, losing time to study.
6 p.m.	At work. Gwen eats a sandwich from the restaurant during her short break.
8 p.m.	At work.
10 p.m.	At work.
11 p.m.	After five hours of work, Gwen leaves with \$50.
12 a.m.	Drives home. Gwen's "Check Engine" light flashes on her way to her parents. She doesn't have the money to fix it.
1 a.m.	Sleep.
<p>Synopsis: Like Tom, Gwen's typical day is full, but her day involves off-campus work, a dependent to care for, greater commutes, and less time to study. Meals are skipped or are poor substitutes for full, nutritious servings. Gwen's schedule entails narrow margins for disruptions yet greater likelihood that they will occur. Stress is prevalent and she has few chances to reduce the pressure. While she likes her classes, Gwen has little time to study and interact with classmates, instructors, and advisors.</p>	



When describing a disappointing grade average in English, this low food secure student with seasonal work shared how this employment conflated with a reading assignment. The student's anecdote nicely captures the meaning of academic shortcuts.



We got assigned a book to read. It was kind of hard for me to understand. It was like magical surrealism, some type of genre that was difficult to comprehend and we were supposed to read it over spring break, but I worked full time over spring break so I didn't really manage, I didn't really have the motivation to read it a lot during spring break, and I didn't have a lot of time also, but I cram-read it that weekend, but I may have missed a lot of things that were on the test since I just read it really quick.

— 18- to 22-year-old, full-time public student with seasonal employment and off-campus, shared housing - family

In addition to inconsistent pay and hours, students' major issues with their jobs (as opposed to complaints about the need to work in general) related to low wage rates, unreliable paycheck processing, commute times, and the inability to do schoolwork on the job. As online and hybrid courses become more prevalent along with internet-connected mobile devices, students may see fitting substantial amounts of coursework into short work interruptions as increasingly viable and valuable. The value of on-the-job schoolwork likely increases with the onset of finals, as the more pressing need to study, write papers, etc. can upset a fragile, possibly unsustainable equilibrium between work and school. The student below discusses how he was willing to let a job interfere with school until the end of the semester drew near.



I ended up getting a job at this place called [employer]. It was this pizza place, I was a driver. And I worked there for a little. But then I had to stop because it was messing with my schedule for school, but I ended up getting a good bit of money for a little... I only worked for two weeks but I worked pretty steadily those two weeks. And I got some good money, but that had to stop because the end of the semester's coming.

— 18- to 22-year old, unemployed, full-time public student

This student coped with their reality by accepting lower grades and a longer path to a degree.



Whenever I just get stressed out I just go... I wouldn't deal with issues. I just ignore them, and ... just go play video games. Like just go home and just play video games and ignore the world and I ignore myself also. I think I took it too easily and that's why I did pretty badly on my first semester. I was just like, 'Okay, whatever. I can just pass this without actually doing real work.'

Interviewer: Okay. What about your expectations for progressing through your degree?

I expected to be finished with community college in two years, but because I didn't do well my first semester and also the Business Administration degree program has a lot of classes. I end up... I can technically be finished in two and a half years.

— 18- to 22-year-old, unemployed, full-time public student with off-campus, shared housing - family



Students modify their academic behaviors to the extent necessary to meet their academic standards; in a sense, everyone is trying to do the bare minimum necessary to meet their threshold for acceptable performance. Common methods of modifying academic behavior, include missing classes, rushing or skipping homework, not buying textbooks, overreliance on cramming, and skimming or skipping reading assignments. Students use these strategies to reallocate resources (primarily money, time, and energy) from academics to other uses when they feel they can afford to do so without making unacceptable academic sacrifices.

Lowering academic standards and using shortcuts are not students' only options for aligning academic expectations with the harsh realities of tight budgets and busy schedules; they can also take steps to foster circumstances that will enable them to maintain academic standards. This can take a variety of forms, the most common of which involve securing additional financial resources (whether through financial aid, family assistance, or a better job), though some also try to work less and cut costs, sacrificing stability and adding stress for study time. A dual strategy tends to be most effective; here, securing grant aid allowed a student to reduce work hours and study more without taking on additional financial risk. A low grade prompted this traditional-aged student to make adjustments:



I didn't know the amount of studying that was actually required to get an A... Because once I failed my test, it made me realize that I have to do the most and the most required a lot of extra time studying so that, I was not really expecting.

Interviewer: Did realizing that you would have to study so much have any other effects on you?

Yes. I would say it impacted me financially because I wasn't able to work as much as I wanted to because I had to spend more time studying. So instead of picking up shifts, I only could work weekends.

Did working less have any effects?

Working less? Academically, yes. It gave opportunities to get an A in my classes.

Any effects outside of academics?

Working less, other than financial, it did cause me to live paycheck to paycheck but I also had some scholarships, which helped me from month to month be able to work less and still be able to support my lifestyle. I didn't really stress too much about it since I have that extra help.

— 18- to 22-year-old, full-time public student with seasonal employment and off-campus, shared housing - family



As will be seen in greater detail in chapter six, these sorts of strategies enable maintenance of academic standards and also have implications for students' food security, depending on the particular strategy used. While students who gain access to additional resources often experience an improvement in food security, those who cut back on expenses or work hours often see their food security decline. Food security is itself a resource; students with high food security can exchange it for additional time or money, but students with low or very low food security have less margin to spend, often because they have already sacrificed it.

In rare cases (only one explicit instance among all students with low food security), financial stress can raise students' academic standards. This phenomenon echoes academic literature on the concept of "eustress" or stress that motivates positive, productive responses instead of anxiety and paralysis (O'Sullivan, 2011). It also has parallels to Roksa and Kinsley's (2018) research emphasizing the importance of emotional support from family, especially for lower-income and first-generation students. This can be seen in the example quoted below, in which the student feels that the unexpected high cost of college motivates him because he and his parents collaborate to pay for it.



Interviewer: What do you think has been the hardest thing to adjust to in college?

I would say the financial part of college. Having to pay for school was the hardest to adjust because the academic part of school is something I'm used to... It was a lot... It was really expensive like thousands of dollars to go to a school was really surprising to me.

What kind of impact do you think that's had on your overall well-being and your experience in college?

It's made me want to do the best that I can in school since so much money is being spent on it. Yeah, it's just made me not want to waste the money I'm spending. I always try to get the best grades and I never procrastinate because it's money that I'm... Both me and my parents are working to pay, and the state. Yeah, my academics are improved because I don't procrastinate at all.

— 18- to 22-year-old participant

This quote at once aligns with many others on the unexpectedness of college costs and stands as an outlier in perspectives on how the impacts of those costs. While no definitive conclusion can be drawn, the presence of strong parental support and financial aid may be significant. It may also suggest the importance of mindset, perspective, and self-efficacy in how students approach challenging circumstances.



5.6 MONEY MANAGEMENT

The stress induced by precarious finances led some students to avoid their finances instead of taking more active control, like making a budget. This likely contributed to the tendencies toward inconsistent, nutritionally deficient eating that marked ad hoc efforts to control expenses and resulted in low food security (see Food as Ad Hoc Budget Balancer).



Interviewer: Do you feel like when you do make a budgeting plan or you kind of plan out your finances you can stick to it, or do you usually find it difficult to adhere to that plan?

Typically, I can stick to a plan pretty well. It's been really weird because... It's been hard to budget because, like I said, we're spending more on groceries than we will for what I can assume is the rest of the time, because we have to get all the... We have to get everything. And then for gas, I had to pay an initial fee. And then for transferring the electric [account] it was 20 more dollars. And so, there's just a lot of added first-time fees to things, where I have enough money for it in my account, but it's not... I can't create a budget off of it, you know? So, it'll probably be worse. Hopefully, when you call me next month I'll have a better budget. I had a budget for the old apartment, but I don't have one for here yet.

It takes time.

Well, and it's also weird because work hours are never consistent, so I have to calculate work hours and possible pay and then do the budget around that. So, I can't just have one budget.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, shared housing - roommates

Somewhat paradoxically, students with no ability to attend without borrowing – those who need to borrow simply to pay their tuition bill – may find it easier to borrow enough to pay living expenses. They have no aspiration of remaining debt free and may more readily borrow a cushion for living expenses, as in the quote above. On the other hand, students who fear student loans and believe they can and should avoid them can experience significant financial anxiety and may prefer to cut academic intensity. While the data in this study cannot support any findings related to differences in attitudes on student loans between students of different racial/ethnic groups, these dynamics may play a role in racial disparities in student loan borrowing and loan aversion (e.g., Cunningham and Santiago, 2008).



Interviewer: And when you were contemplating getting a full-time job, next year, to be able to pay for housing, did you ever think maybe instead of that full-time job you would take out loans instead?

No. I feel like it's better to go a little bit slower but have that money as opposed to just accumulate debt over time and that's just... I should learn to be scared of loans for school. Until I knew I was in a... If I knew I would be in a financial situation, where I could comfortably pay them back, and afford to survive, then maybe I wouldn't shy away from



them so much. But I know that I barely have enough money to do things now. So, if I added having to pay back a loan on top of that, in the future, I'm trying to look out for my future. I don't know how that would go.

And is there any reason why you feel that way about loans?

I guess because I know people that have for years and years and years had to pay back loans. And it just seems like, that was not a wise decision. And I'm just trying to avoid them if possible.

— 18- to 22-year-old, full-time public student with part-time employment and off-campus, solo housing

The emotional impacts of financial stress also affected usage of student loans; whereas some students avoided loans because they feared potential financial consequences, others used them to reduce financial stress.



Interviewer: So up and to this point, how do you feel like student loans have affected your decisions about your education?

Without them I couldn't really go to college, so.

And you're still planning on taking out more loans for the fall, correct?

Yes. I have to take out the loans just to cover the cost of college but then I was gonna take out extra on top of that. More so, [I wanted to] have enough money, 'cause this past year I had to budget too much, to where it was stressful.

— 18- to 22-year old, full-time private student, with multiple part-time jobs and off-campus, shared housing - roommates

5.7 VERY LOW FOOD SECURITY

One goal of this study is to describe the lived experiences of college students with low food security. We do this with rich examples showing some commonalities and diversity among students in this middle category of food security. This section seeks to refine this illustration by contrasting and comparing the responses from low food secure students with those experiencing very low food security.

In 34 of the 499 interviews, participants responded that they experienced five or six of the six food insecurity behaviors, indicating that they had experienced very low food security over the last month¹¹. As expected, the food-related behaviors that define food insecurity were all highly prevalent among students with very low food security. In almost all cases, these students reported having cut or skipped meals, consumed less than they felt they should, and eating unbalanced meals, all for financial reasons. They were marginally less likely to have run out of food or not eaten despite hunger but had still engaged

¹¹ Seven interviewees experienced VLFS during their first interview, which referred to the previous semester.



in these behaviors for financial reasons in 88 and 82 percent of cases, respectively. The frequency with which participants with very low food security engaged in these behaviors, from most to least frequent, matches the order in which participants with low food security engaged in them.

TABLE 7. Prevalence of Food Insecure Behaviors (“Sometimes” or more frequent) among Subjects with Very Low Food Security (n=34)¹² and Low Food Security (n=52)

Behavior	% VLFS	% LFS
Cut meal size or skipped meals because not enough money for food	100%	56%
Ate less than felt they should because not enough money for food	97%	52%
Couldn’t afford balanced meals	97%	46%
Food didn’t last, no money to get more	88%	37%
Hungry but didn’t eat because not enough money for food	82%	27%

The experiences of students with very low food security differ from those with low food security in both degree and type. Like students with low food security, very low food secure students regularly discussed issues with money, stress, and lack of time, but these issues occurred more frequently and with greater severity. However, very low food security tended to be more persistent and long lasting than low food security; fifteen of the 34 instances (44 percent) were experienced by students who had very low food security in four or more months, while ten of 52 (19 percent) instances of low food security were experienced by students who had low food security four or more times. Accordingly, very low food security was somewhat less common than low food security in terms of total instances over the course of the study (34 of 499 interviews versus 52 of 499) and the number of participants who experienced it.

5.7.1 Inadequate Finances, Inadequate Time: Food Is the First to Go

For participants with persistent very low food security and those who experienced it only sporadically, food insecurity often resulted from the difficult choice between purchasing necessities or having a meal. Forced with challenging circumstances, a student with low food security might skip a meal while very low students may go a complete day without eating. For this full-time student working 40 hours per week, the choice was between a piece of fruit or fuel; sometimes an apple a day is too costly when one needs gas to get to work:



Sometimes I don’t have enough money. Sometimes it’s enough money for gas, and I need the gas to get to work. There’s times that if I have an apple, I’ll eat an apple, or I’ll go sometimes not eating that day.

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

¹² Given the small sample size and qualitative nature of the study, these data should not be interpreted as representative of all students with very low or low food security and are provided only to illustrate the response pattern within the sample.



Food security suffers when time is in short supply and students with very low food security more commonly have long, inflexible stretches of time committed to both work and study. This leaves little time to prepare meals. Whereas a low food secure student may, in this situation, grab fast food to stave off hunger, a student with very low food security is more likely to forgo eating. This “time-related food insecurity” is much more prevalent among very low food secure students than those with low food security.

5.7.2 Summer Disruptions

Summer-related declines in food security were one notable way in which very low food security appeared to differ from low in type rather than degree. The transition from the spring semester to summer can disrupt students’ normal patterns in ways that alter their food security. For some, the onset of summer comes with improved food security, as it may provide access to familial resources or free up time for preparing food at home, enabling the same amount of money (or less) to provide a better diet. Summer can also allow some students to add work hours that generate more money to spend on food. For others, however, the end of the semester can bring a decline in food security, sometimes to the level of very low food security. Even students with foresight sometimes fail to anticipate that their financial aid dollars will have to last them for the summer as well as the spring semester. Some expect to find jobs, increase their work hours, or receive more financial aid for summer classes, and have little money saved to hold them over until these resources materialize. The student quoted below reached the level of very low food security when his remaining aid dollars ran out, his summer aid and summer work hours had not yet started, and his car was towed, incurring an additional unplanned expense he could ill afford.



Really tight. Definitely eating more ramen. I finished all my financial aid money that I had gotten for the spring, so now it’s really just what I’m making from work, and since I’m working part time, it’s pretty tight. I don’t spend money outside of anything that I absolutely need to.

Interviewer: What would you say are the most important or necessary things that you spend money on?

Rent and utilities. I need my apartment of course, and Internet to do my homework, and electricity to have the Internet.

— 23- to 27-year-old, full-time public student with part-time employment and off-campus, shared housing - roommates

5.7.3 Academics

Very low food security is often accompanied by major academic disruptions and/or students engaging in a variety of strategies in an effort to minimize academic disruption. Whether very low food security is a recent development or a more consistent circumstance, students with this level of food insecurity often find their ability to devote themselves to academics severely impaired.



A sequence of disruptions and hardships during an academically pivotal month drove a traditional-aged student living with his family while juggling full-time enrollment with a 40-hour workweek job into very low food security. This was his only experience with the phase during the nine-month study. This unfortunate month included a sudden move by his family followed by an urgent need to find housing. The crisis occurred when he was transitioning into a new job. He missed several classes and a test before scheduling a meeting with his professor and the department chair to discuss the situation.



They weren't as lenient as I believe they could've been, but they were lenient on some things. But they did tell me, 'You really need to study for your finals.' And I told them, I said, 'I will do the best I can, but I can't promise anything. And if I fail this course, I fail this course, and I'll just take it again. But, I will do the best I can, I can't make any promises.' And that's honestly been my phrase for the past two months. I will try my best but I cannot make any promises to you.

— 18- to 22-year old, full-time public student, with full-time employment and off-campus, shared housing - family

Thanks to the partial “leniency” granted by his professors, this student managed to pass the class in question, but his experiences point to two important dynamics impacting some students with very low food security. The first is the obvious impact on academic capacity of the material circumstances that produced very low food security – i.e. job and housing disruptions, especially having to suddenly begin paying for housing – on academic capacity. When minimum standards of financial and housing security cannot be guaranteed, resignation to academic penalties, including failing classes, can result.



Students in this study who faced similarly precarious circumstances on a regular basis, though generally better adapted to a routine that meets basic needs while maintaining academic progress, were less likely to reach out to professors or seek special consideration.

The second relates to the magnitude of the relative decline in circumstances. The suddenness with which the situation developed certainly contributed to the resulting academic damage, and it may also have influenced the student's decision to reach out to his professors. Students in this study who faced similarly precarious circumstances on a regular basis, though generally better adapted to a routine that meets basic needs while maintaining academic progress, were less likely to reach out to professors or seek special consideration. Though most students readily used institutional academic assistance (learning labs, math tutors, etc.), many with consistent very low food security were reticent to request academic accommodations in connection with material hardships. In contrast to students with low food security, students with very low food security seemed to prefer a division between academic and material/financial concerns, seeking help with the former at school and with the latter from social connections, though they understand their interconnectedness all too well. This older student explained this delineation:



With studying, I sought the help because there's a learning lab, there's my professors, I get help with that. But when it comes to food issues or money issues, I didn't want to ask for help, because I was like 'I should be able to do this on my own. I should be able to do this without asking for help.'

Interviewer: Would you have wanted help or some kind of assistance from your school, or did you want that independence more so?

I think if I knew what resources there were, maybe I would've asked for help. I think it's a pride thing and I was like, 'Well, let me try to see if I can do it on my own.'

– 33+ year-old, full-time public student with full-time employment and off-campus, solo housing



Students may also seek to divide academic from living expenses because they experience a form of “imposter syndrome,” fearing a loss of respect from faculty, staff, and students who “belong” in college if they acknowledge their struggles to others.

Some students compartmentalize school versus living expenses, possibly because their significant unmet need (especially for loan averse students) suggests that aid is adequate only for academic costs, and only barely. This student who attended a private college full-time was asked how sufficient student aid was:



They're enough for school, I guess, if that makes sense. They're enough to make payments on school, so far. And there's been plenty of times where I've had to... Well, things aren't working out, I've had to fill in the gaps.

– 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – roommates and romantic partner

Students may also seek to divide academic from living expenses because they experience a form of “imposter syndrome,” fearing a loss of respect from faculty, staff, and students who “belong” in college if they acknowledge their struggles to others.



I guess with the whole living situation I've needed help but it's not like I've had to ask for help, it's more like, 'Hey, work with me on this, can we make the living situation happen or do I need to look somewhere else?'



Interviewer: Oh, okay. What about your school? Did you consider trying to get help from your school with any of those problems?

I want to leave school as uncomplicated as possible. When it comes to my financial aid and my academic schedule, that is all I'll talk to them about.

– 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – roommates and romantic partner

The students above saw their academic capacity and performance suffer as a result of circumstances related to very low food security, but some manage to succeed academically in the face of such conditions. While the ability to focus despite stress and hardship is impressive, in some cases, students who maintain their academic performance despite food insecurity may be in significant material jeopardy. Students with persistent very low food security often struggle to meet basic expenses, and keeping up with the perpetual challenge of making ends meet generally and requires a significant amount of time and results in substantial stress. Under these circumstances, a student's good grades can be a sign that they are neglecting their basic needs and putting themselves at risk. One student leaned on her spiritual faith to see her through the stress of living with very low food security as a college student.



It did affect it a lot in the beginning because I wasn't able to focus or eat, because I was like, 'How am I gonna get my rent paid? Where am I gonna stay?' But I'm a very faithful person, so eventually I was like, 'Whatever happens, happens. I can't not have a place to live and fail school. It's gotta be one or the other.' So I was just like, 'If I don't have a place to live at least I pass my classes.'

– 18- to 22-year-old, full-time public student with on-campus, shared housing - roommates

The same dynamic can also affect class attendance. For the student quoted below, budget margins were so tight that the cost of traveling to campus noticeably detracted from dietary quality; he could not afford to attend all of his classes and eat sufficient food, so he skipped classes regularly. Students in this circumstance who maintain consistent attendance may be sacrificing adequate nutrition, jeopardizing not only their health but also their academics, employment, and finances as their risk of illness and exhaustion increases.



Interviewer: And these food issues that you had, do you feel like they impacted your academics as well?

Sometimes. Because sometimes I was worried, 'Oh, if I go to class and I don't spend those miles on my car that waste my gas, then I won't have to put so much in my tank a week, then I can put more money towards food so I can get more food.' So I didn't go to classes a lot because that was my thought process.

– 18- to 22-year old, full-time public student, with full-time employment and off-campus, shared housing - family

For this student, the cost of a tank of gas might have been the difference between aiming to pass or excelling, which perhaps could lead to stronger references from faculty or eligibility for merit scholarships.



5.7.4 Budgeting Out of Necessity

Students experiencing low food security often struggled with managing their money. Often, participants began to engage in insecure eating patterns when they realized, somewhat belatedly, that they would have to cut back on expenses. In contrast, students with very low food security appeared far more likely to engage in more deliberate, intentional budgeting. Some comments suggest that this may be based in the combination of circumstances so severe that budgeting becomes necessary for survival and greater familiarity with such circumstances, such that the students were more “acclimated” to dealing with financial stressors head on. This also coheres with demographic differences; students in this study experiencing very low food security, especially those who faced it in multiple interviews, were more likely to be older and to have dependents, such that they had more financial demands and responsibilities, more complex finances, and more time in which they could have developed financial skills. For this older student, budgeting on the financial edge looked like this:



Right now, I had reached out to a friend of mine who has helped me set up a budget and I try to stick to that budget as much as possible to make sure that my bills get paid. Sometimes like I said, life happens, I'm human and I mess up and I sometimes go over my budget or I'm like, 'Crap. How am I gonna get the money for this bill?' That's pretty much how it happens. I have a budget that I look at, I try to look at it daily to see what's due, what's coming up. If I can, it's kinda playing with it too, like, 'Okay, well this is not due until this time so I can swing some to maybe pay an extra bill.'

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

Some students preferred to conceptualize their budgets in terms of work hours. In the quote below, a single parent who has experience living in poverty managed her wants, but cash flow disruptions still threatened basic needs for herself and a dependent.



Interviewer: Do you feel like you've been able to budget and save more?

No. Next question. No. [chuckle]

Yeah, yeah. I'm kind of like... It's the valley for you. This area is so hard to get ahead it's almost ridiculous 'cause when you think you're getting ahead one thing can happen and it can... And I think that's in life. If you don't have a good support system or savings, which I had a little savings, it just, it was gone when my boy got hurt because I had to stay home from work and that was... If you don't have money and then you're going day by day, and that's me at the moment is I'm day by day. And it's not like I need anything. The necessities that I need are food, water and a roof over my head and that's what I have, I have it. So my support system has allowed me to continue to live.

Was there anything that you kind of had to give up to budget better?

No, I didn't. I was just frugal. I've been poor all my life so it's not like it's... You just, you manage.

— 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family



Under conditions of very low food security, personal budgets assume greater significance and even purchases for “little things” can trigger extreme parsimony.



Most of my money goes towards my rent and food and the little things I need for my extracurricular activities. I'm on the speech and debate. So I have to always buy fruits and stuff like that, like those little things.

Interviewer: In the last month, were there any times when you didn't have enough money to cover all of those things?

In the last month, yeah, yeah. Frequently.

And then how do you deal with that situation when it arises?

Well, I really sit down, I budget what I have, and what's needed, and what I can do without.

— 18- to 22-year-old, full-time public student with on-campus, shared housing - roommates

Unlike low food security, students dealing with very low food security are in a nearly constant state of precariousness. Necessity has compelled most to develop effective survival strategies and adopt highly frugal lifestyles into which they somehow manage to squeeze as much higher education as they can.

Food security provides a foundation upon which a student can build a platform of learning. By removing concerns about meeting basic needs, it allows students to concentrate on studying and mastering high-level skills. Students who are food secure tend to also be able to create bonds with classmates and faculty that are helpful to learning, maturation, and the formation of social networks that can be beneficial in future careers. The loss of food security makes students more vulnerable to enrollment disruptions. Through the voices of students in our study, this report has focused on who experiences low food security, what factors contribute to low food security, what are the implications of low food security, and how students cope with this condition. We focus on low food security because it affects many students and because this status is less intuitive and more ambiguous than very low food security.

This last section drew a distinction between low and very low food security. Low food security is defined as “reports of reduced quality, variety, or desirability of diet, little or no indication of reduced food intake.” In contrast, very low describes students who report “multiple indications of disrupted eating patterns and reduced food intake” (USDA, 2017). While categorical labels are helpful, food security exists on a spectrum and even the underlying responses to the survey questions cannot definitely locate individuals on that spectrum. Rather, more affirmative responses indicate higher odds that an individual is experiencing greater difficulty maintaining an adequate diet. Our study design, which monitors students longitudinally, has allowed us to reveal changes in food security patterns as a semester progresses and over the summer which bridges spring and fall semesters. We learned that food security among college students could be fluid for most, but static for some. The next chapter documents shifting food security beginning with instances of declining food security followed by a section that describes the dynamics driving improvement in food security.



6 SHIFTING FOOD SECURITY

"[My meals] have been getting better. I've been able to eat more and...have more of a variety in my diet as well as a healthier diet [because] my boyfriend and I have decided to do groceries together. He [pays] for all the groceries if I help with cooking and help us make healthier decisions and improve our diet. He's definitely helped with the grocery bill and my diet has just really improved."

18- to 22-year-old, full-time, private student



Our study monitored college students and their level of food security over nine months (January 2017 to October 2017) including the poorly understood summer period. This longitudinal perspective reveals a more fluid pattern of food security than is commonly understood. Changes to food security derived from sudden shifts in financial stability resulting from changes in employment, financial aid, social networks, and personal budgeting (see Figure 6 on page 83).

6.1 DECLINING

Like students' circumstances overall, food security rarely remains static over a significantly long period of time. As the semester and summer progressed, 26 study participants experienced a decline in food security from one interview to the next. The table below shows that students' food security declined from high to low 18 times, from low to very low five times, and from high to very low seven times. This makes 30 instances of decreased food security (three participants experienced two declines with an intervening improvement, and one experienced a further decline in a later interview).

Potential causes of declining food security are presented below, organized by the type/magnitude of the decline.

TABLE 8. Instances of Decreased Food Security Relative to the Previous Interview

Shift	Number
High Food Security to Low	18
Low Food Security to Very low	5
High Food Security to Very low	7

6.1.1 High/Marginal to Low

Declines in food security from one interview to the next most commonly involved a shift from high/marginal to low food security. Review of these cases suggests that the most common likely factors contributing to the decline involve worsening financial circumstances, often related to issues with employment and/or additional expenses. Nearly half of the participants reported either that their job did not pay well or that they had lost their job, and over half reported unusual expenses. These included unanticipated car repair and maintenance costs, repair costs on a broken cell phone, speeding tickets, health issues affecting themselves or family, pet care expenses, and a variety of expenses related to summer break.

Employment issues frequently preceded a drop from high to low food security, typically by affecting students' finances. Some students had their hours cut or requested fewer hours because they needed more time for academics or other responsibilities. In a more extreme form of the same pattern, a few were let go or left their jobs voluntarily and reported a decline in food security in either the same interview or the next one, depending on the timing of the departure.



When asked if there were any times when the student struggled to have enough money for necessary expenses, this full-time student acknowledged that there had been.



Yeah, towards the last... The end of the two weeks before my next pay period. Yeah, it's usually rough around that time.

Interviewer: Is that's something that usually happens?

No. Only now because my hours were cut.

— 23- to 27-year-old, full-time public student with part-time employment and off-campus, solo housing

Even students with high food security may lack a rainy-day fund to buffer disruptions in employment, like this traditional-aged, full-time student.



The past two weeks... I'm at the end of my money basically until I get paid on Sunday. So right now, I just had just pizza for lunch basically. I'm just trying to stretch my money as far as I can.

— 18- to 22-year-old, full-time public student with seasonal employment and off-campus, shared housing - family

Steady employment is critical to keeping many students at high levels of food security.



I just ended [working at a restaurant] actually because I'm about to move back.

Interviewer: When did you stop working there?

Well, I was in Colorado this whole past week, so last Friday.

Okay. All right, and how's that affected your finances?

Well, I just picked up my last paycheck, so I guess I won't really feel the impact for a couple of weeks.

— 18- to 22-year-old, full-time public student with full-time employment and off-campus, shared housing - roommates

The last student quoted experienced a decline from high to low food security in the next month.

General financial issues that were not connected to a change in students' employment were also linked to declines in food security. As students' finances worsened, they ate irregular and/or less balanced meals to contain costs. Students who received significant financial aid and worked few if any hours were especially prone to this pattern, as they came to realize the necessity of slowing their expense rate and stretching their resources.



It was a consistent thing and it was mostly just me trying to maintain costs. I was like, 'Ok we will eat this,' and maybe it's balanced. I don't know. Sometimes I just didn't have the time to cook everything. It was just kind of like, 'Throw together and eat this block of cheese. Ok we're going to bed now, goodnight.' So a little bit crazy this month, but it's mellowed out at this point, but yeah, the last month, food has been super weird, just like random, whatever is in the house kind of madness. Like eat this box of macaroni for lunch and then leftovers for dinner. That kind of stuff. It's just been patchy and random.

— 23- to 27-year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

For students who were heavily reliant on family financial support, general financial issues linked to a food security decline were often linked to family financial challenges stemming from job losses, issues with family businesses, health problems, and unexpected expenses. The quotes below are taken from two successive interviews; in the first, the participant's father had lost his job in the previous month.



I'm supported by my dad right now, but the startup he was working for just lost funding.

Interviewer: Okay. How has that impacted you?

I just try and not to be a burden on him. I'm just like trying to be economical and not use his money and things like that.

Okay. Has there been anything that you needed money for that you didn't feel you can ask him for in the last four weeks?

Yes. School and I've asked him about that because you know, I don't wanna get him stressed out because he's already pretty stressed out. Yes, school and yeah, sometimes food a little bit, but I usually just find something else to eat.

— 18- to 22-year-old, unemployed, full-time public student with off-campus, shared housing - family

From the next interview a month later:



Interviewer: In the last four weeks, the food that I bought just didn't last and I didn't have money to get more. How often was that true?

Maybe a little bit. Just in the past week when I'm home alone, I don't really have that much money for food. Sometimes I'm just okay, I'm not really hungry. Right now during lunch, I just won't have lunch to have more food left, I guess.

— 18- to 22-year-old, unemployed, full-time public student with off-campus, shared housing - family



FIGURE 6. COMMON DRIVERS OF SHIFTING COLLEGIATE FOOD SECURITY

DECLINING	DRIVERS	IMPROVING
Erratic work hours; loss of job; receives low pay; long commute; underemployed	EMPLOYMENT	Stable pay; receives a living wage; easy commute; work schedule accommodates school
Loss of financial aid; insufficient aid package; loses academic or merit-based scholarship; classified as dependent student when actually independent	FINANCIAL RESOURCES	Gains access to federal, institutional, or supplemental aid (e.g., Pell grant or SNAP); financial aid disbursement (beginning of semester)
Parent loses job or becomes ill; is a single parent or has dependents; abrupt changes in childcare (i.e., lost access or increased cost); sibling or parent(s) requires financial support; separation/divorce from romantic partner	SOCIAL NETWORKS	Parent(s) send money; student returns home to live with parent(s); moves in with sibling; parent(s) visits and buy groceries; friend(s) give meal "swipes" or pick up the check; romantic partner helps pay for and prepare meals
Car needs repair; unexpected medical bills; price of daycare rises; cost of textbooks; lab fees; roommate moves out or doesn't pay share of rent; rent increases; utility bill spikes	EXPENSES	Finds time to grocery shop and plan affordable meals; family member provides childcare; moves to less expensive apartment; receives transportation voucher from school; has classes with open resource textbooks

Students with dependent children were particularly susceptible to declines from high to low food security that co-occurred with family-related challenges. This often took the form of a loss of family support for the child, although issues sometimes originated with the children. One single mother's food security declined as her son began experiencing issues with school; critically, she was able to reach out to other family members for assistance:



The only thing that I would say that I had to struggle with is just, is with my son. Just managing him with school and because I am a single parent. It's just making sure that my son is prepared for what's coming in for the school year...That's the only thing that I didn't really reach out as much as I should've because I didn't really know everything that was entailed with the learning disability, and dyslexia, and the different things that they're saying that they may see. But like I said, we'll be able to get everything fully tested. But at this point, when it started getting real dire, I had to reach out to other family and stuff like that.

— 33+ year-old, part-time public student and single parent with part-time employment, and off-campus, shared housing – family

Another single mother's food security declined from high to low as she struggled to secure childcare for her daughter. After losing her sister's help with childcare (another instance of a social challenge), she was holding out for a promised spot in a free, non-profit childcare center whose opening had been delayed, using drop-in daycares in the meantime. They charged such high rates that she literally could not afford study time. Fortunately, the new center opened by the end of the month; the following month, food security returned to "high."



It's been a little hectic. I didn't have childcare sorted out super well for the last month and so I would be going to class and then leaving class as quickly as possible because the way my childcare is working is that I was being charged like an incredible amount by the hour. So I just got signed up with [program] over spring break which basically means that the state of [State] is paying for my childcare now. So now my daughter is in a full-time daycare from 8:30 to 4:00 every day, so I have more time for my school now, but unfortunately it didn't really happen in time to be able to make a difference for my midterms this week. So there's that.

Interviewer: Did the childcare you were using get too expensive or what happened?

It had been too expensive from the start. I was kind of set up using it on a 'here and there' basis. It was like 'Oh, I'll do an hour here when I need it because [university] gave me like a small stipend to apply towards it.' But my primary childcare was my sister and then she didn't want to help anymore so she just stopped. So then I had to use that form of childcare that I'd been using just here and there on a full-time basis and it was just way too expensive when you use it like that because it's like \$11.50 an hour. It was too expensive to use full time. But waitlists for daycares here are insane and I didn't really have the time to go and find a new one. So I just kind of kept her there because there was supposed to be one opening where she would be in for free because it's part of the housing program that I'm in. So I just kind of kept waiting; 'Oh it will be any day now' and then it just wasn't. Yeah, I spent a ton of money on it and it was way too expensive.

— 23- to 27-year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Combinations of possible contributing factors frequently preceded or co-occurred with a drop from high to low food security. For instance, the food security decline experienced by the single mother quoted above may have been related not only to increased childcare expenses after losing her sister's help but also to the coincidence of having no child care during spring break and needing to study for midterm exams; academic burden increased as family support decreased. The student explained:



Yeah, I mean having her without daycare for spring break meant spring break was not a great time to study because I just had a kid all the time. And I have midterms you know coming up this week you know but no I haven't done a ton of studying for it basically. I could've studied more obviously, everyone can always find a little more time to studying, but I've got a little bit of time to study here and there during the week so I'm going to do a little studying tonight for my midterm tomorrow and then a little studying tomorrow and the next day for the midterm that's on Friday and we're just going to see how that plays out.

— 23- to 27-year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family



For a newly single father, a different set of factors appeared to contribute to the decline from high to low food security. Obligations related to divorce proceedings caused him to lose a newly acquired job; at the same time, he began to save for the expenses of raising a child.



Everything changes with the whole divorce, and now that I'm dealing with co-parenting, I'm already starting to try and see about the holidays, believe it or not. I know that it's unnecessary spending, but to a nine-year-old some of those things are a must, having Halloween, costume money, and Christmas money. I'm already working on that.

— 33+ year-old, unemployed, full-time public student and parent and off-campus, shared housing - family

Though never the sole factor preceding a decline from high to low food security, an issue with financial aid was involved in four of 18 such cases. For example, one student's spring grades caused him to run afoul of satisfactory academic progress (SAP) rules, making him ineligible for financial aid for the summer and fall semesters. While his grandparents were providing for his academic expenses, the prospect of funding his living expenses without assistance from others or otherwise, may have contributed to his decision to prioritize saving over paying for/buying adequate food, which resulted in low food security. When asked if his financial aid package had changed, he confirmed the loss of aid.



Yes. I will not be getting financial aid.

Interviewer: And can you tell me what led to that change?

Well, I wasn't doing too well in classes, so they cut me off.

[later in the interview]

Interviewer: In the last four weeks I cut the size of meals or skipped meals because there wasn't enough money for food.

Sometimes I cut the size of my meals because I wanted to save money, it's not that I didn't have enough.

Okay, what about in the last four weeks I ate less than I felt I should because there wasn't enough money for food.

I guess the same thing.

Okay. Can I ask what you were trying to save money for?

Just saving money in general, just in case of emergency.

— 18- to 22-year-old, full-time public student with full-time employment and off-campus, shared housing - roommates



On the whole, the 18 students whose food security declined from high to low tended to have recently experienced a significant and unexpected though not catastrophic setback, most often resulting in direct financial harm but sometimes costing only time or increased stress. Financial struggles preceding these food security declines were most commonly rooted in the loss of a job or work hours, unexpected expenses, financial aid issues (e.g. loss of eligibility), or a slow deterioration of financial circumstances over time. Facing these challenges, many students began to engage in behaviors that classified them as having low security in an attempt to balance budgets that now included less income and/or higher expenses. With notable exceptions, the far majority of these events began with issues in students' personal finances and mitigated, at least in part, through students' reliance on assistance from their social connections.

6.1.2 High/Marginal to Very Low

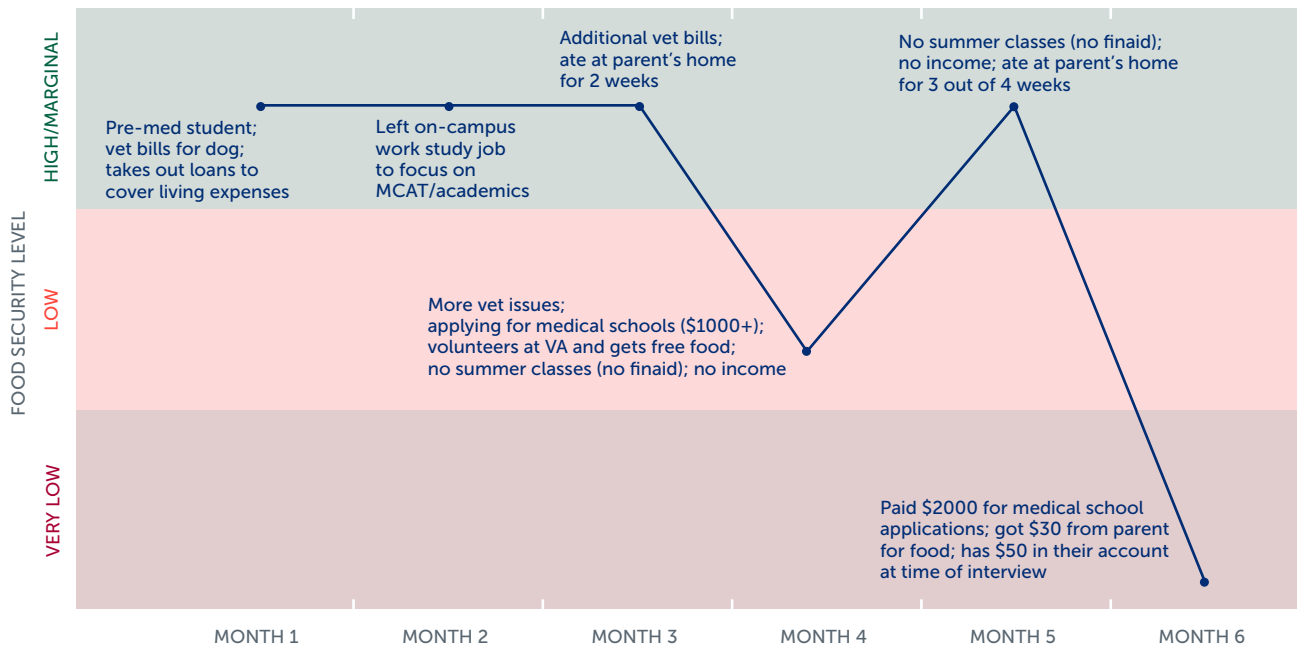
Seven students saw their food security drop from high to very low from one interview to the next. This happened only once to each of the seven students, but their experiences mirrored those of students whose food security went from high to low, but there were some crucial differences. Those involved the prevalence and nature of social and housing challenges and a lack of flexibility or choice around when/how to engage in food insecure behaviors.

The role of social connections was perhaps the most striking difference between factors surrounding "high to low" and "high to very low" food security declines. In cases where food security declined from high to low, preceding challenges appeared to originate with the affected students' social connections in only four of 18 cases, and three of these students were able to rely on social connections in addressing the challenge. In contrast, social issues appeared to contribute in four of seven cases of high to very low food security decline, and these students' either did not receive assistance from social connections or found that the assistance they did receive was not effective.

In the case of "Molly" (See Figure 7) – an 18- to 22-year-old, full-time pre-med student with off-campus housing – a combination of ambitious academic and career goals, costly medical school applications, and recurring veterinary expenses resulted in her food security dropping twice.



FIGURE 7. "MOLLY"



Molly was food secure for the first three months of the study and had a restrictive, but attainable, budget. This changed in Month Four, when her food security dropped from high/marginal to low due to a combination of: (1) recurring vet expenses; (2) pricey medical school applications; and (3) leaving her part-time, on-campus job to focus on academics. Fortunately, Molly was able to secure free food through her volunteering efforts and at her parents' home. This temporarily increased her food security for one month, but without any financial aid or other regular sources of income, her financial and food situation degraded further to very low. By Month Six, Molly completely drained her savings after paying more than \$2,000 in medical school applications; and although she had received \$30 from a parent for food, she only had \$50 in her bank account at the time of the last interview.

A single mother's story helps illustrate the combination of events that triggered an extreme drop in food security. For "Alice", quitting her job became the best course of action when her parents' assistance became untenable. Two cars she had borrowed from her father had broken down, and her aging mother had assumed the bulk of childcare responsibilities for her son but was temporarily unable to watch him. During this time, her son was bitten by a dog and required expensive medical attention. Alice explained the circumstances surrounding quitting her job.



And what finally led you to quitting that other job?

Just that everything stacked up, everything stacked up against me. I broke my dad's Cherokee, and then we fixed it and then he put me into the Impala. After doing that and making repairs on the Jeep and then having to make repairs on the Impala, it was like, 'I'm



going nowhere with this.' Having my responsibility with my kid land on my mother who's 66 years old. That was another thing. It's like, 'You know what, it's just not working.' I quit. They didn't fire me.

— 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Besides aligning with the decision to leave her job, the decline from high to very low food security paralleled drastic shifts in both state benefit support and non-family community support for this student. From the interview with high food security, Alice explained the source of the decline in her resources:



I still get WIC and pay \$95 in [state program], which is my childcare, a month. And now my food stamps went from instead of \$356, they went down to \$230 something, and now it's at \$64 a month. Me working is definitely gonna be more difficult because I'm not gonna be able to save as much because of the food being taken away from me, but that's life.

Interviewer: How have you kind of managed to budget with that reduction?

I won't receive that \$63 'til next month. I'll tell you next month.

— 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Another source of money was the owner of the dog who bit Alice's son.



I had support from... My friend's dog who bit my son, he gave me \$100 a week and kinda helped me out there. And whenever I needed anything, my neighbors were around to help me, like go get me a gallon of milk for the kid. They were able to do that. And we needed some sodas in the house, 'cause I just wanted sodas or some ice cream or something like that, they were there to... They called me every time they were going to the store, so it's like, 'Oh, well, can you pick up...' And they'd bring it over to me.

— 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Contrast the quotes above to statements from the following interview, when her food security was very low:



Interviewer: And what led to the skipping of the meals?

Not having the money. Not having the money at all. Because they had already issued my food stamps and it was only \$64. So not having work and getting a paycheck weekly, that pretty much sealed my deal as, 'Okay, what are you gonna eat today? Another piece of bread that you're allergic to. Yay!' I'm gluten intolerant and my body hurts when I eat certain foods, so not everything I eat is good for me. And I sometimes I'd rather not eat than eat something that's hurting me.

— 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family



Alice had significant social support throughout the food security decline; she and her son were living with her parents. However, they were not able to help with money or food, and the non-housing assistance they had been trying to provide – transportation and childcare – proved unreliable. In fact, with the important exception of housing itself, the family reversed the direction in which assistance was flowing, with the student helping her parents more than the opposite.



I've been able to help my mom and dad with doing things around the house. Like yesterday I was able to get up on the roof and trim a bunch of tree limbs that were rubbing on the roof for the storm. If I was working [at my old job] then my dad probably would have had to be up there and he's 67. I was able to pick up the house, all the toys are everywhere. Pick those up before my mom comes home. Just things. I've been able to help around the house this month, more so than I would've if I was working. And I will still be able to do that, working a 40-hour week in October which I expect to, temporary in September, I'm gonna be able to help around the house. I'm gonna be able to come home from work, see that the dishes need to be done, sweep up or do things that need to be done for my mom and my father.

– 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

For another student, failure to receive help from social connections (as well as the needs of the student's son) compounded unexpected expenses, general financial trouble, and health issues to create a far more harmful financial situation, resulting in very low food security.



I got a nail in my tire, so I had to get a new tire. Another thing is that I forgot that I had my gym membership on auto-pay. I've never realized how much I pay for my gym membership because I've never been at a point where I had to check my account and be like, 'Oh my God, bills are coming. They're about to pull money out, I don't have enough.' I've never been in that situation until now. The fact the tire messed up, I got sick. I had to pay child care by myself because my son's dad didn't help me. It happened all at once.

– 18- to 22-year-old, full-time public student and single parent with multiple part-time jobs and off-campus, shared housing - family

The two other students whose food security declined after a challenge related to social connections also experienced issues with the availability or adequacy of family assistance. One student was waiting for her father to reimburse her for more than \$1,000 spent on medical school applications, but he had not yet sent the check. This student's mother was also unable to meet her full need:



Interviewer: And in the last four weeks, did you use any other resources or rely on anyone else at your school for help with food?

No, it was really my campus ministry boss and I called my mom, and I was like, 'You have to give me money, I'm broke, I need \$50.'



And was she able to help you out?

Yeah, she was. She gave me like \$30, because she's broke too, but it all counts.

— 18- to 22-year-old, full-time private student with multiple part-time jobs, and off-campus, shared housing – roommate and romantic partner

The student in the other case was recently divorced and required to make child support payments despite being unemployed. He was able to move in with family with whom he had lost contact with for many years but ate with them irregularly and had no money to purchase his own food. He speaks of waiting for his reunited family to offer him food.



When I'm there at my mom's house and at my sister's house, I eat when they eat because I don't feel comfortable enough to just go and grab their stuff. I hadn't had a relationship with these people in ten years, twelve years, and then I'm back into their lives and it's like I need the help. And, I don't know. So many times I just wait for them to cook or if they offer me something.

— 33+ year-old, unemployed, full-time public student and parent and off-campus, shared housing - family

When students' social connections are positioned to help in times of need and do not often require assistance themselves, they cushion the impact of other issues and are unlikely to be an inciting factor for a food security decline. When food security declined from high to very low, social connections more frequently either contributed to the issue or were unable to assist as effectively, as compared to students whose food security declined from high to low.

Housing-related challenges also distinguished "high to very low" food security declines from "high to low" declines. Whereas declines from high to low food security were preceded or accompanied by issues related to housing in only one of 18 cases, housing issues were present in three of seven declines from high to very low food security. In one case, this was a fairly straightforward situation in which a rent increase made a student's budget infeasible. A single parent describes her current financial situation:



Terrible. I got a new job, to pay my rent, but the thing about my rent is it's not a fixed rate. When I got my job at [college] to pay my rent I was only paying \$180. I have a car note of \$252 that I pay. The money from school was only paying my car note, but it wasn't paying my rent. And so I had got a weekend job to cover those expenses. And so, it was okay but then, it was time for me to renew my lease. When I renewed my lease, my rent had went up to \$380 and so it's like I got a second job to be able to pay my rent since my school job was only paying for my car. Now that you raised my rent, I'm back to the same situation where it's either you pay your car or you pay your rent. But you don't have enough to do both.

— 18- to 22-year-old, full-time public student and single parent with multiple part-time jobs and off-campus, shared housing - family



Issues with utility expenses also accompanied factors preceding food security declines in some cases. One student had arranged to pay the entire electricity bill at the beginning of every month and have her roommates contribute their portions to her rent at the end of the month; paying most of her rent and then a large utility bill one week later strained her paycheck to paycheck budget, resulting in food-insecure eating.

The extreme deterioration of food security represented by a decline from high to very low security often involves the confluence of disruptions to pillars of stability, including employment, housing, and students' social networks. In every case, the student experienced some sort of financial difficulty, but the issue almost always involved loss of work and involved financial aid issues in only two cases, both of which coincided with a job disruption. Whereas students who experience low food security generally rely on social connections for assistance, students who declined to very low food security were either unable to secure social support or were relied on to provide support to social connections. In no instances did a student choose to engage in very low food secure behaviors to save for eating out or some other voluntary expense; falling from high to very low food security was always dictated by hard financial necessity and the literal inability to spend more on food.

6.1.3 Low to Very Low

There were only five instances in which study participants shifted from low to very low food security from one interview to the next. Their only significant commonality was job-related issues. Three of the students reported having no source of employment, one reported a low-wage position, and the other experienced a pay lapse when transitioning from part-time to full-time employment. The first four appeared to all represent cases of gradual budgetary deterioration, which they responded to through gradually degrading their eating patterns, like this full-time private college student who works part-time.



*It's been a really interesting last month since we last talked. I don't know why it's been so tough, but for some reason, it's been a very tough, tough month, financially. But I'm relatively smart on how I eat. I haven't been getting the proper amount of nutrition and stuff... There are definitely days where I'm like, 'Holy s***, I've been eating the same thing for weeks.' And as a person that actually really enjoys making food and eating good food and healthy food and all that, it definitely drives you a little crazy eating the same thing every day, but at least I'm eating.*

— 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – family



The quote from the same student below illustrates the damage that a low-paying job can do to a students' schedule.



Interviewer: Overall, how would you describe your current financial situation?

Ooh. Dire. No, it's just... I'm working quite a bit. I'm working 35 hours a week, from 30 to 35 hours a week. But it's just not paying enough.

How much do you earn in your position?

\$11 an hour, so definitely not much. But yeah, it's time to leave. With what my classes are, I don't have a choice but to find a better day-to-day job, that's not in the evening or the night or anything. So I've started applying to places and we'll see how that goes. But yeah, it's been tough enough. And so I'm also taking on side jobs here and there.

— 23- to 27-year-old, full-time private student with part-time employment and off-campus, shared housing – family

With exceptions, many of the same factors involved in declining food security (e.g. employment, financial aid, social networks, etc.) were also pivotal in improving food security, highlighting the close connection between finances and food security.

6.2 IMPROVING

While many students experienced declines in their food security from one month to the next, even more saw their food security improve at least once over the course of the study. There were 50 instances of month-to-month food security improvement, of which all but four were low or very low to high. These improvements were experienced by 30 unique students.

TABLE 9. Instances of Increased Food Security Relative to the Previous Interview

Shift	Number
Low to High	30
Very low to High	16
Very low to Low	4

Students reported a variety of accompanying factors that were explicitly or plausibly related to the improvement in their circumstances. These were strikingly common across all three types of increased food security; as such, they are combined into a single section, with notable distinctions between categories outlined in a second section.



6.2.1 Patterns of Improvement: Finances, Social Networks, and Food Habits

Of these factors, changes to financial situations were the most common; within that broader category, most students reported implementing or recommitting to personal budgeting, often in conjunction with careful, strategic cost-cutting and effective communication. A full-time student who also holds down a full-time job seemed to confront the financial challenges directly.



Interviewer: Has anything in particular led to that improvement?

I think it's me sitting down, relooking at my budget and reorganizing my budget and being like, 'You know what, I need to take care of these bills.' What I was doing at first was I was going through and... I hear everybody always saying, 'Make sure to pay yourself first. Put some money away in savings, buy your groceries, then pay your bills.' I wasn't doing that. I had money going into savings when school started back in January and I used it 'cause I had to catch up on bills. And I'm like, 'Well, it's a struggle to save money again.'

And now I'm able to look at it... When I looked at my budget, I'm like, 'Okay, well I'm gonna put this much money in my savings account and then I'm gonna put this money and get groceries and I'm gonna make sure I have money for gas, and then pay my bills.' And I think little by little that's been taken care of. Just reaching out to some of my billers and say, 'Hey, I'm struggling this month but I'm gonna send this amount of money.' And I think just making that effort... And a lot of them say, 'You just making that effort to call and trying to set something up, makes it a lot better than not paying anything.'

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

For the student quoted below, conscientious adherence to a budget helped restore financial stability and food security.



So personal finances, I pay for my own food, gas, any of those things, and I get paid from my work. So I budget maybe every two weeks my paycheck. I write out what my paycheck is, and then I make a distribution with some of that and then I try to stick to it as best as I can.

— 18- to 22-year-old, full-time private student with multiple part-time jobs and on-campus, shared housing - roommates

Increased engagement with financial aid also played a role in some students' financial improvements. A few, like this 33+ year-old who lives alone, successfully appealed previous determinations of ineligibility.



Things have been going really well. I did some appeals for some financial aid to get back into some... tuition help and those appeals got approved and so things are going really well: school, work. Budgeting is hard, but it's hard for everybody.

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing



"I have to take out the loans just to cover the cost of college but then I was gonna take out extra on top of that. More so, [I wanted to] have enough money, 'cause this past year I had to budget too much, to where it was stressful."

One student turned to loans to reduce the daily stress of living on the financial edge while attending school full-time.



I have to take out the loans just to cover the cost of college but then I was gonna take out extra on top of that. More so, [I wanted to] have enough money, 'cause this past year I had to budget too much, to where it was stressful.

— 18- to 22-year old, full-time private student, with multiple part-time jobs and off-campus, shared housing - roommates

Financial aid helped many students stabilize financial situations that threatened their academic progress, like this student with multiple part-time jobs.



Just the fact that we got our financial aid really helps us out. Yeah, I mean we're not stressing as much about, are we gonna get paid enough, are we working enough hours to make the next bill? Or are we gonna get paid on time? Or anything like that. We are able to put away the money that we do get from the financial aid and we're able to budget it better than we are when we don't have, when it's just like our working money.

— 18- to 22-year-old, full-time private student with multiple part-time jobs and off-campus, shared housing – romantic partner

Expanded reliance on friends and family accompanied the majority of instances of increased food security. Some, like the student quoted below, received direct financial assistance from people in their social networks, but social assistance also took the form of help with money management, receiving meals or food, and starting to share food and/or housing costs.



Actually in the past month I did call my parents and say, 'Hey, I need money for food,' so they gave me \$50, and I got enough groceries with that to last a bit so that helped. So, I did struggle but I was able to get help from them.

Interviewer: Is that something that frequently happens?

It was more like the summer months without the financial aid and then not working as many hours as I had hoped to.

— 18- to 22-year old, full-time private student, with multiple part-time jobs and off-campus, shared housing - roommates



In this instance, budget advice from peers provided relevant and pragmatic direction while helping to destigmatize financial instability.



I did talk to my friends about where my budget's at, what's going on, how are they doing it. And it helps out a lot to have that support group of knowing that I'm not alone in the matter, that others are on a budget and this is how they work their budget. It helps out a lot to be able to see somebody else like, 'Hey, this is my budget. Let me show you how to do this so that way you can pass a little bit of financial money left over so you can have some spending money.'

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

Parental expertise with money management can help, though it can also be paternalistic and controlling and may impede students from learning money management skills. This 23- to 27-year-old relinquished control to her father.



My dad was like my accountant, so he handled everything for me. So we put it into a separate account, and when bills came up, take it out and pay the bills. So it wasn't in my hands directly. So that helped.

— 23- to 27-year-old, full-time public student with off-campus, solo housing

Friends who share food can help students ride out lean times while strengthening social relationships, creating more resilient networks for mutually weathering future challenges.



Interviewer: In the last month, the food that I bought just didn't last, and I didn't have money to get more." How often was that true?

Often.

How did you deal with those situations?

I was either eating at a friend's house or... That was basically it. I have a very close friend that cooks all the time, so she always invites me over because she knows the situation, and when I do have food and I cook, I do the same for her.

— 23- to 27-year-old, full-time public student with off-campus, solo housing

Though parents more frequently helped through direct financial assistance or shared meals, the few instances where they helped students with groceries proved critical in elevating students' circumstances. A student living off campus spoke of the improvement that came from a visiting parent.



Well, one good thing that happened is my mom came into town and ended up getting us a ton of groceries. So I haven't been spending money on food like I was last month, pretty much every day. And so that was helping me save money, and yeah.

— 18- to 22-year old, full-time public student with off-campus, shared housing – family and roommates

Parallel to the pattern of more active money management, the majority of comments from students whose food security increased indicated that they had started taking more deliberate control of their eating habits. In discussing the sources of their food, these students often reported more frequent use of grocery shopping and home meal preparation and a reduction in eating out. This development was often directly (and sometimes explicitly) linked to more careful personal budgeting, as in the first quote below.



Yeah, I'm cooking at home. Most of it's all cooking. About 20% of it is going out and eating with my friends, but most of the time, I'm cooking at home. I still have food that I need to cook.

Interviewer: Okay. In general, how satisfied did you feel with meals over the last month?

I feel very satisfied because it's nice to be able to come home and realize whatever I wanna eat and if it's something I didn't wanna eat, and if I had budgeted enough money, then I would go and order something else, but most of the time, I'm eating at home.

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

For this student and others, improved cooking competency enabled lower cost food options:



Interviewer: How satisfied did you feel with your meals?

My cooking's gotten better, not gonna lie. I've learned a lot more to cooking. But yeah, it's been decent.

Is there a reason as to why you decided to cook more this month?

We just, we needed to start learning how to grocery shop and figure out our meals for the week and stuff. I think we're just testing the waters.

And how has that been going?

It's good, actually. We need to learn how to plan a little bit better so that food doesn't go bad. But it's been okay.

Has it helped with the budgeting?

Yes, definitely.

— 18- to 22-year-old, full-time private student with multiple part-time jobs and off-campus, shared housing – romantic partner



Progress towards greater reliance on groceries often took time and effort as students worked to alter their habits, but it could be seen directly from one interview to the next.

From an interview with a student experiencing low food security:



Interviewer: In the last month the food that I bought just didn't last and I did not have money to get more. How often was that true?

That was probably true probably 30% of the time, and that's because like I said, I wasn't managing my money or I would go out to eat more than I would buy groceries. I would say, 'Oh you need to go buy groceries...' And then I would end up going out to eat 'cause that's just more convenient to do that.

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

And from the next interview, in which the same student had high food security:



Interviewer: In the last month, the food that I bought just didn't last and I didn't have money to get more.

Never. I mean, I have food in my pantry right now. I go grocery shopping and I'll buy... If I know I have a can of green beans or pasta, I'll just buy an extra thing of pasta, so I keep building on that.

So you feel like it's always been pretty well stocked?

Yes.

— 33+ year-old, full-time public student with full-time employment and off-campus, solo housing

6.2.1 Notable Differences for Very Low to High Food Security

Though the factors that accompanied and seemed causally connected to increased food security were largely the same, regardless of specific improvement, a select few factors appeared more prevalent or significant when a student went from very low to high food security from one month to the next.

Compared to others whose food security improved, students in the “very low to high” group were more likely to have begun a “side-gig” job, such as pet sitting, house sitting, and babysitting. These students reported preferring this type of employment for its flexibility (including the ability to take hours as needed with long-term commitments and hold multiple jobs) and because they could easily study or do homework while on the clock.

Students whose food security went from very low to high were also more likely to have substantially changed their housing situation. Subjects in five of the 30 interviews where food security became high



from low mentioned living at home, though not always as a recent change. In contrast, four of 16 interviews in the very low to high grouping made mention of having moved in with family, a partner, or a friend in the last month, and often made explicit that they made the move to save money.



Everything here is good. My parents just got back and they're refreshed and happy and I have a roof over my head, I have a roof over my head until I leave with no problems so I'm fine. I don't have to pay any rent or utilities so I can't ask for anything better. [chuckle]

— 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Adding roommates made housing more affordable for this traditional college student.



I'm living with my boyfriend and my other roommate.

Interviewer: And so, how's that going? Any trouble?

Good. It's been really nice, and really cheap.

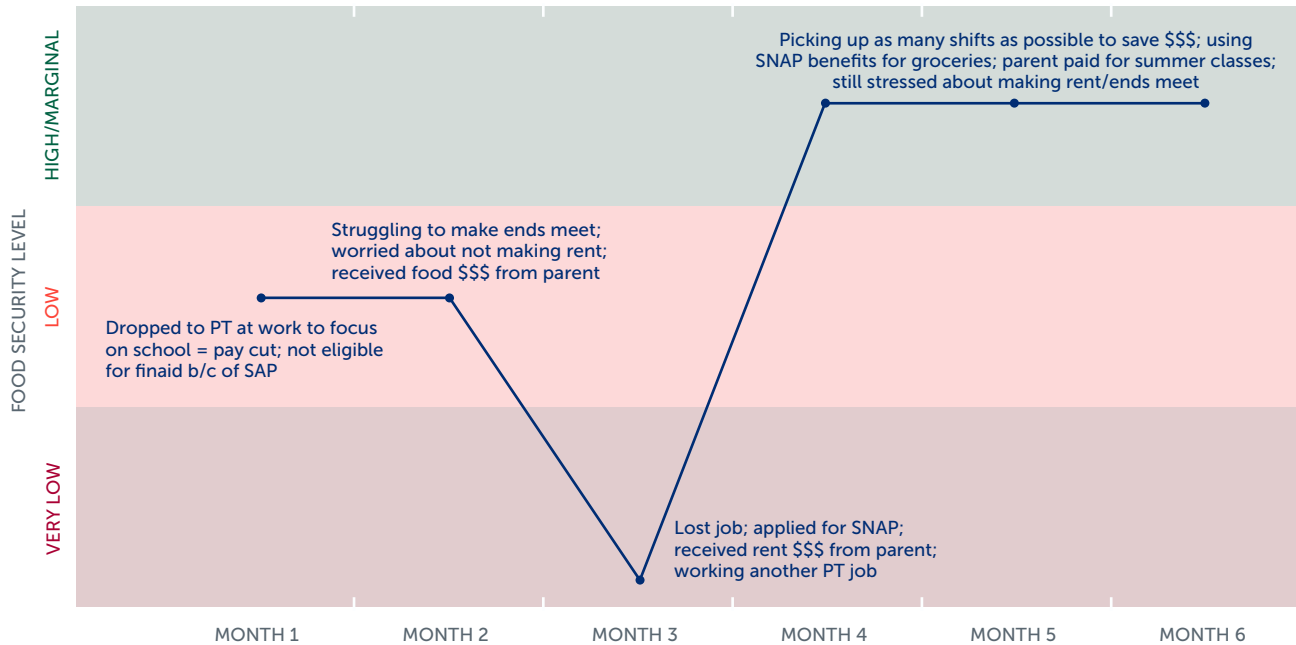
— 18- to 22-year-old, full-time private student with multiple part-time jobs, and off-campus, shared housing – roommate and romantic partner

This group was also notable for its use of public benefits. In fact, each of the four reported instances of students applying for and receiving food stamp/SNAP benefits in the study coincided with a shift from very low to high food security.

In his first interview, “Andrés” – a 23- to 27-year-old, full-time public student with part-time employment and off-campus housing – described dropping from full-time to part-time at work to focus on school. This pay cut, coupled with his ineligibility to receive financial aid due to SAP probation, resulted in the participant living with low food security. For the first two months of the study, Andrés talked about struggling to make ends meet and worrying about not making rent. When things got really tight, he would reach out to his social network, namely his mother and grandmother, for food and/or rent money. In Month Three, Andrés lost his regular part-time job and applied for SNAP benefits at the suggestion of another family member. Fortunately, Andrés had another “as-needed” (PRN) part-time job, where he was able to sign up for shifts whenever they fit into his school schedule. By months four to six, Andrés was picking up as many shifts as possible to save money while also receiving SNAP benefits, which he used for groceries at the local Walmart. At the end of the study, Andrés was still concerned about his financial situation and making ends meet, even though his parents paid for his summer classes at the local two-year college he attends, and his food security had stabilized at high/marginal.



FIGURE 8. "ANDRÉS"



One student resisted getting food stamps until going without food threatened their health.



I did go and apply for food stamps and I got food stamps, so that has helped me a lot. I mean I went and applied three weeks ago. I just got to the point where it was like I just couldn't do it anymore. I was going to school and not eating all day until I got home at night, and that's not good for my health.

Interviewer: What kind of pushed you to apply for food stamps?

I guess, I got tired of being hungry.

Yeah. And how has receiving those food stamps impacted your life?

Well, I get to eat breakfast before I go to work, before I go to school, and I usually take me a sandwich or something to eat during the day, and it helps me concentrate more. I'm not sitting in class thinking, 'Oh my God, I'm hungry.'

— 33+ year-old, unemployed, full-time public student with dependents and off-campus, shared housing - family



Food stamps increased food security for this single parent.



Well, this last month, I had plenty of food stamps. This next month, I'll have about the same amount so food has been great for the last month. I haven't had to not eat. I've been eating three square meals a day and yeah, it's been good. It's been really good.

— 33+ year-old, full-time public student and single parent with part-time employment and off-campus, shared housing - family

Examining students' food security over time clearly demonstrates that low and very low food security are by no means constant, but rather can be ameliorated in a variety of ways. While many of the common factors behind food security improvements involved expanded personal financial or cooking competencies, gaining access to additional resources, like financial aid or SNAP, tended to coincide with the most significant reductions in food insecurity. The experiences of students whose food security improved suggest that a hybrid approach, with the capacity to address both resource and skill deficiencies, could be promising. These and other implications of this research are discussed in greater depth in the following section.



7 IMPLICATIONS FOR RESEARCH, PRACTICE, AND POLICY

*"School is nice, though. They have [free] ramen in the student lines. And so, one day I did not have any food. And I'd left my debit card at home – again. I'm a wreck. [laughter] So, I was able to have a thing of ramen. **No charge whatsoever. That was nice.** They provide snacks there pretty commonly. I'd say, once a week, they probably bring a cart around while I'm there. And I get to take a little snack. So, you know, that helps me not [to] waste away."*

18- to 22-year-old, full-time public student



7.1 PROMISING PRACTICES FOR SUPPORTING STUDENTS WITH LOW FOOD SECURITY

This study can provide colleges and higher education policymakers with insights that can inform practices and policies to address the needs of students experiencing low food security. Drawing from our findings, we identified five broad strategies that can help students struggling with their basic needs reach their full academic potential. These include: 1) affirm student first culture; 2) build student financial and food self-efficacy; 3) integrate advising; 4) address resource needs of students; and 5) advocate for systemic changes.

1. Affirm Student First Culture

Despite evidence of growing basic needs, insecurity among college students and the challenges it poses for academic progress, many colleges have struggled to incorporate robust supports into their traditional student service programming. For these institutions, addressing the basic needs of students suffering with low food security will require cultural changes. The following strategies may help foster such a culture of caring.

- a. Collect and analyze data: Colleges can use data analysis to better understand their students' characteristics and circumstances. In addition to mining the school's institutional data for insights, participation in national benchmark surveys of students' financial wellness and basic needs will help identify potential and observed difficulties that may impair academic performance.
- b. Focus on students: Colleges that have restructured policies and practices to best serve the types of students they enroll have seen gains in student performance. This might entail accommodating schedules of working students and prioritizing high impact interventions (e.g. offering eight-week "minimesters" and childcare services, implementing curriculum changes, etc.) to help students struggling with food insecurity and other financial pressures (Mangan & Schmalz, 2019).
- c. Watch for signs of poverty: Faculty and staff can be trained to spot signs of low food security, such as students who stay in their cars for long hours and students lingering on campus during semester or holiday breaks. While most school employees should not double as social workers, they should be encouraged to know how to identify warning signs, and either approach students respectively and refer them to the appropriate staff or notify such personnel directly. Class syllabi can include a brief basic needs statement that welcomes students to seek assistance from the designated office(s) on campus and to contact the instructor in case they have access to additional resources to help.
- d. Destigmatize poverty: Stigma can prevent students from accessing resources or from feeling that they are worthy of accepting support. Making resource centers and food pantries open to all students, placed in prominent locations, and widely publicized as resources for the convenience of all students can help normalize the availability of aid. Schools can also reframe assistance as "protecting the shared investment in education". Removing this stigma can encourage students to seek the help they need to be successful while reducing the significant stress low food secure students experience.



- e. Build networks of support: The magnitude of the task of insuring that basic needs of students are met requires leveraging an array of institutional and community resources. Students must feel comfortable asking for (and receiving) help and this requires schools creating a caring climate, perhaps through learning communities, assigned mentors, or consistent, empathetic interactions with employees.

2. Build Student Financial and Food Self-efficacy

Our study shows that low food security is not a static condition and that improvements in food security can result, in part, from improved self-efficacy with personal finances and food preparation. Especially for students who dropped one or more levels in food security, the harsh reality of struggling to eat regularly forced students to more carefully plan their expenses. Downward shifts in food security and the new independence experienced by traditional age students can also prompt students to develop greater knowledge and skills regarding “food literacy” (i.e. knowledge about nutrition and meal preparation). Schools can foster financial and food literacy to help students with low food security better withstand their challenges.

- a. Develop students’ financial skills: Just as students need to academically plan for their degrees, so too should students plan financially. Schools can create or expand money management centers, hire financial coaches, and build calculators and decision tools to help students plan and track expenses. While many students with low food security know how to live frugally, aspects of higher education finance can be mystifying to many, especially first-generation students. The inadequacies associated with federal loan counseling are well documented; guidance in understanding aid packages, borrowing and managing student loans should accompany a general academic budget plan, can make students more comfortable using a critical source of financial aid, and may have long-term positive outcomes for students with low food security.
- b. Develop students’ food literacy and help stabilize access to nutritious food: The transition to college life can be abrupt for many. Students with food literacy deficits can find themselves struggling to eat adequately amid new demands on their time, money, and focus. Building knowledge, skills, and confidence related to nutrition, meal planning, and meal preparation, can reduce costs, improve time management, improve health, and boost energy. Schools can build or direct students to engaging in cooking videos geared to novice cooks, host live demonstrations and workshops, and share a library of quick, affordable, and healthy recipes. Fliers and websites can help students compare food options (e.g. eating out, pre-processed foods, home cooked meals, snacking, skipping meals) based on cost, time, and nutrition. Schools might also solicit innovative concepts from their students to boost food literacy and mitigate barriers to efficient food preparation.



Promising Practices: On-Campus Food Pantries and Resource Centers

1. **Designate space on campus:** Initially, schools that provide food pantries have tended to be concerned about allowing students to access food discretely to minimize the potential shame of being in need. However, some schools have found success with destigmatizing these resources centers by making placing them more prominently and being more welcoming. Encouraging comfort and interaction in these spaces can also provide schools with insights that can inform counseling, financial assistance, and other interventions.
2. **Commit paid staff to resource centers:** While volunteers and interns can help supplement the services provided at resource centers, having paid staff provides greater accountability, compliance with policies, continuity of service and relationships, and professionalism that can better serve students.
3. **Promote services:** Schools can use flyers, social media, email, referrals, signage, and word of mouth to promote their resource centers. Well-crafted materials help destigmatize the centers and promote access to critical resources. Some schools program special features, such as offering an option to pay parking fines by donating to the resource center or declaring “free bag of food” days to help raise awareness of the centers.
4. **Engage community resources:** Local nonprofits and churches are often willing to help students in need but want schools to act as facilitators and liaisons to better understand how they can help. Local businesses may also be eager to provide help if schools provide the outreach and structure. This strategy may be especially fruitful at community colleges, which often maintain partnerships with local employers.



3. Integrate Advising

Students with low food security endure acute levels of stress related, in part, to time management issues. Some of the reluctance of low food secure students to seek help from their schools, public benefit offices, or community organizations stems from fears of bureaucracy and the associated loss of time, often quickly translated by low food secure students in terms of hours of lost work, schoolwork, and sleep. Integrating academic, financial aid, public benefits, financial education, career, and mental health counseling can better conserve these students' scarce time and provide a more holistic experience that may aid schools in addressing other unexpressed needs that are limiting the academic potential of students.

- a. Implement a case management approach to advising: Students, especially those who are the first in their families to attend college, may not know where on campus to seek help. Visiting multiple offices can be a barrier to engagement with the college even when students would benefit from assistance. Through case management, students can be treated more holistically and guided to available resources more quickly (Richardson, 2008).
- b. Create financial crisis response teams: Time is critical when a food insecure student is in crisis. Some schools have created hotlines and group email addresses that include staff from various departments that might help intervene with assistance when students struggling to meet basic needs have a crisis. Response times tends to be within 24 hours of the notification (Kell, 2019).
- c. Prepare mental health services areas to address issues stemming from low food security: Students with low food security endure high levels of stress that can be debilitating. Mental health professionals who are sensitive to the special needs associated with low food security can provide more lasting care.
- d. Connect students to public benefit services: Programs like SNAP have program eligibility requirements that can be complex as they relate to college students. On-campus advisors and counselors can provide clear guidance on eligibility to better optimize benefits for eligible food insecure students. Reframing messages to students to reinforce the importance of protecting their investment in education can help destigmatize the process. At some institutions (see Amarillo College), social work students looking for internships are recruited to help students navigate the system of public benefits (Goldrick-Rab & Cady, 2018).



4. Address Resource Needs of Students

Students who have difficulty meeting their basic needs, like food security, are unable to meet their full academic potential. This study has shown the many ways students are detoured from academic excellence by their efforts to maintain financial solvency while meeting basic needs. To meet education attainment goals, schools need to make college more affordable for students with low food security. This can mean either lowering costs or increasing aid.

- a. Lower costs: Students in our study were often surprised by the supplemental costs of going to college. Schools can provide greater clarity to the auxiliary costs and help to address those for their neediest students. For example, schools that help make textbooks affordable can strengthen student engagement and academic success among students with low food security. Discounts on course supplies and technology and selected fee waivers can improve student financial stability.
- b. Increase need-based grants: Our interviews with students with low food security show that when adequate resources, time, and financial resources are available, students can achieve academically. Working to close unmet need gaps can further student success and many schools are actively fundraising by focusing on the transformative effect of need-based grants.
- c. Increase emergency aid: Aid that helps students overcome temporary financial obstacles like car repairs, gaps in daycare coverage, rent payments when roommates leave, and utility bill spikes can improve retention. Payments typically go to the service providers from the school or its foundation. This type of aid can stabilize food security and help students maintain focus on academic success.
- d. Offer flexible meal plan options, increase dining hours, and decrease costs: Some colleges are experimenting with programs, like the Swipe Out Hunger model, that allow students on meal plans to donate unused meal plan dollars to those in financial need. These donations sometimes go towards meal credits or help fund food pantries and resource centers. Dining hall providers can be encouraged or required to make low cost options available to students. Periodic promotional drives can increase donations to this type of initiative. Students can be invited to “round up” their meal purchases, with the additional amount funding food subsidies for food insecure students. Some schools have built community gardens that students can utilize, while a few schools work out arrangements with local farms that will trade food for labor.
- e. Provide on-campus food pantries: There is a growing movement among colleges to address the needs of students with low food security. One of the most direct ways that schools serve food insecure students is through the provision of food pantries and resource centers that provide food, hygiene products, clothes, and other essentials.
- f. Make transportation affordable: Random control trials on student retention initiatives that include transportation vouchers or gas cards as a component of wrap-around services have shown significant positive effects on student retention (Kolenovic, Linderman, & Karp, 2013).



5. Advocate for Systemic Changes

While colleges can institute local reforms to reduce barriers for their food insecure students, public policy change will be needed to address the more systemic and costly changes that can help all food insecure students achieve their academic potential. Beneficial policy changes include:

- a. Increase need-based grants: All levels of government have an interest in promoting college success and building a well-educated workforce. Both federal and state higher education policymakers contribute substantial money to these ends. By increasing need-based grant aid, policymakers can protect their investments by closing the unmet need gap and improving graduation rates of low-income students for whom postsecondary education can have the most transformative impact. Though models vary across states, localities in some states also contribute significant funds to higher education (e.g. in Texas, community colleges receive a large share of their funding from local property taxes), creating opportunities for investment in local student populations.
- b. Remove eligibility restrictions to SNAP benefits for college students: The 20-hour work requirement for SNAP discourages full-time attendance in college, delaying time to degree and increasing student debt. Opening up eligibility of a proven program designed to ameliorate food insecurity can help students be students.
- c. Expanding free and reduced lunch to postsecondary education: Household food challenges do not disappear at high school graduation, especially for the large contingent of students who continue their educations. Expanding free and reduced lunch programs (e.g. by subsidizing the establishment and operation of affordable campus-based dining) can directly improve food security for students.



7.2 FUTURE RESEARCH

While research on the intersection of postsecondary students' basic needs and their academic progress tends to focus on student finances, this research suggests that greater attention should be paid to the ways in which students spend their time, which is often at least as important a constraint as money. Our research suggests that excessive demands on students' time can negatively affect their food security and their academic performance. Financial need often drives time scarcity by compelling students to work long hours, but busy academic schedules in combination with other activities (commuting, housework, childcare, extracurriculars, etc.) can also suffice to prevent both adequate studying and effective food practices.

Future research might also benefit by looking more closely at the interplay of students' stress levels, mental health and access to basic needs. As rates of mental health issues increase among postsecondary students, further overtaxing campus counseling resources, understanding the ways in which material conditions, academics, and stress can interrelate and form feedback loops will be more pressing. Negative mental and emotional impacts (stress, anxiety, mental exhaustion, occasional sleep issues, and some loss of academic confidence) appeared to be key mechanisms through which both food and financial insecurity undermined academic capacity and performance, but research on these connections and the efficacy of interventions are still needed.

This line of inquiry would also point towards the growing field of "scarcity" research, which examines the ways humans approach challenges, make decisions, and generally behave differently under conditions of material scarcity and insecurity. These and other studies suggest that poverty not only imposes a distinctive form of rational decision-making but also degrades people's cognitive capacity, as pressing material concerns rob processing power from learning and abstract thought. Such research might attempt to examine and even quantify the academic impacts of food insecurity with greater precision and longitudinal reach than was possible here.

Researchers and higher education practitioners would also do well to consider methods of exploring students' relationships with both family and friends in greater detail, especially with regard to relationships of consistent and temporary material support. While this study could not establish substantial equivalencies for comparison, it does suggest that the availability of support from students' social networks plays a crucial role in their ability to weather unexpected disruptions. Two students who appear to have roughly similar financial stability based on financial aid data might actually be in drastically different positions based on, for example, family resources they could draw on if necessary or, conversely, the extent to which they are expected to assist other family members financially or in other ways.



The adoption of more active personal financial management and eating habits was a key theme among many students who saw their food security improve over time. Future research could focus even more closely on the ways students manage their money, especially when dealing with large financial aid disbursements. Mobile phone applications create new opportunities for helpful tools in both financial management and food management (which ideally would be combined) that could both directly benefit students and generate useful data for researchers. At the intersection of research and practice, institutions might also perform campus-based research on the dining options most readily available to their students. The research strongly suggests that institutions should look beyond the creation and stocking of campus food pantries to have a meaningful impact on student food insecurity.

7.3 CONCLUSION

While several surveys report on the alarming levels of food insecurity among college students, this Trellis study provides a broad qualitative window into the lives of 36 current students living with food insecurity. These student voices describe the debilitating stress that often accompanies the balancing of school, work, and life with low food security. Daily decisions about how to spend their time, money, and energy largely dictated their success in school, and they knew it. Students shared stories that document their levels of sacrifice – to their health, financial stability, and relations with friends and families – to earn a college degree. Despite their sometimes staggering level of commitment to their educational goals, going to college with low food security consistently derailed students in their academic pursuits, lowering their educational aspirations even as they maintained confidence in their ability to handle the course material. Unable to reliably meet their basic needs, students in this study spoke of settling for lower grades and delayed plans in order to work enough to pay their bills.

The longitudinal methodology allowed students to share how their food security shifted over a nine-month period. Far from being locked into one level of food security, this study highlights the fluid nature of food security in a college setting. Abrupt changes to employment, student aid, social networks, and personal budgeting were quickly followed by either declining or improving food security. Academic performance tended to parallel these shifts. Low food secure students are contrasted with students with very low food security, showing how these students suffer at a higher magnitude of discomfort, at higher frequencies, and with less chance of improving their condition.

This study captures the human drama of students sacrificing to create a better future for themselves and their families in the face of significant obstacles. It shows the admirable strength and grit of students with low food security as well as their fragilities and even their foibles in balancing time, money, and energy. The report also offers promising steps that colleges and higher education policymakers can take to improve food security among college students who toil daily to reach their academic potential.



APPENDIX

Recruitment and Sample

This study drew on a convenience sample of students recruited from 11 colleges and universities in Texas and Florida. Researchers used existing contact networks to seek assistance in recruiting students from institution administrators, who disseminated recruitment materials via mass emails, public fliers and bulletin boards, and outreach to student organizations during January 2017. These materials directed interested students to a website that described the study and provided a link to download an informed consent form, which students could sign digitally or physically and submit via email. A link to an intake survey was sent to the email address provided on the consent form. This survey collected demographic and academic data, as well as preferences for scheduling interviews. Researchers contacted participants who completed the intake survey to schedule times for first interviews, which took place in January and February 2017.

From January 2017 to October 2017, a team of six researchers conducted 499 interviews with 72 research subjects. These interviews followed a semi-structured protocol that ensured a uniform set of questions while providing flexibility to discuss subject-initiated topics and ask follow-up questions. The interviews could last up to an hour but averaged about 35 minutes. They were all conducted and recorded by land-line telephone and transcribed through Scribie.

Interview-level data is provided below:

AGE

18-22	23-27	28-32	33 or older
58%	21%	4%	17%

GENDER

Female	Male	Other
72%	25%	3%

MOST EDUCATED PARENT

<High school	HS or GED	Attended, no degree	Assoc. or cert.	Bachelor's	Grad./Profess.
15%	15%	25%	15%	24%	6%

RACE/ETHNICITY

Black/Af-Am	Hisp/Latino	White	Asian/Pac-Isl	Other
19%	39%	31%	8%	3%



CURRENT PROGRAM TYPE (JANUARY 2017)

Certificate	Associate	Bachelor's
3%	68%	28%

CURRENT CLASS STANDING (JANUARY 2017)

Freshman	Sophomore	Junior	Senior	Unsure
29%	50%	7%	4%	10%

STATE OF CURRENT INSTITUTION (JANUARY 2017)

Texas	Florida
74%	26%



Coding

The coding process began with the lead researcher and chief assistant conducting data review and writing analytic memos. Discussions emerging from these memos helped develop and refine a code scheme consisting of a priori and in vivo codes informed by the memos and discussion.

Six coders (though no more than four were on the team at any time) were trained to apply the code scheme to the interviews. Each took four coding tests to check for issue areas and assess inter-rater reliability. Average Cohen's kappa statistics from these tests are below:

When coding actual transcripts, coders called attention to code applications they were unsure of through memos, which were later reviewed by a different coder. If the two coders agreed on the original application, the issue was closed; if they disagreed, they would discuss and seek consensus, which was usually established as they explained their reasoning and referenced the code book. On the rare occasions when they still disagreed, a third coder would hear both sides and make a final determination.

AVERAGE COHEN'S KAPPA STATISTIC (FOUR CODE TESTS)

Coder 1	Coder 2	Coder 3	Coder 4	Coder 5	Coder 6
.78	.78	.73	.72	.66	.65



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