5-2022

Present Limitations and Future Projections: Food Insecurity, Housing Insecurity and Optimism Among College Students

Amber Obermaier
University of Arkansas, Fayetteville

Present Limitations and Future Projections: Food Insecurity, Housing Insecurity and Optimism Among College Students

A thesis submitted in partial fulfillment
of the requirements for the degree
of Master of Arts in Sociology

by

Amber Obermaier
Missouri State University
Bachelor of Science in Anthropology, 2019

May 2022
University of Arkansas

This thesis is approved for recommendation to the Graduate Council.

_____
Kevin M. Fitzpatrick, Ph.D.
Thesis Director

_____
Don Willis, Ph.D.
Committee Member

_____
Shauna Morimoto, Ph.D.
Committee Member

ABSTRACT

Within the last decade, research has identified wide-ranging disparities in access to basic needs among university students. These differences, such as a lack of adequate food and housing during university, provide a negative environmental experience with potential to limit one's optimism or hope for the future. This research explores how basic needs insecurity and social vulnerabilities among college students are related to subjective assessments of their prospects for the future. The present study utilizes survey data from a random sample of college students (n=300) enrolled at an urban university in the Midwest region of the United States of America. Logistic regression examines the multivariate relationships among social vulnerabilities, insecurities, educational achievement and their role in determining the odds of being optimistic *vs*. non-optimistic. The analysis finds that among this sample of students, unmet basic needs are related to higher chances of being non-optimistic for the future. The findings underscore the importance of personal stability in food and shelter reflecting not only current physical and mental capabilities, but also projections of one's future.

Keywords: optimism, college, food insecurity, housing insecurity

TABLE OF CONTENTS

Introduction……1

Theory and Evidence……..…3

Methods……12

Results……...16

Discussion……17

Tables……22

References……25

INTRODUCTION

Higher education is increasingly viewed as a pathway to upward mobility. However, rising college tuition coupled with the lack of need-based financial aid and income disparities, make it difficult for some students to pay for tuition/fees, living expenses, and educational supplies (Goldrick-Rab, Anderson, & Kinsley, 2017). Additionally, with the rising cost of postsecondary education, students across the nation often lack access to stable housing (Broton & Goldrick-Rab, 2017; Hallett & Crutchfield, 2017) and consistent access to healthy food (Fruedenberg et al., 2019; Martinez et al., 2018; Gaines et al., 2017). Although students in higher education may gain the necessary skills and capital to secure a better post-graduation future, the relationship between how they view their future, and their basic needs insecurity has yet to be examined. Additionally, this research supports a growing body of evidence that supports institutions developing and implementing policies to address the growing inequality among their students, thus helping to eliminate significant roadblocks in their learning experience.

With the identification of wide-ranging disparities in accessing basic needs among university students, highlighting disparities across the higher education continuum research has increased in the last decade, led in part by research centers like the Hope Center for College, Community, and Justice (Goldrik-Rab, Anderson, & Kinsley, 2017). Scholars have found both higher rates of food and housing insecurity among particular university students compared to their counterparts of the same age, especially among community college students (Martinez et al., 2016). Others, utilizing a nationally representative sample, find rates comparable to the general population (Blagg et al., 2017). A growing body of empirical evidence suggests that both food and housing insecurity are negatively related to academic performance as well as overall

health and well-being among college students, potentially undermining the benefits of tertiary education (Broton, 2017; Martinez et al., 2016).

Defined as "access by all people at all times to enough food for an active, healthy life," (Coleman-Jensen et al., 2020) food insecurity among college students continues to be a troubling circumstance for a growing number of students. Additionally, housing insecurity which can be defined as "a broader set of challenges such as the inability to pay rent or utilities or the need to move frequently" (Goldrick-Rab, Anderson, & Kinsley, 2017, p. 3) has been of growing concern across both urban and suburban campuses as the housing stock shrinks and the cost of both detached and attached rental housing increases in part because of demand but construction costs as well. Within the literature, both food and housing insecurity are defined on a continuum, ranging from very low food or housing insecurity to higher levels of food insecurity or homelessness (Goldrick-Rab, 2016).

Emerging research identifies patterns among college students that parallel the larger population research; racial and ethnic minorities, and low-income students are disproportionally impacted by basic needs insecurity (El Zein et al., 2019; Gaines et al., 2016; Martinez et al., 2017). While these patterns have developed, little attention has been paid to how this insecurity is related to student's future outlook or optimism. Optimism, defined as holding positive expectations about one's future (Carver, Scheier, & Segerstrom, 2010), has been linked to experiencing negative feelings related to one's living circumstances (Heinonen et al., 2006). Additionally, optimism for the future has been shown to be related to academic achievement and overall psychological well-being (Brissette et al., 2002; Rand, Martin & Shea, 2011). Distressing experiences during university, such as worrying about basic food and housing needs, provide negative feelings that certainly have the potential to limit ones hope for the future. These

negative feelings can be exacerbated by specific social vulnerabilities such as racial/ethnic minority status and income that have also been shown to be negatively associated with individual's subjective assessment regarding their optimism for the future (Webber & Smokowski, 2018). With an interest in exploring this relationship further, the present study examines how basic needs insecurity and social vulnerabilities among college students are related to subjective assessments of their prospects for the future, potentially undermining upward mobility that can take place as a result of the higher education experience. We anticipate this research will add to a growing body of literature that illustrates the importance of higher education, and more importantly, the larger structural inequalities that students can experience when accessing critical social and material resources that are necessary for their success.

THEORY AND EVIDENCE

Across the United States, scholars continue to report a varying presence of food and housing insecurity among college students, either comparable or more prevalent than their counterparts (Blagg et al., 2017; Nam et al., 2015; Payne-Sturges et al., 2017). Additionally, one's expectancies, or optimism for the future, have been identified as correlates of academic performance and psychological well-being within college students (Bandura, 1977; Lin et al., 2013). These expectancies may differ both in the presence of social vulnerabilities and insecurities, ultimately impacting the goal of completing a higher education degree and securing a better future. In addition, studies have found that the presence of social and psychological resources can improve resiliency when faced with social and psychological risk, and in turn increase optimism and educational success (Ellicott et al., 1990; Thoits, 2010).

Given these general relational assumptions, the present study aims to build upon and fill the literature gap that examines the relationship between social vulnerabilities, basic needs

insecurity risks, academic achievement and their relationship with optimism for the future among a sample of college students. To address these relationships, we analyze online survey data collected from a random sample of college students (n = 300) and pose the following research questions:

1. Are social vulnerabilities associated with optimism for the future among higher education students?

2. Are food and housing insecurity associated with lower levels of optimism for the future among higher education students?

3. Does achievement mitigate basic needs insecurities among higher education students?

Educational Attainment and Cumulative Disadvantage

Even though college enrollment and completion rates have increased over the last two decades, equity gaps remain (Goldrick-Rab, Anderson, & Kinsley, 2017). Access to higher education remains largely based upon parental resources, however, completion of college helps close the inequality gap. The completion of a bachelor's degree largely erases intergenerational mobility, evening the earnings of all those completing a degree; however, this mobility is still present among those earning advanced degrees (Torche, 2011). Even though the completion of this degrees erases some inequality, often the path to graduation differs for those without certain social advantages. In an effort to support students throughout the college experience, many overlook the relevance of Maslow's hierarchy of needs (1943), focusing on changing students social or academic settings before first ensuring their basic needs are met. Likewise, some scholars identify that both material and social inequalities can exert influence on current and future life course trajectories (Schafer et al. 2011). Social stratification, in the form of race, socioeconomic status, gender, sexual orientation and first-generation status, all have the potential

to promote ideal circumstances for the accumulation of resources which in turn influence life course trajectory. The stacking of several of these social statuses associated with a social/economic marginalization are associated with greater risks to experience poor emotional and physical health, as well as have limited access to resources (Nurius, Prince, & Rocha, 2015). Young adults are more likely to confront a wide variety of stressors than their advantaged peers, resulting in an overwhelming burden that can create uncertain and often negative views about their future. For the current study, we posit that the stacking of several of these social vulnerabilities, as well as the absence of basic needs, will help to create a significant socioemotional burden that can lead to diminished outlooks on one's future. Beyond these vulnerabilities, we examine basic needs insecurity among young adults and their impact on optimism and well-being.

Additionally, causes or risk factors followed by experiences and potential consequences associated with basic needs insecurity has been identified throughout the literature (Alaimo, 2005; Broton, Weaver, & Mei, 2018). Specifically, social status factors of sex, race/ethnicity, marital status, the parent with dependent children, and immigration status are identified as key social vulnerabilities. Additional risk factors also include past experiences with food insecurity, financial resources, and employment status. These risk factors have been identified through patterns in empirical research, mainly utilizing the 18-question USDA food security status questionnaire (2020). These socio-demographic and financial risk factors manifest in food-related challenges such as lack of resources or lack of transportation to adequate grocery stores, making food insecurity a social determinant of health (Alaimo, 2005)

Although the literature remains relatively new and fast-growing, the same demographic risk factors are seen within the college student population (Broton, Weaver & Mei, 2018; Patton-

Lopez, 2014). Alaimo's model of food insecurity demonstrates the social inequalities that are perpetuated as risk factors, such as food insecurity and hunger where Hispanic and Black households are three to four times more likely to experience than White households (Alaimo, 2005). Additionally, both the short and long-term effects of food insecurity including psychological suffering, impaired mental health, and impaired psychosocial behavior, have been linked to suppressed feelings of optimism (Carver, Scheier, & Segerstrom, 2010). Optimism, as well as hope and mastery, have been treated as psychosocial resources throughout the literature, linking these disparities in resiliency to the challenges of physical and mental health (Carver, Scheier, & Segerstrom, 2010; Thoits, 2010; Webber & Smokowski, 2018). Social disparities, in certain sectors of the population, are more prone to higher levels of food insecurity, based on structural inequalities, the college environment, and the community environment (Broton, Weaver, and Mei, 2018). Additionally, the presence of food and housing insecurity can lead to diminished psychosocial functioning, such as impaired mental health or diminished hope for the future (Lin et al., 2011).

Optimism and Aspiration

The primary outcome for this paper is on the psychosocial condition of optimism; holding positive expectations for one's future, which has been associated with a variety of psychological and physical well-being factors (Carver, Scheier, & Segerstrom, 2010). Optimism has been identified as performing a self-regulatory function, which demonstrates that if one's expectancies of success are favorable, one will continue to reach their desired goals (Carver & Scheier, 1981). In recent years, optimism for the future has been added to the conversation of the agency one holds. Within one's life course, the agency one holds also includes their perceived capacities or life chances for their own future (Hitlin & Johnson, 2015). However, if one is living

in an environment where hope or security is absent or deficient, optimism can be harmed by the negative experiences that are in part, a function of environmental challenges. As a result of these negative environmental challenges and other systemic inequalities, certain social demographic subgroups have reported lower optimism than others, including racial/ethnic minorities, those reporting low socioeconomic status, and LGBTQ+ status (Freitas et al., 2016; Heinonen et al., 2006; Webber & Smokowski, 2018). Even though the sociological notion of agency has been studied through obtaining higher education, this conversation is missing the inclusion of forward-thinking aspirations, the subject of this paper (Hitlin & Johnson, 2015).

Additionally, childhood socioeconomic status also impacts optimism later in life, with evidence that parental warmth and financial security can be important in determining adult optimism (Heinonen et al., 2006). Aspirations and expectations for the future predict later educational attainment, however, this is highly affected based on socio-economic status (Hitlin & Johsnon, 2015). Even though scholars have found overall lower levels of optimism within LGBTQ+ individuals compared to the general population, they have also found significant within-group differences (Moe, Dupuy, & Laux, 2008). LGBTQ+ individuals with higher levels of optimism for the future report better coping mechanisms when faced with stigma and discrimination they might face as well as better overall psychological health (Moe, Dupuy, & Laux, 2008; Park, Peterson, & Seligman, 2004; Snyder, 2002). Parallels have also been found between familial optimism and overall mental health, meaning LGBTQ+ family members who hold optimism for the future positively influence both their mental health and their LGBTQ+ family members (Freitas et al., 2016). Longitudinal studies also have found significant social disparities in optimism, with whites and individuals with a higher socio-economic status more likely to be optimistic throughout the life course (Boehm et al., 2015). Additionally, research

finds that men scored higher in levels of optimism than women (Jacobson et al., 2014, Puskar et al., 2010).

Previously, the relationship between optimism and basic needs security in college students has been limited. Expectancies about the future are predictors of both academic performance and psychological well-being in college students (Bandura, 1997). However, this relationship has been relegated to a larger study of psychological factors, with the specific indicator of optimism only being utilized in a study among African American women at Historically Black Colleges (Lin et al., 2013). Participants with high levels of food insecurity were significantly more likely to have lower optimism, or future orientation, along with higher instances of other psychological factors. Additionally, optimism for future events has been tied to concerns over food, housing, and economic insecurity, where uncertainty and unpredictability of future needs are threatened (Weaver & Hadley, 2009). While optimists can demonstrate greater resiliency to these uncertainties (Ellicott et al., 1990; Finlay-Jones & Brown, 1981), the deficiencies of basic needs ultimately continue to influence mental and physical health. Even though optimism, through the vehicle of agency, has been measured as a vehicle of personal control and increased life outcomes through obtaining higher education, the addition of a lack of basic needs often prevents this potential.

Food and Housing Insecurity

In recent years, the body of literature examining college basic needs insecurity has grown with scholars consistently finding varying levels of food and housing insecurity on the college campus with identifiable groups that are more susceptible to these insecurities. Studies in the U.S have found that on average 21-59 percent of students experience some form of food insecurity (Chaparro et al, 2009; Gaines et al., 2014). Additionally, extant research shows that one in ten

students were homeless or at risk of homelessness with the past year as well as nearly half of students experiencing some form of housing insecurity (Broton, 2020).

Chaparro and colleagues published one of the first studies examining college food insecurity at the University of Hawaii, where 21 percent of students reported reduced food intake due to resource limitations within the past year (Chaparro et al., 2009). In later work, at the University of Massachusetts, 27 percent of students reported skipping meals and 6 percent did not eat for 1 to 2 days due to resource limitations, both of which are signs of food insecurity (Silva et al., 2017). Additionally, Sturges and colleagues (2017) reported that 15 percent of students were food insecure and an additional 16 percent were at risk for being food insecure at a large mid-Atlantic University. Likewise, several meta-analyses have compiled studies together that meet inclusion criteria, creating a total picture of food insecurity on the college campus. With data from over 52,000 students, the average food insecurity presence was 43.5 percent (Nazmi et al., 2018). Lastly, researchers analyzed all available peer-reviewed literature and government documents to find the average prevalence of food insecurity. They found average rates between 35- 42 percent among seventeen peer-reviewed studies and 41 reports or government documents (Breuening et al., 2017). Additionally, 32% of students at a 4-year, Midwest University where this study was based were found to be food insecure, within the above average rate (Willis, 2019).

Unlike food insecurity, there is little consistency in the way that homelessness or housing insecurity has been operationalized (Bowers & O'Neill, 2019; Hallett & Crutchfield, 2017). Housing insecurity has been typically viewed as existing on a continuum made up of several dimensions, including unaffordability, measured as difficulty making rent payments or an inability to pay the full amount of rent or utilities (Johnson & Meckstroth, 1998), and instability,

which includes moving multiple times per year, doubling up with other families, or moving in with others due to financial problems (Cutts et al., 2011). Furthermore, depending on the measurement used, some samples end up with conservative estimates of the problem, by including students who identify as "homeless," rather than documenting their entire housing experience (Goldrick-Rab, Anderson, & Kinsley, 2017; Hallett, 2012).

Within this literature, multiple studies have examined the prevalence of housing security across college campuses. Data on more than 30,000 two- and four-year college students indicated that one-third of the 2-year students were housing insecure and between 11-19 percent of 4-year students were housing insecure (Broton and Goldrick-Rab, 2017). Research across University of California campuses found that within a calendar year, approximately 11 percent of students at one point found themselves homeless. Additionally, students with higher levels of housing insecurity reported lower GPAs and more mental health symptoms (Trawver & Hedwig, 2020). At the national level, the National Center for Education Statistics (NCES) conducts surveys of undergraduate housing changes, as well as their risk to experience homelessness. Within the national sample, 9 percent of undergraduates reported they experienced homelessness or were at risk of homelessness (Broton, 2020).

Social Vulnerabilities

Across the college campus, individual characteristics work together with larger structural factors to determine one's general physical and mental well-being. A well-established body of literature connects certain social conditions, both inside and outside the college environment, as an underlying correlate of impaired mental well-being, including reduced levels of optimism for the future (Link & Phelan, 1995; Weber & Smokowski, 2018). Historically, students from low-income backgrounds, racial/ethnic minorities, LGBTQ individuals, and single parents have

increased difficulty continuing to afford college (Broton, 2019; Broton & Goldrick-Rab, 2017). This of course depends on the specific college and community environment, as well as the extent to which social vulnerability impacts specific well-being outcomes. These social vulnerabilities often lead to higher instances of food and housing insecurity, increasing the chance of impaired psychosocial outcomes that impact one's view or perspective on their future (i.e. optimism).

Throughout the literature, patterns have emerged that finds certain demographic characteristics tied to higher prevalence of food and housing insecurity among college students (Broton, 2019; Martinez et al., 2017; Zein et al., 2019). Due to several factors such as differences in accumulated wealth and limited social and community resources, students from low-income families and/or racial and ethnic minorities are at an increased risk for food insecurity, with even higher risks among lower-income minorities (Nam et al., 2015; Payne-Sturges et al., 2017). These risk factors have further been studied throughout the literature. For example, food insecurity has been demonstrated to be 1.5 times more likely among Black and Hispanic students than white or Asian students, even when controlling for socio-economic status (Freudenberg et al., 2011). Among students at a large mid-Atlantic public university, students who were non-white had a statistically significant likelihood of being food insure or at risk for being food insecure compared to white counterparts (Payne-Sturges et al., 2018). Growing up within a low-income family and childhood food insecurity has also been associated with food insecurity in adulthood (Martinez et al., 2017). Lower-income status has been associated with being eligible for the Pell Grant, which has been shown to correlate with basic needs insecurity (Goldrick-Rab, 2019). These vulnerabilities parallel patterns within the general population, showing the degree to which certain social determinants of health hinder certain populations and create very different health outcomes (Dean & Sharkey, 2011). Findings suggest that students with social hardships

may have a harder time navigating their college years without material hardship, resulting in the possibility of diminished psychosocial capabilities.

GPA/Achievement

Academic success within higher education is strongly influenced by individual differences in motivation, as well as environmental and social factors that influence individual success outcomes. Within higher education, grade-point average (GPA) is often viewed as the single, largest marker of individual achievement. One's GPA can determine both short-term outcomes in financial aid and long-term outcomes in job prospects. Within the literature, both optimism and self-efficacy have been reported to be positive correlates of GPA (Nes & Segerstrom, 2006). However, the relationship remains understudied in students who face adversity, particularly those facing basic needs insecurity.

Overall, socio-demographic, and environmental risk factors create a greater likelihood of an individual experiencing food and housing insecurity during their college years (Alaimo, 2005). Experiencing basic needs insecurity, both in one's past and during their college years, can cause impaired physical and mental capabilities, such as poor mental health and diminished hope for the future (Alaimo, 2005; Freitas et al., 2016; Heinonen et al., 2006). Additionally, food and housing insecurity within college students has led to diminished academic achievement and attainability (Broton, Weaver, and Mei, 2018; Nes & Segerstrom, 2006). When a student does not have consistent access to basic needs, such as food and shelter, all attention is drawn to securing those needs, giving them a set of challenges apart from their peers. Without adequate food and housing, students may also become less optimistic about their future prospects both before and after graduation.

DATA AND METHODS

Data were collected from a survey of undergraduate students enrolled at the University of Missouri at Kansas City, during Spring, 2017. The University is a 4-year university located in the large urban area of Kansas City. The Office of Institutional Research generated a random sample from email rosters of the student population, excluding graduating seniors. Graduating seniors were excluded due to them being targeting for another ongoing survey. Students also had to be 18 years or older to participate in the survey.

First, the survey was developed using Qualtrics and pretested with a small group of undergraduate students before it was distributed. Then, the survey was distributed via email to a random sample of 4000 students via a recruitment email that detailed the anonymous and voluntary nature of the research. The students emailed were also provided with informed consent information and were asked to agree that they had read and wanted to participate before they entered the survey. An incentive of an entry to a raffle for 1 of 2 $100 dollar gift cards was also provided. They survey was open for two weeks, during this time an additional reminder email was sent. Approximately ten percent of the random sample completed the survey, providing 389 undergraduate responses of those with complete information for all variables, within the average response rate for this area of study (Bruening et al., 2016). The survey was approved by the University of Missouri-Columbia Institutional Review Board.

Measurement

Dependent Variable

Optimism is measured using a Likert scale with the one question, “thinking now about your own personal situation, looking ahead to the next five years or so, do you feel very optimistic, somewhat optimistic, somewhat pessimistic, or very pessimistic about what the future holds for you?” (MacArthur Foundation, 2018). The variable was coded into a dichotomous

variable, with somewhat pessimistic and very pessimistic = 0 and somewhat optimistic and very optimistic = 1.

Social Vulnerabilities

Age was operationalized using with the question, "What is your age in years?" Since the study focused on college students, a dichotomous variable was created to capture traditional vs. non-traditional students, or those over/under the age of 25. Students aged 25 or older were coded = 1 and students under the age of 25 were coded = 0.

Gender was operationalized using the question, "How do you describe your gender?" Optional responses included man, woman, transgender, or "I do not identify as male, female, or transgender." All but five responses were either man or women, so a dichotomous variable was created with women = 1.

Race was operationalized using the question "How do you describe your race?" Students could select all that applied from the following categories: American Indian or Alaska Native, Asian, black or African American, Hispanic or Latino, Native Hawaiian or Pacific Islander, and white. From these categories, a dummy variable for non-white students was created, where students that identified as a racial or ethnic minority = 1 and the students who identified as non-Hispanic white = 0.

Sexual orientation was operationalized with the question, "What is your sexual orientation?" Choices included straight or heterosexual, gay or lesbian, bisexual, a written-in self-description, prefer not to say, or do not know. A dummy variable was then created with students who selected straight, or heterosexual = 0 and all other responses = 1.

Insecurities

Food insecurity is operationalized using the United States Department of Agriculture (USDA) short-form Adult Food Security Survey Module (AFSSM) (Blumberg et al., 1999). This module includes the following statements: I was worried whether my food would run out before I got money to buy more; The food that I bought just did not last and I did not have money to get more; I couldn't afford to eat balanced meals. Responses to the first three items were *often true, sometimes true, never true, or don't know.* Items 4, 5 and 6 of the module include two yes or no questions detailing whether the individual cut the size of their meals or ever felt hunger but did not eat due to not having enough money, and one follow-up question to item 4 that asks how many days the respondent cut the size of their meals in the last 30 days. Respondents were then scored according to USDA guidelines, with a score from 1-6. The categories include: marginal food security (0-1), low food security (2-4), and very low food security (5-6). Both low and very low food security are considered "food insecure." A dichotomous variable was computed from these categories to indicate food insecurity = 1 or food security = 0.

Housing insecurity is operationalized using the question, how do you feel about your current housing situation--do you feel very stable and secure, fairly stable and secure, just somewhat stable and secure, fairly unstable and insecure, or very unstable and insecure? This derives from question five from the MacArthur Housing Matters Survey (MacArthur Foundation, 2018). The variable was coded as very stable and secure= 0 and fairly stable and secure, just somewhat stable and secure, fairly unstable and insecure, and very unstable and insecure=1.

Achievement

The single mediator variable that is used as a proxy for academic achievement is *GPA* which is operationalized using a single question, "What is your GPA?" The respondent reported their current GPA using a standard 1-4 scale.

ANALYTIC FRAMEWORK

The analysis focuses on three different levels of description. First, we provide univariate descriptives for all study variables used. Second, we examine the bivariate relationships (discrete/continuous) among study variables, and third, we examine the logistic regressions, where social vulnerabilities, insecurities, educational achievement and their relationship to the odds of someone being optimistic *vs*. non-optimistic are examined.

RESULTS

Table 1 presents the unweighted descriptive statistics for the dependent variable, sociodemographic characteristics, and risk factors. Approximately 11.3 percent of the sample was not optimistic. Additionally, over 30 percent of the sample was food insecure, and 48 percent of the sample was housing insecure. This prevalence fits in with the average, around forty percent experiencing some kind of food insecurity and around fifty experiencing some kind of housing insecurity, that other studies examining the presence of basic needs insecurity find (Breuening et al., 2017).

[Table 1 about here]

The average age of the sample was 22. Nearly 19 percent of the sample was 25 or older, indicating the study university had a higher-than-average number of nontraditional students. Additionally, approximately 41 percent of the sample were first-generation students. Fifteen percent of the sample was non-heterosexual. The sample was over representative of women (73.3%) and non-Hispanic white students (73.5%).

[Table 2 about here]

Table 2 presents a focused bivariate analyses that examines varying levels of optimism across food insecurity status and housing security status. The statistical significance for

difference in optimism was tested using Pearson's Chi Square. Statistically significant differences in levels of optimism were found in both food insecurity ($X^2 = 9.736;\ P = .002$) and housing insecurity ($X^2 = 12.117, P < .000$). Students who reported either food or housing insecurity reported lower levels of optimism compared to students who reported food or housing security/stability.

[Table 3 about here]

Table 3 shows a series of logistic regression models that report optimism odds related to the model variables. Model 1 only includes the social vulnerabilities (social demographics), assessing the role of age, gender, race, sexual orientation, and first-generation status and their relationship to optimism. None of the variables were statistically significant and the Nagelkerke R^2 for this model was .030.

In Model 2 the insecurities were added to examine the association of food and housing insecurity with optimism. Both food (p=.02) and housing insecurity (p=.02), as well as the model ($p < 0.004$) were significant. Odds of reporting optimism for the future were reduced by the presence of both food insecurity (95% CI [.398-.923]) and housing insecurity (95% CI [.454-.935]). The demographic variables remained non-significant. The Nagelkerke R^2 for this model increased to .110.

In Model 3 the achievement variable of GPA was added to the overall model as earlier hypothesized as a mediator in the negative influence of food and housing insecurity. Within this model both food (p=.026) and housing insecurity (p=.028), as well as the overall model (p=.006) remained statistically significant, however, GPA was not significant in determining the odds of optimism as originally thought. Again, the odds of reporting optimism for the future were

reduced by the presence of both food insecurity (95% CI [.402-.944]) and housing insecurity (95% CI [.457-.955]). The Nagelkerke R^2 for the final model increased slightly to .111.

Overall, these results highlight disparities in optimism for the future among this sample of students. Throughout the logistic regression models, food and housing insecurity were significant in the odds related to lower amounts of optimism for the future. Neither sociodemographic variables nor the measure of achievement significantly influenced the odds of optimism. However, throughout all three models' sexual orientation was the closest sociodemographic to being significant. Lastly, in reference to our third research question introducing a measure of achievement did nothing to mitigate the impact of basic needs insecurity on optimism for the future.

DISCUSSION

Students within the college context who face basic needs insecurity have significant diminished outcomes of optimism for the future compared to their counterparts. In this study, we found that the presence of food and housing insecurity outweighed any social vulnerabilities (sociodemographics) and measures of achievement (e.g. GPA) in helping us to better understand the odds of optimism for the future among this sample of college students. Even though higher education is seen as a means of social mobility, the circumstances that many students face during their college years may prevent them from reaching their full potential, or even imagining their future self as successful in the same way that many of their more secure counterparts do. This study suggests that students lacking access to basic needs, no matter how high their academic achievements, will often report more diminished levels of optimism for the future (Hitlin & Johnson, 2015). Even though higher education has been seen as a great equalizer, these results suggest that the optimal returns of securing higher mobility may not be the same for all students

(Torche, 2011). Additionally, within this problem additional attention should be given to students who disproportionally feel the burden of basic needs insecurity, including students of color, students from low-income backgrounds, and LGBTQ+ students (Dean & Sharkey, 2011, Martinez et al., 2017, Payne-Sturges et al., 2018).

These findings are consistent with other studies examining the state of higher education. Across the U.S., scholars have found a growing presence of food and housing insecurity among college students, either comparable or more prevalent than their counterparts (Blagg et al., 2017; Nam et al., 2015; Payne-Sturges et al., 2017). These disparities in basic needs create diminished physical and mental capabilities, as well as we have found, diminished hope for the future. The results here support an argument for cumulative disadvantage—both material and social inequalities can exert compounding influences on current and future life course trajectories (Schafer et al. 2011). This lack of basic needs surpassed any expectation of sociodemographic vulnerabilities and academic achievement.

Limitations

Although this data highlights some of the social inequalities faced by university students, there are a number of limitations that are important to note. The data collected was cross-sectional and limited to a single university, paralleling most of the literature in the field. Nevertheless, we make no causal assumptions regarding the sequencing of any effects or predictions among this sample of students. Additionally, the sampling was also limited to the exclusion of graduating seniors, who were targeted by other ongoing surveys at the time and as a result was left out of the sampling. Even though the response rate for the current survey was consistent with other like studies in the literature, future researchers should consider ways to gain higher response rates within random samples. Additionally, both food and housing insecurity

were measured as ordinal independent variables. Both of these variables are treated as continuous, aligning with patterns in the literature (Williams, 2020).

Conclusions

Overall, the results above suggest an important paradox that students are facing in the midst of the increased necessity of higher education while faced with its rising prices. Many students are confronting structural barriers in securing important resources, impeding their ability to thrive in the college environment. When one faces these kinds of uncertainty when it comes to securing shelter or food, that can easily become their focus, impacting the all-important focus that should be on their future. Nevertheless, this research provides the opportunity for institutions to use findings like ours to begin to develop policies that can help to address the importance of minimizing the growing inequality among college students. Currently, most policies take a hyper-local approach, with individual colleges implementing resources or programs that meet specific, identified student needs (Broton & Goldrick-Rab, 2016). Struggling students emphasize the importance of co-locating community services on campus, such as a food pantry or a social service office. This not only helps to eliminates travel time but also reduces the stigma associated with utilizing these services, especially for marginalized populations (Broton & Goldrick-Rab, 2016). Even though colleges at a local level are working to keep policies in line with the needs of its students, federal-level educational and social policies have not met the increasing demands and needs of a diverse and growing population of post-secondary students. The current federal social safety net largely excludes college students from adequately receiving enough support. With great identified need that both affects the current and future projections of college students, there must be a greater amount of support on the federal level.

In conclusion, this study adds to a growing body of literature examining the reproduction of social inequalities within higher education. Additionally, it adds to a smaller body of literature that describes the future implications of these inequalities, showing the greater cost as a result of a lack of both local and federal social support. When students face basic needs insecurity their agency, including their optimism for the future is diminished, affecting the equality of opportunity in higher education that is often promised (Hitlin & Johnson, 2015). Even though access to enrollment in institutions remain at an all-time high, these institutions must consider the impact that these inequalities are having in how and what resources students have access to (Goldrick-Rab, 2019). Future research by life course scholars is needed in this emerging inequality to fully understand the implications for a large but understudied population of students.

Table 1 Sociodemographic data for University Students

	Mean	*SD*
Dependent Variable		
Optimism	.887	.317
Sociodemographic		
Gender (male=1)	.260	.438
Race (non-Hispanic white=1)	.740	.442
Sexual Orientation (heterosexual=1)	.840	.363
Nontraditional Age (25+ =1)	.190	.391
First Generation Status (first gen=1)	.410	.493
Insecurities		
Food Insecurity	.460	.744
Housing Insecurity (very secure or greater=1)	.520	.500
Achievement		
GPA	3.418	.490

Table 2 Prevalence of Optimism by Student Characteristics

	Yes: Optimistic (%)	No: Not Optimistic (%)	X^2	P Value
Food Insecurity				.002
Insecure	81.03%	18.97%		
Secure	92.04%	7.95%		
Housing Insecurity				.000
Insecure	82.68%	17.32%		
Secure	93.66%	6.34%		

Table 3 Logistic Regression Analysis and Optimism Odds Among Study Variables (N=365)

Variables	**Model 1**			**Model 2**			**Model 3**		
	b	**Significance**	**95% Confidence**	**b**	**95% Confidence**	**Significance**	**b**	**Significance**	**95% Confidence**
Demographics									
Age (25+=1)	-.437	.266	.299-1.396	-.355	.315-1.565	.386	-.352	.391	.315-1.572
Gender (male=1)	-.338	.352	.350-1.454	-.473	.298-1.305	.210	-.478	.205	.296-1.299
Race (non-Hispanic white=1)	.253	.491	.627-2.643	.089	.517-2.315	.815	.072	.852	.505-2.285
Sexual Orientation (heterosexual=1)	.709	.077	.925-4.467	.542	.755-3.918	.197	.539	.201	.751-3.917
First Generation (first gen=1)	.079	.819	.550-2.131	.169	.583-2.405	.641	.179	.622	.587-2.437
Insecurities									
Food Insecurity (insecure=1)				-.500	.398-.923	.020	-.485	.026	.402-.944
Housing Insecurity (insecure=1)				-.429	.454-.935	.020	-.414	.028	.457-.955
Achievement									
GPA							.148	.666	.592-2.273
Model Significance		.340				.004		.006	
Nagelkerke R^2		.030				.110		.111	

REFERENCES

Alaimo, K. (2005). Food insecurity in the United States. *Topics in Clinical Nutrition*, *20*(4), 281–298. https://doi.org/10.1097/00008486-200510000-00002

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, *84*(2), 191–215. https://doi.org/10.1037/0033-295x.84.2.191

Blagg, K., Gundersen, C., Schanzenbach , D. W., & Ziliak, J. (2017). (issue brief). *Assessing Food Insecurity on Campus A National Look at Food Insecurity among America's College Students* (pp. 1–15). Washington D.C.

Blumberg, S. J., Bialostosky, K., Hamilton, W. L., & Briefel, R. R. (1999). The effectiveness of a short form of the household food security scale. *American Journal of Public Health*, *89*(8), 1231–1234. https://doi.org/10.2105/ajph.89.8.1231

Boehm, J. K., Chen, Y., Williams, D. R., Ryff, C., & Kubzansky, L. D. (2015). Unequally distributed psychological assets: Are there social disparities in optimism, life satisfaction, and positive affect? *PLOS ONE*, *10*(2). https://doi.org/10.1371/journal.pone.0118066

Bowers, P. H., & O'Neill, M. (2019). The lived experience of being a homeless college student: A qualitative Interpretive meta-synthesis (QIMS). *Journal of Children and Poverty*, *25*(2), 114–130. https://doi.org/10.1080/10796126.2019.1629580

Brissette, I., Scheier, M. F., & Carver, C. S. (2002). The role of optimism in social network development, coping, and psychological adjustment during a life transition. *Journal of Personality and Social Psychology*, *82*(1), 102–111. https://doi.org/10.1037/0022-3514.82.1.102

Broton, K. M. (2019). A review of estimates of housing insecurity and homelessness among students in U.S. higher education. *Journal of Social Distress and Homelessness*, *29*(1), 25–38. https://doi.org/10.1080/10530789.2020.1677009

Broton, K. M., & Goldrick-Rab, S. (2017). Going without: An exploration of food and housing insecurity among undergraduates. *Educational Researcher*, *47*(2), 121–133. https://doi.org/10.3102/0013189x17741303

Broton, K., Weaver, K., & Mai, M. (2018). Hunger in higher Education: Experiences and correlates of food insecurity among WISCONSIN undergraduates from low-income families. *Social Sciences*, *7*(10), 179. https://doi.org/10.3390/socsci7100179

Bruening, M., Brennhofer, S., van Woerden, I., Todd, M., & Laska, M. (2016). Factors related to the high rates of food insecurity among diverse, urban college freshmen. *Journal of the Academy of Nutrition and Dietetics*, *116*(9), 1450–1457. https://doi.org/10.1016/j.jand.2016.04.004

Carver, C. S., & Scheier, M. F. (1981). Standards of behavior. *Attention and Self-Regulation*, 119–141. https://doi.org/10.1007/978-1-4612-5887-2_7

Carver, S. C., Scheier, F. M., & Segerstrom, C. S. (2010). Optimism. *Clinical Psychology Review*, *30*(7), 879–889. https://doi.org/https://doi.org/10.1016/j.cpr.2010.01.006

Coleman-Jensen, Alisha, Matthew P. Rabbitt, Christian A. Gregory, and Anita Singh. 2020. Household Food Security in the United States in 2019, ERR-275, U.S. Department of Agriculture, Economic Research Service.

Cutts, D. B., Meyers, A. F., Black, M. M., Casey, P. H., Chilton, M., Cook, J. T., Geppert, J., Ettinger de Cuba, S., Heeren, T., Coleman, S., Rose-Jacobs, R., & Frank, D. A. (2011). US housing insecurity and the health of very young children. *American Journal of Public Health*, *101*(8), 1508–1514. https://doi.org/10.2105/ajph.2011.300139

Dean, W. R., & Sharkey, J. R. (2011). Food insecurity, social capital and perceived PERSONAL disparity in a predominantly rural region of Texas: An individual-level analysis. *Social Science & Medicine*, *72*(9), 1454–1462. https://doi.org/10.1016/j.socscimed.2011.03.015

Duran, A., & Núñez, A.-M. (2020). Food and housing insecurity for latinx/a/o college students: Advancing an intersectional research agenda. *Journal of Hispanic Higher Education*, *20*(2), 134–148. https://doi.org/10.1177/1538192720963579

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

Ellicott, A., Hammen, C., Gitlin, M., Brown, G., & Jamison, K. (1990). Life events and the course of bipolar disorder. *American Journal of Psychiatry*, *147*(9), 1194–1198. https://doi.org/10.1176/ajp.147.9.1194

Feldman, D. B., & Kubota, M. (2015). Hope, self-efficacy, optimism, and academic achievement: Distinguishing constructs and levels of specificity in predicting college grade-point average. *Learning and Individual Differences*, *37*, 210–216. https://doi.org/10.1016/j.lindif.2014.11.022

Finlay-Jones, R., & Brown, G. W. (1981). Types of stressful life event and the onset of anxiety and depressive disorders. *Psychological Medicine*, *11*(4), 803–815. https://doi.org/10.1017/s0033291700041301

Freitas, D. F., D'Augelli, A. R., Coimbra, S., & Fontaine, A. M. (2015). Discrimination and mental health Among gay, lesbian, and Bisexual youths in Portugal: The MODERATING role of family relationships and optimism. *Journal of GLBT Family Studies*, *12*(1), 68–90. https://doi.org/10.1080/1550428x.2015.1070704

Freudenberg, N., Goldrick-Rab, S., & Poppendieck, J. (2019). College students AND snap: The new face of food insecurity in the United States. *American Journal of Public Health*, *109*(12), 1652–1658. https://doi.org/10.2105/ajph.2019.305332

Gaines, A., Robb, C. A., Knol, L. L., & Sickler, S. (2014). Examining the role of financial factors, resources and skills in predicting food security status among college students. *International Journal of Consumer Studies*, *38*(4), 374–384. https://doi.org/10.1111/ijcs.12110

Goldrick-Rab, S. (2019). A review of estimates of housing insecurity and homelessness among students in U.S. higher education. *Journal of Social Distress and Homelessness*, *29*(1), 25–38. https://doi.org/10.1080/10530789.2020.1677009

Goldrick-Rab, S., Anderson, D. M., & Kinsley, P. (2017). *Paying the price: College costs, financial aid, and the betrayal of the American dream*. The University of Chicago Press.

Hallett, R. E. (2012). Living doubled-up: Influence on residential environment on educational participation. *Education and Urban Society*, *44*(4), 371–391. https://doi.org/10.1177/0013124510392778

Hallett, R. E., & Crutchfield, R. (2017). Homelessness and housing insecurity in higher education: A trauma-informed approach to research, policy, and practice. *ASHE Higher Education Report*, *43*(6), 7–118. https://doi.org/10.1002/aehe.20122

Heinonen, K., Raikkonen, K., Matthews, K. A., Scheier, M. F., Raitakari, O. T., Pulkki, L., & Keltikangas-Jarvinen, L. (2006). Socioeconomic status in childhood and adulthood: Associations with dispositional optimism and pessimism over a 21-year follow-up. *Journal of Personality*, *74*(4), 1111–1126. https://doi.org/10.1111/j.1467-6494.2006.00404.x

Hitlin, S., & Kirkpatrick Johnson, M. (2015). Reconceptualizing agency within the life course: The Power of Looking Ahead. *American Journal of Sociology*, *120*(5), 1429–1472. https://doi.org/10.1086/681216

Johnson, A., & Meckstroth , A. (1998). (rep.). *Ancillary Services to Support Welfare Work*. Princeton, New Jersey: Mathmatica Policy Research Reports.

Lin, M., Peters, R., Ford, K., A, M., Johnson, R., & Hill, M. (2013). The Relationship between Perceived Psychological Distress, Behavioral Indicators and African-American Female College Student Food Insecurity. *American Journal of Health Studies*, *28*(3), 127–133.

Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior*, *35*, 80. https://doi.org/10.2307/2626958

Martinez, S. M., Frongillo, E. A., Leung, C., & Ritchie, L. (2018). No food for thought: Food insecurity is related to poor mental health and lower academic performance among students in CALIFORNIA'S public university system. *Journal of Health Psychology*, *25*(12), 1930–1939. https://doi.org/10.1177/1359105318783028

Martinez, S. M., Webb, K., Frongillo, E. A., & Ritchie, L. D. (2017). Food insecurity in CALIFORNIA'S public university SYSTEM: What are the risk factors? *Journal of Hunger & Environmental Nutrition*, *13*(1), 1–18. https://doi.org/10.1080/19320248.2017.1374901

Moe, J. L., Dupuy, P. J., & Laux, J. M. (2008). The relationship between lgbq identity development and hope, optimism, and life engagement. *Journal of LGBT Issues in Counseling*, *2*(3), 199–215. https://doi.org/10.1080/15538600802120101

Nam, Y., Huang, J., Heflin, C., & Sherraden, M. (2015). Racial and ethnic disparities in Food INSUFFICIENCY: Evidence from a Statewide probability sample. *Journal of the Society for Social Work and Research*, *6*(2), 201–228. https://doi.org/10.1086/681574

Nazmi, A., Martinez, S., Byrd, A., Robinson, D., Bianco, S., Maguire, J., Crutchfield, R. M., Condron, K., & Ritchie, L. (2018). A systematic review of food insecurity among US students in higher education. *Journal of Hunger & Environmental Nutrition*, *14*(5), 725–740. https://doi.org/10.1080/19320248.2018.1484316

Nes, L. S., & Segerstrom, S. C. (2006). Dispositional optimism and coping: A meta-analytic review. *Personality and Social Psychology Review*, *10*(3), 235–251. https://doi.org/10.1207/s15327957pspr1003_3

Nurius, P. S., Prince, D. M., & Rocha, A. (2015). Cumulative disadvantage and youth well-being: A multi-domain examination with life course implications. *Child and Adolescent Social Work Journal*, *32*(6), 567–576. https://doi.org/10.1007/s10560-015-0396-2

Park, N., Peterson, C., & Seligman, P. (2004). Strengths of character and well-being. *Journal of Social and Clinical Psychology*, *23*(5), 603–619. https://doi.org/ https://doi.org/10.1521/jscp.23.5.603.50748

Payne-Sturges, D. C., Tjaden, A., Caldeira, K. M., Vincent, K. B., & Arria, A. M. (2017). Student hunger on campus: Food insecurity among college students and implications for academic institutions. *American Journal of Health Promotion*, *32*(2), 349–354. https://doi.org/10.1177/0890117117719620

Pia Chaparro, M., Zaghloul, S. S., Holck, P., & Dobbs, J. (2009). Food insecurity prevalence among college students at the University of hawai'i at Mānoa. *Public Health Nutrition*, *12*(11), 2097–2103. https://doi.org/10.1017/s1368980009990735

Puskar, K. R., Marie Bernardo, L., Ren, D., Haley, T. M., Hetager Tark, K., Switala, J., & Siemon, L. (2010). Self-esteem and optimism in rural youth: Gender differences. *Contemporary Nurse*, *34*(2), 190–198. https://doi.org/10.5172/conu.2010.34.2.190

Rand, K. L., Shanahan, M. L., Fischer, I. C., & Fortney, S. K. (2020). Hope and optimism as predictors of academic performance and subjective well-being in college students. *Learning and Individual Differences*, *81*, 101906. https://doi.org/10.1016/j.lindif.2020.101906

Silva, M. R., Kleinert, W. L., Sheppard, A. V., Cantrell, K. A., Freeman-Coppadge, D. J., Tsoy, E., Roberts, T., & Pearrow, M. (2015). The relationship between food security, housing stability, and school performance among college students in an urban university. *Journal of College Student Retention: Research, Theory & Practice*, *19*(3), 284–299. https://doi.org/10.1177/1521025115621918

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry*, *13*(4), 249–275. https://doi.org/10.1207/s15327965pli1304_01

Thoits, P. A. (2010). Stress and health: Major findings and policy implications. *Journal of Health and Social Behavior*, *51*(1_suppl). https://doi.org/10.1177/0022146510383499

Trawver, K. R., & Hedwig, T. (2019). Food and housing insecurity and homelessness among students in an open-enrollment university*. *Journal of Social Distress and Homelessness*, *29*(1), 57–64. https://doi.org/10.1080/10530789.2020.1676987

Torche, F. (2011). Is a college degree still the great equalizer? intergenerational mobility across levels of schooling in the United States. *American Journal of Sociology*, *117*(3), 763–807. https://doi.org/10.1086/661904

Weaver, L. J., & Hadley, C. (2009). Moving beyond hunger and nutrition: A systematic review of the evidence linking food insecurity and mental health in developing countries. *Ecology of Food and Nutrition*, *48*(4), 263–284. https://doi.org/10.1080/03670240903001167

Webber, K. C., & Smokowski, P. R. (2018). Assessment of adolescent optimism: Measurement invariance across gender and race/ethnicity. *Journal of Adolescence*, *68*, 78–86. https://doi.org/10.1016/j.adolescence.2018.06.014

Williams, A. R. (2020). Ordinal independent variables. *SAGE Research Methods Foundations*. https://doi.org/10.4135/9781526421036938055

Willis, D. E. (2019). Feeding the student body: Unequal food insecurity among college students. *American Journal of Health Education*, *50*(3), 167–175. https://doi.org/10.1080/19325037.2019.1590261