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Entanglements of Teenage Food Security Within High School Pantries in Pinellas County, Florida

Karen T. Díaz Serrano
University of South Florida

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by

Karen T. Díaz Serrano

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Major Professor: David Himmelgreen, Ph.D.
Nancy Romero-Daza, Ph.D.
Heide Castaneda, Ph.D., MPH
Theresa Crocker, Ph.D., RD
Janelle Garcia, Ph.D., MCHES

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ABSTRACT

Food insecurity has the ability to shape an individual's or a family's everyday life and take emotional, psychological, and physical tolls. Among adolescents, not having access to nutritious food could lead to physical effects during growth and development. Moreover, the stress and anxiety of not knowing where their next meal is coming from and the social stigma associated with being food insecure can have negative effects on mental health. A recent solution to these issues is locating food pantries in high schools. **Purpose**: This exploratory study examined how high school students in Pinellas County, Florida perceive the use of a food pantry on campus. Two research questions were asked: What social factors act as barriers and facilitators for food pantry use for a high school student population? And what is the impact of having a school-based food pantry on students perceived stress and anxiety levels? **Methods**: A mixed method approach was utilized during data collection: participant observations were conducted, an electronic survey was distributed among students, and in-depth interviews were completed with the students, school staff, volunteers, and food bank employees. **Results**: The social factors that acted as barriers at these two high schools were COVID-19 and when students food preferences differed from what was offered in the food pantries which were often determined by the adults who volunteered or worked at the food pantries. Facilitators of student food pantry use included lenient policies (e.g., no formal rules needed to be followed for students, no restrictions were placed on the amount of food that was taken, and no requirements on who could utilize the pantries), the atmosphere (e.g., the pantry was visible and easily

accessible at the school and the space dedicated to the pantry was inviting of the school). The social network of the students and allowing non-student use of the food pantry helped contribute to the positive atmosphere of the pantry. Providing other necessary items at the food pantry and involving the students in decision-making were also considered as facilitators. Although not statistically significant, having access to food on the school's campus seemed to have a positive effect on the students' stress and anxiety levels. This is based on the students' answers to the surveys, observations, and interview data. **Recommendations:** Based on the results, the following should be kept in mind while planning the implementation of a food pantry at a high school: 1) Students should be included in all decision making regarding the food pantry, from how it is set up to what foods are ordered. 2) The food pantry should be integrated into the school's culture. 3) The school's food pantry should follow a client choice model. 4) Other basic necessities (eg. deodorant, menstrual pads, toilet paper, toothbrushes, and toothpaste) should be available at the food pantry.

CHAPTER ONE:

INTRODUCTION

Food Insecurity

On a global level, there are more than enough food calories produced to feed every person (2,800 calories per day) and there has been since around World War II; especially in the United States, which has an abundance and cheapest food in the world (Guptill, et al., 2017, De Souza, 2019; Anderson, 2005). Yet, in 2020 it was estimated that between 720 million and 811 million people were food insecure, worldwide (FAO, et al., 2021). Although this remains a public health issue worldwide, it has been a particular concern in United States where food insecurity rates increased substantially during the economic crisis of 2008 and although declining remain at high levels especially during the COVID-19 pandemic (Shankar-Krishnan et al., 2021; Coleman-Jensen, 2021). The Economist reported how the COVID-19 pandemic has also demonstrated how fragile the food system is, with the United States ranking 13 out of 113 counties in the most recently published food security index (2022). Although, the pandemic highlighted this issue, the food system has been weakening for years. Issues such as volatility in agricultural production, scarcity of natural resources, and increasing economic inequality have all contributed to this downward trend and little has been done in regards to food security policy (Economist, 2022).

Food insecurity is defined by the United States Department of Agriculture (USDA) as a period in which an individual lacks consistent access to enough food for an active and healthy life, or has a limited ability to acquire foods in socially acceptable ways (USDA, 2022). Having

surplus food available for one group, yet there being scarcity for others reveals intertwined problems related to inequalities (Guptill et al., 2017). It is a critical issue that has become better known in an unpredictable climate where food prices, fuel prices, and housing costs are rising (Morris, 2019; Vansintjan, 2014; Blake, 2017; Sonnino & Hammer, 2016). Soil erosion, urbanization, and deforestation have had a negative impact on the world's food supplies (Anderson, 2005). Due to climate change foods that were once cheap have become expensive or unavailable, with global warming favoring warmer-growing crops rather than colder ones and these food economic issues will continue as long as the environment continues to change (Anderson, 2005). Despite the severe impact that COVID-19 had on the labor market in the United States, wages have also risen slightly (Kochhar & Bennett, 2021). According to the U.S Bureau of Labor Statistics, approximately one quarter of U.S. private-sector businesses (24%), increased wages and salaries (2022).

Food insecurity has the ability to shape an individual's or a family's everyday life and take emotional, psychological, and physical toll. However, it is a complex issue, involving economic, social, cultural and ethical factors that cannot be solved by simply stating that all people have the right to food (Skinner et al., 2016; Phillips, 2018; Blake, 2019; Dickerson, 2019; Sonnino & Hammer, 2016).

Emergency Food Relief

As a potential short-term solution or stop-gap, food banks and food pantries were developed to provide emergency food relief to vulnerable populations concerned about experiencing food insecurity (Chiu et al., 2016). Food pantries are community-based organizations that can differ in size, location, and their operations can vary widely; some pantries are a part of a non-profit organization, others are located in community spaces such as religious

institutions, parks, or recreation centers. Unlike soup kitchens, food pantries do not serve prepared meals, only grocery items. While food pantries have typically only offered non-perishable foods to their clientele, in recent years many pantries have seen an increase in the amount of perishable goods (e.g. fresh fruits and vegetables). The majority of this food is sourced from donations through food drives and/or a partnership with a local food retailer. However, many also work with food banks that are able to source larger amounts of food due to national partnerships and larger sources of revenue. Food banks are much larger in size than a typical food pantry, they work as a storage-facilities for the millions of pounds of food that go out to the community, while a food pantry reaches out to a community directly. Food banks also offer additional services such as job training, diabetes prevention programs, and computer classes (Martin, 2021). They have acted as advocates for the food insecure, promoting equity, creating nutrition policies, and advocating for federal nutrition programs (Martin, 2021). Recently, food pantries have begun to be implemented in schools, most of these follow a client choice model where instead of being handed a box of food, clients are encouraged to choose what they would like to take from the pantry. The idea behind this model is that there is dignity in making choices. Additionally, not allowing people to choose their own food sends a message of distrust (Martin, 2021). Logistically, it is also beneficial for the food pantry because food is not wasted since clients are able to choose what they know they will eat. It also reduces labor since food does not need to be pre-packaged into boxes and instead of needing to keep exact items in stock this model allows pantries to accept a wide array of products to offer.

Due to the high rate of inflation and cost of living, the level of need has remained high following the COVID-19 pandemic, with food banks reporting that they served over 55% more people in 2021 than in years before (Feeding America, 2022). A study by Coleman-Jensen and

colleagues (2022) supports this trend, reporting that 10.2 percent (13.5 million) of U.S. households were food insecure in 2021, a slight decrease from 10.5 percent (13.7 million) in 2020 and 2019 (13.6 million). The rates of food insecurity among households with children decreased to 6.2 percent (2.3 million) of U.S. households in 2021 from 7.6 percent (2.8 million) in 2020 and 6.5 percent (2.4 million) in 2019. These decreased rates could be the result of a change in the USDA food policy where all students were provided free lunches for a time period. Unfortunately, when reported, teenage food insecurity rates are commonly combined with the rates of households with children and the most recent rates provided specifying food insecurity among teenagers (ages 10-17) are from in 2016 where it was estimated that 6.8 million teenagers were food insecure (Popkin, 2016). Since this report occurred prior to the pandemic it is unclear how food insecurity has affected the food insecurity rates among this specific population.

Negative health outcomes have been associated with food insecurity across the lifespan; these include physical issues such as growth faltering, obesity, poor bone health, iron deficiencies for females at menarche, as well as psychological and behavioral issues such as anxiety, stress, irritability, and nervousness (Holben, 2010; Shankar-Krishnan et al., 2021; Jones, 2017; Niles et al., 2020; Gundersen & Ziliak, 2015; Eicher-Miller & Zhao, 2018; Fielding-Singh, 2021). Not having access to nutritious food could lead to physical effects during growth and development among adolescents such as not properly growing to adult height or poor resistance to disease; as could the stress resulting from being a target of bullying from their peers and the social stigma associated with being food insecure (Burris et al., 2020a, Burris et al., 2020b). While there are documented effects of how food insecurity may impact dietary quality, the *stigma* related to food insecurity among this population may be an even greater issue. Yet, despite the fact that adolescence is a time of strong social pressures adolescents remain a

consistently understudied population in food insecurity studies (Knoll et al., 2015; Knoll et al., 2017). Additionally, programs offered to end child hunger tend focus and reach younger children, with few resources targeted towards adolescents (Popkin, 2016; Waxman et al., 2015).

Formation of this Study

As I'm sure is the case for many dissertations, the formation of this study changed along the way. Originally, this project was going to involve an additional school and recruitment was going to include students from the whole school, not just the ones who utilized the food pantry, and compare their answers. Unfortunately, due to COVID-19 restrictions and concerns from the school district and from the third school's administration, changes had to be made and recruitment had to be contained to only those who utilized the two schools' food pantries, limiting the research sample and excluding the third school.

Research Aims

The purpose of this study was to gain a better understanding of how high school students in Pinellas County, Florida perceive the use of a food pantry on campus. Specifically, this purpose is addressed by measuring two research questions:

- What social factors act as barriers and facilitators for food pantry use for a high school student population?
- What is the impact of having access to food on campus on student's stress and anxiety?

It was hypothesized that with the introduction of the food pantries there would be an increase in food security, a decrease in stigma, and an improvement of perceived stress and anxiety among the students. This study utilized a mixed methods approach, with the researcher distributing surveys among participating students. Along with demographic questions, this survey included questions from the USDA Food Security Survey Module for Children Ages 12 Years in order to

measure food insecurity and Older, the validated Kessler Psychological Distress Scale (K10) to measure levels of anxiety and distress, and if the school food pantry helped manage their stress and anxiety around food. The researcher conducted participant observation within the pantries to determine what social factors act as barriers and facilitators for food pantry use for a high school student population. In-depth interviews were the final research method used in this study and were conducted with students, volunteers, and employees from the school and from two food banks to analyze how power dynamics can influence food pantry use. Student participants in this study were enrolled in one of two high schools. Both schools had food pantries that distributed food to their students and have been in operation for at least two years; these pantries were run by school staff and followed the client choice model. With this model, adolescents were able to choose what they would like to take from the pantry, but were given suggestions on what types of food they should take. These suggestions were based on the go, slow, and whoa concept that was developed by the National Heart Lung and Blood institute on which foods should be eaten a lot (go), a little (slow), and not much (whoa). Although with the emergence of COVID-19 some adjustments to this model had to be made for part of the school year, including repackaging the food so that contact can be limited.

Chapter Organization

Chapter two describes the relevant literature for this study to illustrate how it will contribute to knowledge about food insecurity among adolescents, in the fields of public health and in anthropology. Specifically, the chapter considers literature related to hunger and food insecurity, food banks and food pantries, the stigma related to such programs, and touches on the influence that COVID-19 has had. Due to this study focusing on high school food pantries, there is a focus on adolescents and the influence that schools may have on them. In Chapter three, the

different theological frameworks: biopower, social ecological model, and structural violence are discussed on how they related to this study and food insecurity. Chapter four describes the study was designed and how a mixed method was utilized during data collection; how participant observations were conducted, the electronic survey that was distributed among students, and in-depth interviews that were completed with the students, school staff, volunteers, and food bank employees. Chapter five provides an introduction to the results for this study, focusing on the survey results. Chapter six serves as a continuation of the results, introducing the data collected through participant observations and interviews while focusing on the first research question: What social factors act as barriers and facilitators for food pantry use for a high school student population? Chapter seven addresses the second research question: What is the impact of having access to food on campus on student's stress and anxiety? Chapter eight focuses on discussion, including information on how the results would be disseminated and the impact that this research may have. The final chapter, Chapter nine, summarizes the main findings of the study, providing recommendations to different organizations for starting a high school food pantry, concludes the dissertation with some of my personal thoughts.

CHAPTER TWO:

LITERATURE REVIEW

Hunger

Food insecurity has been established as a humanitarian issue in recent decades, however, hunger has long been a societal issue. Hunger may result from food insecurity but it is defined as a physiological condition, which can be felt on an individual level (USDA, 2022). The literature regarding hunger goes back to the 1840s but it was not until April 1967 that it was considered to be a national issue in the U.S. (Vernon, 2007; Kotz, 1969). Although no food banks or programs were established at that time to address this issue, it was expected that voluntary organizations and community services would care for those who were hungry (Kotz, 1969). It was not until the second half of the twentieth century that new programs were developed specifically to eradicate hunger and the appropriateness of the term began to be questioned. Hunger generates an emotion and personal response; it tugs at heartstrings and violates a sense of fairness since it is commonly believed that in the modern world no one should have to go hungry (Vernon, 2007; Fisher, 2017). In contrast, food insecurity does not create a sense of marginalization that hunger does, instead it moves away from the idea that people can either be hungry or not (Skinner, et al., 2016; Fisher, 2017). While the term food insecurity seems to more accurately describe food deprivation in America, who is to blame continues to be a topic of debate. It can be argued that although hunger is a biological condition, it is an effect of broader historical forces and socioeconomic processes and that it is not the food insecure individual's fault for being hungry but that they are victims of failing political and economic systems (Vernon, 2007). This became

more apparent in the 1980s government policies led to large cutbacks in food-aid programs (Anderson, 2005).

Health Implications of Hunger and Food Insecurity

Sapolsky describes how in most parts of the world being poor means that an individual will have trouble affording food but in the Western world, it tends to mean that an individual will have trouble affording *healthy* food (1994). This is because; food is a flexible budget item. Unlike the mortgage or light bill, food is a cost that can be avoided by going hungry or negotiated by eating cheap, less nutritious items. Although the prices may be outdated, Anderson provides a great example of this by stating how in "the United States, a dollar will buy you more than 1,200 calories of potato chips, about 900 of soda, but less than 200 of fresh fruit" (2005, p. 113). While people may eat enough calories to sustain themselves on a daily basis, due to the inaccessibility of affordable, healthy foods, the foods they consume may undermine their health and well-being (Bublitz et al., 2019; Scharf, et al., 2010).

Multiple studies have shown that healthy food options are more expensive; however other factors are also linked to healthy food consumption such as accessibility and availability (Tonumaipe'a, et al., 2021; Fielding-Singh, 2021; Hager et al., 2019. In the United States, there exist areas where it is hard to access fresh food without a car (Patel, 2007). These types of areas are considered to be food deserts, although the definition varies generally a food desert is considered to be "an area without a supermarket and limited access to healthy foods" when fresh foods are available they tend to be expensive (Hager et al., 2019; Tonumaipe'a, et al., 2021). Subsequently, these areas also house lower-income populations, which tend to have higher rates of obesity and health-related problems (Dempsey & Gibson, 2017; Blake, 2017; Hager et al., 2019). This could be because residents of these areas have an abundance of access to fast foods

and other energy-dense foods; these types of geographic locations are classified as food swamps and tend to predict obesity rates better than food deserts (Tonumaipe'a, et al., 2021; Hager et al., 2019). A third term, less commonly used, are food mirages which are areas that include full-service grocery stores but the prices are food are high, making healthful options inaccessible for low-income household (Tonumaipe'a, et al., 2021).

Recently, these terms have been critiqued stating that there are more complex elements that need to be considered when discussing people's food choices. Such as, what types of foods are considered to be culturally acceptable and the socialization that occurs in certain areas where food is purchased (Tonumaipe'a, et al., 2021; Hall, 2014). Additionally, Hall criticizes how these terms create the notion that the only problem in these areas are food and food access but ignores other important issues such as a lack of cultural institution, inadequate schools, and fears of safety (Hall, 2014). Although these terms have been critiqued, there seems to be evidence that these conditions seem to be part of a negative cycle; living in a low-income community could result in having less access to healthy, affordable foods, which could lead to diet-related health conditions or chronic disease.

Not all low-income households experience food insecurity; just like not all those who experience food insecurity are low income. Many middle-income households who work are reporting having to utilize food pantries for supplemental assistance or are only one medical crisis away from becoming food insecure (Shankar-Krishnan et al., 2021; Clealand, 2018). These households, known as the Asset Limited, Income Constrained, Employed (ALICE) population, are more likely to sacrifice food for medicine or other life necessities (Clealand, 2018). Overall, food insecure individuals have been found to have worse general health and an increased use of emergency department services causing them to have higher healthcare expenses than those who

are food secure (Thomas et al., 2019). It is theorized that it would be more beneficial to pay for necessities such as food than for the medical care needed to address the resulting health issues and that eradicating hunger would also prevent the global epidemics of diabetes and heart disease (Kotz, 1969; Thomas et a., 2019;Patel, 2007). While food pantries and other programs are available in low and middle-income areas, existing literature shows those who visit community food pantries still have a higher high prevalence of diet-related chronic diseases such as diabetes, high blood pressure, and obesity than their food secure counterparts (Martin et al., 2013; Wetherill, 2019).

Additionally, although the food provided by the pantries may or may not benefit health, the stigma of having to go to a food pantry can be difficult for a person to overcome psychologically. The inability to afford food often forces individuals to make decisions between food and other household needs which cause feelings of powerlessness or being "out of control" resulting in increased stress and anxiety (Blake, 2019; Addy, 2017; Carney, 2015; Martin, 2021). Research completed by Martin (2021) and Thomas et al. (2021) show that food insecurity is associated with other mental health complications such as higher rates of anxiety and depression. A study by Jones (2017) demonstrated that mental health issues could be amplified as food insecurity becomes more severe. Stress can have a negative impact on adults and children, especially chronic stress which results a constant release of hormones that can deregulate and damage the body's physiological stress response system (Fielding-Singh, 2021). Even though a person may look normal, physically when a person does not eat the proper foods their resistance to disease is lowered which can lead to more communicable diseases and body changes, such as poor growth, can occur (Kotz, 1969; Thomas et al., 2019; Fielding-Singh, 2021; Schaible & Laufmann, 2007; Millward, 2017; DeBoer et al., 2017). The relationship of malnutrition is

complicated since an effect can be immune suppression and infection; however, infections can also contribute to malnutrition (Schaible & Laufmann, 2007; DeBoer et al., 2017). While the effects of malnutrition among children have been thought to be of great importance, overnutrition also is of concern. Research by Schaible & Laufmann closely examines the relationship between immunity and nutrition and has found that there is a hormonal connection, which explains why overnutrition can also increase the risk of chronic non-communicable diseases such as obesity, diabetes, hypertension, and heart disease (2007).

Since over and undernutrition carry with it a critical risk factor of diet-related chronic diseases, which is a factor for more than half of the world's disease, Schaible & Laufmann call for immediate attention to be given to addressing these issues (2007). As previously mentioned, not having enough food as a child creates many health risks, along with an increased risk of immune suppression and infection there is an association with higher prevalence of diseases such as diabetes, cardiovascular disease and depression later in life (Ross, 2010; Dickerson, 2019). Substantial life cycle and intergenerational effects can be accumulated during adolescence (Millward, 2017). Multiple studies have confirmed that, nutritional intake is important for growth, long-term health promotion, and the development of lifelong eating behaviors during this time in the life cycle (Bucher et al., 2016, Brothers et al., 2020; Poppendieck, 2010; Cook & Frank, 2014; Burris, 2018; Burris, 2020a; Eicher-Miller & Zhao, 2018). When compared to younger children and older adults, adolescents have been shown to have poorer diets (Lipsky et al., 2017). Based on dietary data, adolescents in the United States, regardless of food-security status, do not consume adequate amounts of recommended fruit, vegetables, and whole grains while consuming excessive amounts of sodium, refined grains, solid fat, and added sugar (Hiza et al., 2013; Liu et al., 2020; Lipsky et al., 2017; Banfield et al., 2016). This is problematic

because adolescence is the stage when lifelong eating behaviors are further cemented. These behaviors can be tracked into adulthood, which is why the behavioral and health patterns formed during this stage are often used as predictors of adult health (Niemeier & Fitzpatrick, 2019). However, when focusing on diet quality and food insecurity amongst students it was found that, compared to their food secure counterparts, food insecure students consumed a greater percentage of their energy from fat, had less food available to them at home, and perceived greater barriers to eating a healthful diet (Holben, 2010; Larson et al., 2008; Garthwaite et al., 2015; Molitor et al., 2020). Eating low quality food that is high in sodium and sugar and low in nutrients makes the food-insecure population, particularly children, vulnerable to developing diet related diseases such as diabetes, high blood pressure, or obesity (Martin et al., 2013; Sarlio-Lähteenkorva, & Lahelma, 2001; Roncarolo et al., 2016). In contrast, a varied diet with proper recommended servings can decrease the burden on individuals and society to treat illnesses and protect individuals from the psychological and physical suffering that accompanies preventable diseases (Molitor et al., 2020).

Social Nutrition

Food is often taken for granted as an ordinary thing that humans need to survive but food has a great influence on society, politics, and relationships (Parker et al., 2018; Qualliam, 2015; Phillips, 2018). Although food does have nutritional value it also has a social and cultural meaning (Vernon, 2007). In Everyone Eats, Anderson describes how anthropologists use the word culture to refer to rules, customs, and other shared plans and behaviors (2005, p. 5). He then proceeds throughout the book to demonstrate the role food has in cultural and social practices. For example, the value that food has in ethnicity, religion, or class (i.e. how cows are considered sacred in India and are not eaten) or how food transactions define social networks and

how some groups try and use food to separate themselves from others (i.e. caviar is typically eaten by those who have a high-income). Anderson claims that nutritional anthropology is founded on the premise that foodways are powerfully structured by considerations of personal and group identity and that one cannot succeed in feeding the hungry unless the full range of cultural meanings that become attached to food is understood.

The system that we have built around food is complex and rigid; what we eat is not simply shaped by choice or preference (Scharf, Levkoe, & Saul, 2010; Guptill, et al., 2017). For example, the type of food that an individual purchases from the store corresponds with their available income or their desired image (Qualliam, 2015). Food that is given through charity is viewed as providing nutrition but it is also considered to act as a form of psychological transformation for the individual to bounce back from the crisis that put them in a situation that requires them to ask for charity (Möller, 2021).

Social factors also mediate eating behaviors, especially for children, the act of eating has to be performed within a set of discipline parameters that is based in power and domination or in care and commensality (Abbots et al., 2015; Dickerson, 2019; Guthman, 2011; Carney, 2015). For example, in Western culture eating sugar is often considered to be against the normative notion of what is considered a "correct" diet; yet giving a child a cupcake as a sweet treat is considered as a strategy of caring (Abbots et al., 2015).

In the 1930s and 40s scientists were further exploring how food had social meaning and the field of social nutrition emerged (Vernon, 2007). It was recognized that the way people communicated about food was a marker of social class, and that social norms, rather than biology, was what determined what was edible enabled scientists to establish that hunger was

actually a social problem and that new forms of social welfare were needed to counter it (Vernon, 2007; Guptill, et al., 2017; De Souza, 2019).

Stigma

Goffman (1963) describes stigma as an attribute that makes a person different from others in a less desirable way such as bad, or dangerous, or weak. Link & Phelan (2001) describe stigma as a term used when labeling, stereotyping, separation, status loss, and discrimination co-occur in a power. Food banks have helped many individuals in society, but when food assistance programs were first being established the act of having to rely on such a program was considered socially unacceptable and equivalent to stealing or taking food from a trash can; which, understandably, established a stigma around such programs (Martin, 2021; Cameron, 2013). Stigma is often related to poverty and can cause feelings of inferiority and shame, affecting individuals as a well as the social cohesion of society and can persist across generations (Horst, et al., 2014). Shame resulting from stigma is identified as a source of violence and when experienced in childhood can negatively affect adulthood. Unfortunately, years later shame and stigma continue to be experienced by many food aid recipients, although it remains concealed and underestimated, and is one of the reasons why so many people choose to go hungry rather than participate in a food aid program (Williams et al., 2016; De Souza, 2019; Martin, 2021; Radsky et al., 2022). De Souza (2019) describes the process of stigmatization as being dependent on power and privilege. She views it as the power to assign and frame issues, people and situations in particular ways. Although staff and volunteers at food banks and pantries have good intentions and do not create stigma on purpose, people who have to turn to these food programs for help feel shame due to their growing reliance on charitable providers (May et al., 2019; Martin, 2021). The stigma of hunger also produces twice the number of burdens, not only are

individuals faced with the economic burden of trying to feed themselves and their families but they are also faced with the psychological burden of knowing that society views them as deviant, abnormal, or undeserving (De Souza, 2019).

Food recipients are often referred to as "guests," "clients," or "neighbors" in an effort to reduce the stigma associated with visiting a food bank or pantry but interactions between volunteers and food bank recipients can still demonstrate unequal power relations. The voucher system, for example, which indicates the level of need a food recipient serves as a way to distinguish who is deserving or not of food assistance and can create a culture of suspicion among volunteers (Williams et al., 2016; May et al., 2019; De Souza, 2019). Most volunteers indicate that there should be no shame when participating in an emergency food program but research has shown that volunteers also have a clear image of how food recipients should act, involving their attitudes and behaviors. For example, all food given should be appreciated, otherwise the need for food assistance is not so grave and complaining shows a lack of real need (Horst et al., 2014).

Food Inequalities and Inequities

Inequalities refers to situations where there is an uneven distribution of resources and opportunities (Global Health Europe, 2009). According to Clealand, hunger and food insecurity are a result of inequalities, not of scarcity, due to the unfair distribution methods set by global and national systems (2007). Costs of healthy foods and the inability of those of lower socioeconomic status (and increasingly middle-income earners) are examples of such inequalities (Pechey & Monsivais, 2016). Inequity refers to unfair or unavoidable differences that arise from poor governance, corruption, or cultural and racial/ethnic exclusion (Global Health Europe, 2009). Martin describes equity as a way to see the world, viewing things through an equity lens

forces people to examine who makes decisions and who are not represented in such decision (2021, p.97). In 1996, food was recognized as a basic human right at the Rome Declaration for World Food Security by all countries except the United States and Australia (Carney, 2015). Although being recognized as such is advantageous, addressing food insecurity is much more complicated. Food insecurity is rooted in social inequalities and addressing it is complex, often politically charged, and requires a multi-actor and multi-scale approach that include policies that heighten and exacerbate such inequalities (Martin, 2021; Vansintjan, 2014; Guthman, 2011).

According to Foucault, order, which is the relationship of things and what they are called, can be accomplished through comparison and there exists two types of comparison. One type occurs when items are arranged based on the smallest differences and the other type analyses and establishes relations of equality and inequality (Foucault, 1994). Even though individuals who are food insecure are sometimes perceived as lazy or incapable of making good decisions, oftentimes inequality seems to be the main driver behind food insecurity (Fisher, 2017). These vulnerabilities can become embodied and interpreted as deserving which, as previously mentioned, can negatively affect a person's psychological well-being.

Inequality also seems to be rising and hunger is being used as a scapegoat for the causes of poverty such as inadequate income, unaffordable housing, and social assistance levels (Fisher, 2017). Costs of food have produced a social gradient where those who are of lower socioeconomic status have worse health since healthier food costs more and are less accessible than less nutritious foods (Guptill et al., 2017). Additionally, the inadequate distribution of food highlights the power inequalities in the food system and society as a whole. These inequalities isolate individuals- deny their power and exclude them from society (Blay-Palmer et al., 2016). This can be seen by the lack of inclusion of the people who the food insecurity programs are

trying to serve, which further contributes to inequities. Addy (2017) criticizes food banks specifically for this, stating that they act as "the practical and symbolic dividing line between abundance and exclusion." This is often ignored because of the "feel good factor" that is involved when volunteering or donating to food banks and pantries. Instead, it is recommended that food banks use their space for political activism and foster awareness of the inequalities that drive food insecurity (May et al., 2019).

Effects of inequalities can be destructive, however in order for society to work there must be regulations. Ideally by reducing the pay gap between different classes, every individual can be provided with significant income to be able to insure them a comfortable lifestyle (Foucault et al., 2008). However, enforcing such a policy could bring unforeseen consequences that could disrupt the economic system. Additionally, poverty, although generally viewed as bad, is what motivates social assistance (Foucault et al., 2008). Without some sort of poverty in existence society as a whole would not create programs through collective means to help those in need.

Who is at Fault for Food Insecurity?

In the U.S. not having enough food available and accessible is considered a social problem since surplus and scarcity are human conditions. Yet there are differing opinions on whether a food-insecure person is to blame for their circumstance or if the blame should be placed elsewhere; unfortunately, this argument contributes to the food insecurity stigma and further politicizes the issue (Abbots et al., 2015; Guptil et al., 2017). Although recognized as a collective social problem there still exists the moral critique which involves personal shaming to those who are hungry; as though it is a personal fault that results from lack of discipline, failure to meet their potential, or as divine retribution due to sinful behaviors (Vernon, 2007; Dempsey & Gibson, 2017; Carney, 2015; Sonnino & Hammer, 2016). This type of personal shaming is not

a new phenomenon, it can be seen all throughout history as far back as 1388 where laws were passed to differentiate who were the "undeserving" poor (those who were presumed to work but did not) and those who were "deserving" poor (those who were presumed unable to work) and were given charity (Clealand, 2018). It was the Social Security Act of 1935 in the U.S. that reversed assumptions about the nature of social responsibility, establishing that individuals had clear-cut social rights (Clealand, 2018). A different perspective of thought blames various levels of government and the web like systems that seem to neglect those in need (Kotz, 1969; Martin, 2021). The dispute that the end of hunger is attainable if the United States had the political will has become overstated and the extent of the government's responsibility to fulfill the human right to food is unclear. Although the government collects information on food insecurity, there does not exist a legal mandate to implement policies or programs to address this issue or an action plan to reduce food insecurity rates (Fisher, 2017). Many politicians view welfare benefits and the social safety net as generous, and believe that gaps should be tended to by religious organizations or society at large (Horst et al., 2014; Cameron, 2013; Sonnino & Hammer, 2016). There is also the belief that family should act as a social safety net for members experiencing hardship (Clealand, 2018). Others view hunger as an embarrassing failure of society, demonstrating the inability to provide basic necessities or adequate opportunities for the poor (Fisher, 2017; Phillips, 2018; Scharf et al., 2010). That even if the government did take responsibility and that the right to food was ratified, all social ills that were related to poverty and deprivation would not be solved (Fisher, 2017). This argument diverts attention away from structural and systemic barriers that contributes to poverty (Fielding-Singh, 2021).

Emergency food providers are not immune to these forms of critiques either. Although they are providing a service, the expansion around the world of charitable organizations such as

food banks and food pantries have been viewed to lessen the government's responsibility to address food insecurity thereby furthering injustices in the food system (Görmüş, 2018; Williams et al., 2016; Vansintjan, 2014; Möller, 2021; Sonnino & Hammer, 2016). These organizations are viewed as being the solution to ending hunger but there are no true plans on how that goal will be achieved, instead they are simply responding to the problem (Dickerson, 2019; Fisher, 2017). By categorizing food as a matter of charity, rather than a political obligation or a human right, policy makers are able to look the other way and ignore the damage brought by lessening the funding to welfare systems (May et al., 2019; Görmüş, 2018; Williams et al., 2016; Scharf et al., 2010). Food banks are also viewed as furthering the social constraints that contribute to food insecurity. For example, the emergency food system relies on surplus food that comes through government and corporate channels, food that if better distributed would already be accessed by those who need it (Guptill et al., 2017; Carney, 2015). Meeting the need for food is helpful to many, however, as May et al. suggest, confronting the systemic injustice involved with food production and distribution that lead to hunger and food insecurity can make a bigger difference (2019).

Food Banks and Food Pantries

The first food bank was established in the mid-1960s but the rise of food insecurity due to welfare cuts occurred in the 1980s, which was when food banks grew in popularity, serving as a moral safety valve for society (Poppendieck; 1998; Lohnes & Wilson, 2018). In the late 2000s food banking went global, soon operating in 30 countries (Lohnes & Wilson, 2018). Food banks are now vastly different from how they first started, for example, they function through a nationwide network of nonprofits and work more like clearing houses than directly feeding the hungry (Vansintjan, 2014). Some food banks also have programs that offer direct grocery or

meal distributions and as discussed in the introduction, other services such as nutrition education, job-training or assistance with signing up for Supplemental Nutrition Assistance Program (SNAP). With limited budgets, food banks rely on funding from private funders, corporations, grants and individual donations. Food can come from governmental programs such as The Emergency Food Assistance Program (TEFAP) which is a federal program that offers supplemental foods to low-income individuals at no cost. However, the food that is collected in this process has its own set of requirements and practices. Otherwise, food comes from supermarket donations, or post-harvest donations that make an effort to reduce food wastes. Volunteers are relied on to move food through the system, whether that is by organizing food at the food bank or by distributing groceries and/or meals at food pantries or other meal programs.

Currently, Feeding America has 200 affiliated food banks across the nation, making it the largest anti-hunger organization and the third largest non-profit in the United States (Martin, 2021). Feeding America procures and distributes billions of pounds of food and interacts with millions of donors, volunteers, and recipients (Rosenthal & Newman, 2019, Feeding America, 2022). In a sense, food banks operate in a shadow of state hierarchy since government food programs have set regulations regarding who can access the food, the amounts that they can receive that are passed down from the federal and state governments (Rosenthal & Newman, 2019).

Food banks were meant to be a short-term solution and although many food bank workers share the desire to put themselves "out of business" rather than closing the doors food banks seem to have become a permanent part of our society (Martin, 2021; Morris, 2019; Williams et al., 2016; Williams et al., 2016; Dickerson, 2019). This is why a common critique against food banks is that they have not been able to accomplish what they were meant to do, which is

alleviate hunger (Rosenthal & Newman, 2019). In a way, hunger at a food bank seems to be viewed as "normal" and the promise that it can be solved by charity is appealing; it taps into the natural desire of religious organizations and charitable organizations to respond (Addy, 2017; Möller, 2021). Nonetheless, by constructing hunger as a matter of charity rather than a structural issue, can be stigmatizing to those who use their services. Essentially, food banks individualize food poverty and frame the poor as a victim in need of their support to survive hardship (Sonnino & Hammer, 2016). The idea that the same money that is spent on running the food banks can be given to their recipients seems foolish, with the reasoning that those who need the food are unable to spend the money wisely or make responsible choices, which is why they are in their current position (Möller, 2021). However, oftentimes food banks are often disassociated from the people that they serve and the types of foods and the amounts that they receive are not driven by their needs (Guptil et al., 2017).

Interactions at food banks and food pantries are not limited to just food; there are many emotional reactions amongst volunteers and the people who are being served. Oftentimes, volunteers are the first to greet people arriving to receive food and the final ones to say goodbye. These day-to-day interactions can be unexpected moments of sociality and connections, which could be positive. However, as Addy (2017) explains, contrary to popular belief, no one really has the "right" to use a food program especially if there are public resources involved and when someone visits the food bank there is a sort of moral distancing that is embedded into the organizational practices of the volunteers and workers. It starts with surveillance by ensuring that individuals only come as often as they are allowed to visit, take what they are allowed to, and the amounts that they were allowed (Williams et al., 2016; May et al., 2019). Also, if someone does not adhere to these guidelines or if they do not fit a certain image then they are ungrateful,

problematic, or taking advantage of the system. The line between being a grateful and an ungrateful food recipient is blurry and often volunteers or food bank employees view this type of policing as part of their job, as a way to make sure that those who genuinely need help are given the opportunity to receive it but this constant vigilance and somewhat dehumanizing bureaucracy can lead to negative emotions felt by those visiting the food banks, many of whom are already traumatized by other encounters with benefits officials (May et al., 2019; Dickerson, 2019).

While food banks may not be the solution to end hunger, they are still very beneficial and are easier to partake in than addressing larger issues such as homelessness or affordable housing (Fisher, 2017; Guptill et al., 2017). Moreover, since food issues are often interwoven with other needs, they can be used as a starting point. However, if that is the case then it is important that the food itself is not an end but a means to achieve another goal (Scharf et al., 2010).

As discussed in the introduction, food banks and food pantries are designed and operate differently. The way that a food pantry is designed and operated can influence the experience of those who visit. Oftentimes food pantries are tended to by religious organizations but for a food insecurity program to be successful, it should reflect the local community and include them in the program, even if the community members are not members of that specific organization. It is important for these programs to be culturally appropriate and to consider existing power dynamics, whether they are social, political, or economic; and for programs involving children, considering the family environment is important (Gidding et al., 2015; Skinner et al., 2016). In a sense, the food pantries should work as community food hubs where people are able to build connections, socialize, and receive food (Martin, 2021). They should also encourage those who participate in receiving the food to have a voice in how the program is managed (Abbots et al., 2015).

Food Insecurity in Pinellas County, Florida

As previously mentioned, many people who receive food assistance, work and use their food benefits to supplement their income. While well-intended programs may exist to help alleviate the burden of food insecurity there still exists a shame associated with needing or asking for help. The ALICE population, for example, work one or more full-time jobs and earn enough to be above the Federal Poverty Level. However, they are constantly at the risk of financial disaster when faced with an emergency (United Way, 2019). When circumstances beyond their control occur, like being unable to pay for repairs on a broken-down car, they may not be able to get to work and risk losing their jobs, which can put them at risk of going hungry. Additionally, some of these individuals may not qualify for food assistance programs, such as SNAP, because their income is considered to be too high but it is too low for them to cover all of their household expenses (Martin, 2021). The most recent ALICE report conducted by United Way (2019) found that Pinellas County had 46 percent of its residents below the Household Survival budget, which represents the bare-minimum costs of basic necessities in a household. Thus, close to half of Pinellas residents struggle to make ends meet in terms of the cost of living but do not qualify for government-funded assistance. This alarming statistic shows that households that are considered middle-income are struggling financially. The basic cost of living has consistently increased in Florida since 2007. In addition, 67 percent of Florida jobs are considered low-wage jobs which pay $20 an hour or less and 75 percent of those low wage jobs pay less than $15 an hour (United Way, 2019; Burris, 2018). Since the cost of living is higher than the growth in wages, many workers in Florida still do not earn enough to cover a basic household budget and ALICE households in particular. Hence, the need for food assistance

remains high in spite of an improving economy (Edwards et al., 2016; Coleman-Jensen et al., 2012; United Way, 2019).

Food banks tend to be local. The most successful food banks are made up of members from the community and are viewed to be resources of the community (Vansintjan, 2014). In Pinellas County, Florida there are two well-known food banks that operate in the region. Feeding Tampa Bay, a Feeding America-affiliated food bank that covers a ten-county area. And the St. Pete Free Clinic, which operates in Pinellas County. Both organizations offer fresh produce, meats, food staples and on occasion hygiene items through their various food pantry partners, food insecurity programs, or drive-thru pantries.

The Influence of Schools on Food Insecurity

Children have complex schedules and situations in which single-parent households or households where both parents work can require a child to consume the majority of their meals outside of the home (Gidding et al., 2015). It is estimated that about 35% of a student's daily calories are consumed at school (Ross, 2010). Other sources of meals for children can include child-care programs, after-school programs, vending machines, or convenience stores (Gidding et al., 2015). This often explains why when school holidays arrive families feel pressured to have food available at home, especially those who rely on free/reduced school meals. Research done by Waxman et al. report that adolescents are aware of this pressure on the family's food budget and that during the holidays there is a greater need because there are more people in the house (2015). Schools are locations where children spend a large amount of time, the environment also has a powerful influence on students' future educational and economic outcomes, and if supported could help establish behaviors that support good health practices (Haerens, 2006; Niemeier & Fitzpatrik, 2018). This makes schools a great location to host programs aimed at

reducing food insecurity, since food is so important for children's academic success. Children who are hungry cannot learn at school since they may have a hard time concentrating (Kotz, 1969). Skipping a meal can negatively affect a person's learning and there have been studies that show a direct correlation between food insecurity and low reading and mathematical performance in school (Ross, 2010; Jyoti et al., 2005). Also, children who are food insecure are more likely to get suspended from school, experience tardiness or absence from school, or have difficulty getting along with peers due to behavioral issues that stem from psychological and emotional distress associated with not knowing where their next meal is coming from (Ross, 2010). In research conducted by Mmari et al. (2019) adolescents suggested that food insecure programs should be provided at locations where youth already congregate and be combined with other services such as job training.

Free/Reduced Lunch Program

Providing youth with nutritious food has been a concern of this nation for years. During the Great Depression of the 1930s it was recognized that the effects of hunger was having a negative impact on productivity; in order to see that the students were adequately fed school lunch programs were established (Ross, 2010; Vernon, 2007). By supplying students with nutritious breakfast and lunches during school days, schools played a vital role in preparing and sustaining their potential learning abilities and benefiting their social behaviors (Vernon, 2007).

In the early twentieth century the program began to change, starting with distinguishing which children were eligible for a free meal, by a medical inspection, and which should pay for half the cost (Vernon, 2007; Dempsey & Gibson, 2017). Soon the eligibility requirement was based on income and the schools began to receive reimbursement from the federal government for the meals that were provided (Guthman, 2011). These meals were prepared with surplus

commodities that were purchased directly by the federal government and then donated to the schools (Guthman, 2011). It is estimated that the eligibility for these programs was, and remains, underreported since caregivers are reluctant to disclose their low income to the school, for fear that they will be judged as unable to provide for their children or that their children may be removed from their care (Dickerson, 2019; May et al., 2019). Change came again in 2020 when the COVID-19 pandemic put pressure on school districts to find creative ways to feed more hungry children as rates of food insecurity soared. As a way of support, the USDA offered federal waivers that reimbursed schools for meals for all students, regardless of their income (Fielding-Singh, 2021). This new policy introduced the possibility of offering universal school meals, a policy common in many other nations but long seen as unfeasible in the United States (Fielding-Singh, 2021). Research conducted by Gutierrez (2021) has shown that universal school meals can also lead to improved student perception on the school environment and a decrease in bullying and fighting. Although the free/reduced lunch program remains the current solution for addressing food insecurity in high schools, the layout of school lunchrooms is not conducive to this program. Lunchtime is a great setting for socialization, as during this time students may be more self-conscious about how they are perceived and thus want to avoid being seen as "poor" (Stein, 2008; Brothers et al., 2020). Social class segregates lunchrooms; children who are eligible for free food are those who line up for their federally regulated meal while their more affluent peers purchase the more desirable a la carte items, fast food meals, or leave the campus altogether (Poppendieck, 2010; Stein, 2008; Burris et al., 2020). This structured separation of students in school lunchrooms exaggerates the importance of the one form of power that they can exercise, which is status (Poppendieck, 2010). Eating at the lunchroom can be classified as a ceremony or ritual, which underlines or dramatizes the exercise of temporal or secular power and

authority that get drafted down the social ladder (Mintz, 1985; Pryor et al., 2012). Since who students associate with has such an effect on their status, they may choose not to line up for a free meal and instead go hungry. Although the concept of preferring to go hungry rather than admit need is a hard for some people to grasp, poverty is associated with feelings of shame because of failure or incompetence, thus exercising the little bit of power that a teenager may have in order to maintain a certain status makes sense (Stein, 2008; Brothers et al., 2020). Ignoring the issue of food insecurity in a high school simply feeds into the marginalization. With food assistance programs tackling food insecurity becoming more common in schools across the country, understanding the challenges beyond access to food, such as stigma and shame attached to receiving food aid, can offer important clues to improving these programs.

It has been reported that stigma deters participation in food assistance programs; particularly in high schools it is considered to be a barrier (Mirtcheva & Powell, 2009; Marcus & Yewell, 2022). Work by Fitzpatrick (2011) and Duong (2023) provide an example where there was a perceived stigma of the food assistance program among students who utilize the program but no such perception from non-participants. Duong (2023) theorized that food pantry users who had this perceived stigma were creating a harsher depiction of what others think of them and self-blaming, resulting in stigma from internal thoughts. However, Mircheva & Powell found that students would eat free meals more often if their friends did (2009). Other research builds on this, showing that high school sites where the great majority of children are eligible for the program have a culture that does not stigmatize food insecurity thus; neither children nor caregivers feel ashamed to participate, instead the program has become so accepted that most do not view of it as welfare (Poppendieck, 2010; Ross, 2010). For example, one school offered a free breakfast in class at the start of the school day, rather than in the cafeteria before school

hours. This reduced the stigma associated with visiting the cafeteria before school for a subsidized meal and made it so that this program was not "just for poor kids" (Corcoran, et al., 2016; Leos-Urbel et al., 2013). Another example was provided by Poppendieck (2010), in which a teacher managed to increase the participation of grab and go lunches and lessened the stigma by simply promoting and engaging with the students, informing them of the warm bagels they had that day and asking if they had breakfast, this simple act caused all the food to be gone in fifteen minutes. Universal meals have a similar effect, of normalizing accessing free meals and preventing stigma (Marcus & Yewell, 2022; Gutierrez, 2021). This calls into question whether changing the culture of high schools where participating in a food assistance program is not viewed as shameful or different would be an effective way to combat this stigma. Since there are examples of sites where food insecurity is not stigmatized and ways that have been shown to lessen its effect, more research should be done on how to replicate this at sites where this remains an issue for adolescents (Corcoran, et al., 2016; Leos-Urbel et al., 2013). An effort should also be made to recognize that stigma does not just stem from others, but also from internal thoughts (Duong, 2023).

School Food Pantries

Children and adolescents spend a large amount of time at school, thus a potential short-term solution to addressing food insecurity would be to implement visible school food pantries in high schools. It has been shown that pantries, which are visual to the public, tend to be more successful because they lead to a sense of community and act as a source of pride for the school (Poppendieck, 2010). Client choice pantries offer clients an opportunity to "shop" for the foods that meet their dietary and personal needs. Often, these types of pantries are preferred by volunteers and clients since distributing food through a client choice model is better able to

accommodate client needs and preferences, enhance dignity, accommodate cultural preferences, and reduce waste (Remley et al., 2019; Ohio Association of Second Harvest Food Banks, 2006). Children do not always have much control over their own food resources. With school lunch, the choices of availability, quality, and quantity are made for them by school personnel. At homes, parents are often in charge of deciding what adolescents can and should eat, because their parents control the money in the household (O'Dougherty et al. 2006; Patrick & Nicklas, 2005). In addition, children's food choices cannot be separated from the power dynamics of the schools. Even though children are charged with taking responsibility for their food choices, the different modes of control that restrict and reduce their agency need to be taken into account (Radsky et al., 2022; Fitzgerald et al., 2010). Within the schools, food is treated as a commodity and the programs offered are entangled with politics, federal guidelines, budgets and decisions that have been made throughout the year, at local, regional and national scales (Gibson & Demsey, 2015). For example, vendors of fast food, soft drinks, and processed snacks often act as funding sources for under-resourced schools and school lunches often depend on paying children to subsidize the cost of the free/reduced lunches that are offered. Which means that, for the interest of the political economy of school lunch programs, the choices that are offered in schools need to be appealing to children and produced cheaply (Gibson & Demsey, 2015). The ability to make a choice in what adolescents would like to eat at the school pantry would help in giving them some power over their diet. However, it would be important for the food pantry staff to ensure that the types of food that are stocked on the shelves are a combination of healthy and tasty so that the students are meeting their nutritional needs as well as eating the foods. This brings up the cultural usability of a luxury, in this case free food, which must be studied for its meaning to be fully understood (Mintz, 1985). An example of cultural usability of free food could be seen if the

food pantry was stocked with brussels sprouts and macaroni and cheese. In this example, it would not matter if the brussels sprouts were considered luxurious because they were nutritious and expensive if the students did not know how to cook them because they wouldn't take these items nor would they eat them. Whereas if the students could easily prepare the macaroni and cheese in less than five minutes by microwaving it, this item would be more valued. The influence of the school staff who are running and stocking the pantries must also be acknowledged, although the staff may have good intentions they remain in a position of power over the adolescents because they are the ones making the choices in what the adolescents eat by making the decisions on what is being provided in the first place. This is perhaps the point where meaning and power touch most clearly (Mintz, 1985). There remains a concern with the ways that political economic conditions and power relations are inscribed on individual bodies (Seligman, 2014).

Food Insecurity Among Adolescents

Adolescence is a transitional phase that begins at the onset of puberty into early adulthood; typically it is the age between 12 and 19 years old and is characterized by an increase in mobility, greater financial autonomy, and independence (Haerens, 2006). The rapid development of the body, brain and social identity that occurs during these years make it a vulnerable stage to experience food insecurity (Niemeier & Fitzpatrik, 2018). However, adolescents have a distinct awareness of their social and economic environments, and this can influence their risk as well as responses to food insecurity. For example, many adolescents in a study conducted by Popkin (2016) recognized that their parents did their best to put food on the table but that many struggled and cut back on their meals so that their children could eat. However, this same group of adolescents did not want others to know that their family sometime

went hungry out of fear that they would be considered outcast. This awareness may keep them from asking for or accepting food assistance due to the stigma associated with food insecurity and contributes to low self-esteem (Shankar-Krishnan et al., 2021). Although a large body of literature demonstrates the impact of food insecurity on physical and mental health, the social stigma attached to food insecurity remains relatively understudied among adolescents. This is an omission given that adolescence is known to be a period of growth, identity development, and social comparisons (Milner, 2004; Knoll et al., 2017; Bucher et al., 2016, Brothers et al., 2020). Stigma disproportionately affects those at an increased risk for various health problems and less access to resources (Ostach et al., 2017). It is viewed as a fundamental cause of health inequalities because it hinders those in need from seeking help and deters people from accessing help such as from food assistance programs (Bublitz et al., 2019; Brothers et al, 2020; Popkin, 2016). Often, stigma results from stereotyping and is a characteristic that is deeply discrediting, affecting how people view themselves and how they see and treat others (Ahmedani, 2011). How others see and treat them can also affect them negatively. Stigma often refers to a particular kind of narrative that focuses on individualism, hard work, and personal responsibility. When people are not able to live up to these characteristics, for reasons beyond their self-control, society marks them as having character flaws, that they are irresponsible and unworthy (De Souza, 2019; Cozzarelli et al., 2001). This type of discrimination creates a stigma around receiving assistance, and the internalization of such stigma can cause stress which can lead to negative bodily affects if suffered over a long period of time (Ostrach et al., 2017; De Souza, 2019; Seligman, 2014). Research has shown that food insecurity is associated with health issues for adolescents such as depression, anxiety, and obesity and that it can make a child vulnerable to infections (Popkin, 2016; Bae, 2020; Dush, 2020; Hatem et al., 2020; Men, Elger & Tarasuk, 2021).

Despite its existence among adolescents in low-income communities, food insecurity often goes unrecognized among this age group when compared with younger children (Poppendieck, 2010; Cairns, 2018; Eicher-Miller & Zhao, 2018). This is detrimental since this is a time where adolescents achieve the final 15-20% of their adult height, gain 50% of adult weight, and accumulate up to 45% of their skeletal mass; which can be affected without proper nutrition (Haerens, 2006). Food assistance programs that exist for children are typically targeted at infants and preschoolers, and have no direct benefits to adolescents (Hamersma & Kim, 2015; Johnson et al., 2019). The lack of engagement with adolescents at these sites contributes to them being unaware of this option or feeding into the perception that these types of programs are for younger children. However, within recent years many changes have been implemented and more are expected. In 2019, Feeding Tampa Bay started up three high school-based school pantries across Hillsborough and Pinellas County. Additionally, local policy changes have been made to school lunches based on recommendations given through an evaluation funded by the Juvenile Welfare Board (JWB) of Pinellas. This evaluation aimed to identify issues related to food insecurity among adolescents in Pinellas County, Florida (JWB, 2018; Burris et al., 2020). An example of such issues that were identified included the negative perception that students had of the food quality and the food options that were being distributed in the lunchroom (Burris et al., 2020), As a result, one change that was implemented was an annual taste test from different food vendors inviting students to provide input on what they would prefer to be included in the school lunch menu.

Coronavirus (COVID-19)

In their article, Lohnes & Wilson (2018) asked what would happen during the next recession or crisis if emergency food were the last line of defense against hunger in the United

States. A few years later the Coronavirus (COVID-19) pandemic became a major public health crisis causing sudden and major disruptions in the everyday lives of families, from loss of employment, increased financial burdens, and feelings of isolation. These disruptions have especially affected those who were already food insecure before the pandemic but with high unemployment rates, and increased food prices rates of food insecurity have grown, making the emergency food system the last line of defense like Lohnes and Wilson predicted (Heuer et al., 2020). The pandemic affected all aspects of food insecurity, which include food availability, accessibility, utilization, and stability (Niles et al., 2020). FAO (2008) breaks down what each of these dimensions refer to and explains that in order for food security to be achieved, all four have to be fulfilled. Availability refers to level of food and if there are sufficient amounts for a healthy lifestyle, when examining it outside of the household it can be determined by the level of food production and stock levels. Accessibility involves both the economic and physical access to food. Utilization determines the nutritional status of an individual since it's the way that the body makes use of the food (ie. sufficient energy). Stability means that the previously mentioned dimensions continue over time, for example a person can be considered food secure until they lose their job then their status changes to food insecure until they get a paycheck from their new job. Although all four aspects of food insecurity were affected during the pandemics, accessibility seemed to be greater impacted (Economist, 2022).

Prior to the pandemic it was estimated that approximately 14% of families with children (13 million children) were food insecure and were using food banks and government funds to feed their families (Kinsey, Kinsey & Rundle, 2020; Fielding-Singh, 2021). When schools closed and families were put out of work, this number skyrocketed and the food bank system went into emergency response mode (Martin, 2021). However, even this system struggled during COVID-

19, due to rationing or decreased product availability, food that was normally available for purchase from supermarkets was often no longer available (Butler & Barrientos, 2020; Bradley, 2021). Long lines of cars that waited hours to receive food became normal images on daily news (Bradley, 2021).

At the start of the pandemic families tended to purchase lower-cost, shelf stable foods that were highly processed and fewer fresh fruits and vegetables in an effort to reduce the number of shopping trips and exposure (Adam et al., 2020).

However, with more people at home because of lock-down protocols and school shutdowns the food lasted less time in the households. Adolescents in particular, it was discovered, were highly susceptible to acquiring bad eating habits during lockdown due to the COVID-19 pandemic and consumed a higher diet of ultra-processed foods during this time (Ruíz-Roso et al., 2020).

Parents during this time reported higher rates of stress and depression (Adam et al. 2020). Carroll et al. (2020) reported a significant decrease in mental health, with 80% of participants reporting on a survey that the pandemic negatively impacted their mental health. The challenges of balancing work with the responsibility of homeschooling children while at home, worries about contracting the COVID-19 virus, possibly facing unemployment and financial instability, were some of the key stressors identified (Carroll et al., 2020). Considering the physiological impact that stress can have on an individual, minimizing family stress should have been a priority in the COVID-19 response plans (Carroll et al., 2020).

Pre-pandemic it was reported that 13.6 million of U.S. household were food insecure in 2019, this number rose to 13.7 million in 2020 when COVID-19 was to blame for high unemployment levels and rising food insecurity rates. (Coleman-Jensen et a., 2022). Although these rates lowered to 13.5 million in 2021 according to Coleman-Jensen et al., (2022), Feeding

America (2022) released a study reporting that food banks served over 55% more people in 2021 than in years before the COVID-19 pandemic.

CHAPTER THREE:

THEORETICAL FRAMEWORKS

This study explored the complex issue of food through the accounts of the experiences of adolescents coping with food insecurity. All study instruments and analysis were developed based on established theoretical frameworks. A theoretical framework is the conceptual direction of a project and it is identified from the research question (Morse & Niehaus, 2009). For the purpose of this study, biopower, the social-ecological model (SEM), and structural violence were used to guide the research. By linking relevant causal factors of certain behaviors to appropriate change methods, theories can help provide valuable insight on how these components can contribute to outcomes.

Biopower, in particular, was used to describe barriers and facilitators that affect food pantry use while SEM was used to explore food choices among adolescents and the stigma that may be influencing participation at the food pantry. Food insecurity can be considered an outcome of structural violence, since it can result from social structures characterized by poverty and inequality. Structural violence was used to explore the forces that create and reinforce social hierarchies (Johnston et al., 2019).

Biopower

Biopower, coined by Michel Foucault, is a concept used to examine the strategies and mechanisms through which human life processes are managed under regimes of authority over knowledge, power, and the processes of subjectivation. It originally emerged in the seventeenth

century with the rise of industrial societies; what occurred was a changing thought that the sovereign had the right to manage life to society's right to manage life, either by caring for the people or by limiting their life expectancy by not caring for them (Arnason, 2012). Foucault claimed that this change in power over life evolved in two forms, one was the anatomo-politics of the human body and the second was the biopolitics of the populations (Arnason, 2012; Hope, 2016; Lemke et al., 2011). The economy tends to be what enables the justification of power, not that the state has an autonomous source of power or is universal; actually if the state violates the freedom and rights of citizens it is no longer representative of the citizens and cannot exercise its power legitimately (Foucault et al., 2008; Foucault, 2003). However, economical factors tend to overlap and invest in political and cultural factors and the creation of wealth in society tends to influence the biopolitical production of social life (Lemke et al., 2011).

Anatomo-politics and Biopolitics

Anatomo-politics focused on the body as a machine, looking for ways to discipline and make it useful. In his work Discipline and Punish, Foucault focused on how this aspect of biopower worked in places such as the army, prisons, hospitals and factories since there was wider use of disciplinary techniques at these locations (Foucault, 1977; Lemke, Casper, & Moore, 2011). This form of biopower involves various networks of power and knowledge as well as countless plans and strategies throughout society in order to work (Arnason, 2012; Carney, 2015). Examining the lifestyle of a competitive runner can give a modern example on how this type of discipline is applied. Whether by a supportive coach or the monetary motivation of their employer, a runner is constantly being told what to eat or drink, what to buy, or what forms of exercise they must follow to perform better (Arnason, 2012). Another example of a form of discipline would be the marketing techniques that are used in stores; they influence

consumers' actions in overt and subtle ways on what they should buy (Guptill et al., 2017). In contrast, biopolitics of the population is not concerned with the human body but with the population as a whole; managing births, deaths, behaviors, and health (Arnason, 2012; Foucault et al., 2008; Foucault, 2003). Interventions involving biopolitics require collecting enormous data about population and then analyzing the data. By measuring and aggregating biological features on the level of populations, norms were able to be defined, standards established and as a result life could become an objective and measurable factor that could lead to the production of knowledge; this knowledge was what led to the start of demography and statistics in the eighteenth century (Arnason, 2012; Hope, 2016; Lemke, Casper, & Moore, 2011).

Contemporary politics involve biopower as a form that regulates social life from inside social groups (Rabinow & Rose 2013). Invoking the language of biopower can reference how life is made into an object of political maneuvering and explain how populations that have little power become socially invisible due to some of the existing bureaucratic procedures (Rabinow & Nikolas 2003; Biehl, 2001). The issue of food insecurity tends to be a matter of access and power, not a lack of food (Martin, 2021). Since food is commonly used to maintain power and can result in inequalities, controlling what other people eat has become an area of interest in biopower especially since there exist numerous and diverse interventions that can be used to achieve the subjugation of bodies and therefore the control of populations (Abbots et al., 2015; Armstrong 1995; Guptill et al, 2017). Dayle & McIntyre (2003) illustrates the subjugation of bodies using the school lunch program as an example of a program of power and a way to control the population of students. They state that children who are food insecure have deviated from the normality of food security and that this program attempts to correct this deviation, which establishes mechanics of power. By providing students food at school it is expected that

behavioral problems will decrease and that their capacity for learning and attention will increase making these programs a way to increase capacity of their bodies, a common characteristic of biopower. Additionally, programs of power attempt to make bodies politically obedient through the use of space, time, and prevailing truths. The school lunch programs assemble children in designated spaces during specific times allowing for surveillance and control of activities, which are considered techniques of power. Rules are established based on societal and cultural truths (ie. amounts of food they are allowed to take, expressing good manners as expected), which children must follow to receive food, those who follow the rules are rewarded for their behavior and those who do not are punished.

Carney (2015) argues that most food insecurity programs have more to reveal about contemporary biopolitics than they attempt to alleviate food insecurity. While these programs do aid in feeding individuals, they fail to assist them in getting out of the position of abject marginality that caused them to require assistance. Such programs hold individuals responsible for their own dietary health and have certain expectations of them; in her research she provides the example of unauthorized migrants who are maintained as an exploited source of cheap labor.

Biopower in Schools

Surveillance is common in social programs, especially with the welfare system. It is referred to as poverty governance, which is how the poor are surveyed, disciplined, and then brought to the social program with the help of public health workers who work as "proxies for the state" (Carney, 2015). This also acts as a calculated practice for managing behavior (De Souza, 2019; May et al., 2019). While limited research has been conducted, examples of biopower are evident in state-sponsored initiatives such as school lunch programs, which attempt to manage the population through food (Goodman et al., 2017; Dempsey & Gibson, 2017; Hope,

2016). Everyday life has now become systematically monitored and surveillance has become part of our social organizations but schools especially seem to be ideal for analyzing the biopolitical management of populations. Schools can be considered institutions of social control that train students on how to behave in socially acceptable ways by dictating, monitoring and enforcing what is considered appropriate behavior (Hope, 2016). Within the school's lunchroom, biopower can be used to describe how power works to categorize groups of people by using socially and culturally constructed ideas and how this power determines who receives investment (Kline, 2019). Although school food pantries do provide access to food, once access is achieved, stigma becomes a barrier for adolescents to access a healthy meal because they do not want to utilize this resource due to the fear that their peers will view them as different or poor. Our society is governed to distinguish what is abnormal; once determined it then regulates and organizes the normal condition (Ferreira et al., 2015). This can be described as a form of social constructionism, which Anderson defines as "the idea that society or culture constructs all that we believe and do" (2005, p. 84). For adolescents in the lunchroom, the social hierarchy contributes to the stigmatization and social devaluation of food insecure students (Johnson et al., 2019; Poppendieck, 2010). However, as Anderson (2005) explains individuals are the ones who construct their own foodways, not cultures, and a person cannot be forced to eat particular things; thus, the act of choosing not to partake in a program that distinguishes them as abnormal is an individual choice, which grants the teenager power and autonomy over what they eat and explains why some adolescents choose to go hungry instead.

Biopower in Food Banks and Pantries

Food banks are also involved in shaping the lives of people and places that results in politics of life and could help in lessening that feeling of powerlessness. Food is vital to life and

central to behaviors and cultural norms (Bourdieu, 1984; Strong, 2019). Although the food that food banks and food pantries provide addresses hunger and provides nutrition, it can also act in a way that can control the conduct of hungry bodies (Vernon, 2007; Strong, 2019; Nally, 2011; Cloke, 2013). Within the food pantries, the issue of biopower is revisited when addressing the lack of autonomy that the food recipients have over what they eat. Food autonomy involves the ability that people have to make food choices in a dignified manner (Vansintjan, 2014). Power is necessary to maintain social order and food insecurity is associated with feelings of powerlessness, along with stress and anxiety (De Souza, 2019). A way that the food pantries can help ease that sense of powerlessness is to follow a client choice model. As De Souza (2019) explains, when money is scarce there is seldom the luxury of choice when it comes to what a person will be eating, but through this model food recipients would have that choice.

Fisher (2017) argues that the freedom of choice is an illusion that everyone makes food choices within established parameters outside of our control. For example, although a food pantry may follow a client choice model where they are able to make decisions for the types of food that they would eat, their choices are still limited to what the food pantry staff have stocked the shelves with; a decision someone else made. Similarly, food pantries are in an uneven power relationship with food banks, which supply them with the foods and food banks have less power than their food suppliers and the government that regulate them. Even those who are food secure do not have full control over their food choices since at a supermarket the food that's available is subject to the power of the food industry (Patel, 2007). However, although power relations cannot be avoided, their effects can be mitigated. For example, although a consumer may not have full control over their food choices at a higher-income supermarket, they have more options

than what is available in a supermarket located in a low-income neighborhood (Patel, 2007). These are the types of structural inequalities that should be directing efforts for change.

A theoretical analysis using biopower requires an examination of how power operates in day-to-day life. Foucault (1990) states that "power is not an institution and not a structure" instead that it is a title, which is attributed to a complex situation in society. Power operates based on what people assign meaning to, if people stop assigning meaning to one object its power would cease to exist (Möller, 2021). Power must then be analyzed as something that functions only when exercised through networks, and that the individuals that are part of those networks are also in a position to exercise this power (Foucault, 2003). Thus, power is not applied to individuals it simply passes through them. A shifting of power can be seen through food pantry volunteers. Even though volunteers at a food pantry may have a mindset of generosity and charity when volunteers select the food instead of the food recipient it sends a message of distrust and reinforces the idea that the volunteers are in charge which can create an emotional barrier and reinforce the power dynamic of giver and receiver, maintaining a system of oppression (Martin, 2021; Clealand, 2018). This phenomenon can be shifted if the food recipients are the ones who are able to choose the food, especially if they make up the majority of the volunteer base and are involved in deciding what food should be ordered, how the food should get distributed, and what programs would be most effective in their community (Martin, 2021; Möller, 2021). This example illustrates how power is not an object that institutions or individual people have over others but a relational process enacted through interactions or networks of relationships. By examining power in this way, this theory will be useful in addressing the research question: what social factors act as barriers and facilitators for food pantry use for a high school student population?

Critique

Foucault's theory of biopower does face many critiques. To begin with, since biopower focuses on power relations it can only be understood in terms of modes of opposition (Salgues, 2016). In his writings, Foucault questioned whether improvement could be applied to all citizens, indicating that when using biopower for a program, a sub-population of citizens could be deemed unnecessary or unwanted (Lewis 2018).

Additionally, when biopower operates on a collective level on populations it ignores a point that was brought up in Foucault's writings on governmentality, which involves that the theory focuses on the control of individual bodies (Bird & Lynch, 2019). Yet, when there is a large focus on individual bodies, how they have been subjected, and to how human populations have been regulated some scholars have raised the question: if biopower is not the theory where life is subjected to bureaucratic politics than is it where the power of life can be realized instead (Bird & Lynch, 2019)?

Theoretical analysis using biopower requires an examination of how power operates in day-to-day life, but even though the concept of biopower can describe forces of power it does not seem to analyze anything in the modern day. Thus, a critique of this theory is that if biopower has become the pervasive modern model of power than why is it not recognizable as such (Cisney & Morar, 2016)? For example, biopower focuses on sovereign power, which has become only a supporting role in politics. So then why does it continue to guide understandings of the politics? One response to this critique is that the conceptual model of sovereignty continues to serve as a critical tool against the reemergence of sovereign power and that this model serves as a reminder of the dangers of the excesses of power (Cisney & Morar, 2016). For this critique, it is important to keep in mind that this theory was developed 40 years ago and it is unfair to

examine the perspective with a mindset of the mid-twentieth century. Also, in modern forms of government, the understanding of power as sovereignty still does persist, but in a dispersed form (Cisney & Morar, 2016). The state is a sovereign, but one in which its subjects are understood to also be sovereign because they are free citizens. So then, sovereignty as the perceived model of power continues but each participant is responsible and capable of making good decisions, exercising their own sovereignty, as long as they do not impose their will on other sovereign individuals (Cisney & Morar, 2016).

Summary

Biopower was used to answer both research questions. For the first question: what social factors act as barriers and facilitators for food pantry use for a high school student population? Individual and interpersonal were focused on, which follow anatomo-politics in that it is concerned with the human body as a machine organizational, and policy. For the second question: What is the impact of having access to food on campus on student's stress and anxiety? Individual and interpersonal factors were still focused on as well as potential community factors, which is more closely related to biopolitics, which is concerned with the population as a whole.

Social Ecological Model

The SEM is rooted in Urie Bronfenbrenner's ecological theory of human development. Bronfenbrenner emphasized that human development is influenced by multiple environmental and social mechanisms that interact (Brothers et al., 2020). These include factors at the intrapersonal, interpersonal, organizational, community, and public policy level (Glanz, et al., 2008). This is useful because health disparities are determined not only by individual behaviors but also by their social determinants of health, which include a variety of different factors such

as living and working conditions, medical care, local and federal laws and policies, and other social factors that influence health (Brothers et al., 2020).

Society tends to think that children need extra guidance when making choices; this is because their environment seems to not only shape their choices, but it shapes them (Patel, 2007). Ecological models demonstrate the importance that interactions can have in shaping behaviors (Haerens, 2006). Social networks especially have a strong influence. For example, research by Blake (2019) shows that those who have strong social networks have a better quality of life. Among adolescents, the social environment has a considerable influence on their eating behaviors (Haerens, 2006). The physical environment also influences their eating habits; this includes factors such as availability and accessibility. Hager and colleagues found that particularly the home and school environment have a significant influence on an adolescent's consumption of fruits and vegetables (2019). The SEM provides a visual depiction of how dynamic relationships interact through an interconnected web of social norms, community influences, and individual beliefs that contribute to behaviors (Blake, 2019). The importance of including a broader understanding of human behavior into the study of social-ecological systems has also been growing in recognition among the social sciences (Schlüter et al., 2017). By bringing attention to health-related and other social policies and environments, and conceptualizing the ways in which individuals, their social networks, and organized groups produce a community context, a healthy policy and environmental development can be promoted (Golden et al., 2015). By examining these interactions, this theory will be useful in answering the research question: What social factors act as barriers and facilitators for food pantry use for a high school student population? Then, by distinguishing these factors and their interactions with

a student's food security status, the second research question will be answered: What is the impact of having access to food on campus on student's stress and anxiety?

Critique

A critique of the SEM is when it is used to influence large groups of individuals or organizational structures it is more complex and multinomial, causing any assessment based on this framework to require a more complex and less controlled design (Glanz et al., 2008). Since ecological models specify multiple levels of influence there are typically multiple variables at each level, which makes it difficult to determine which of the interactions are most important. Thus, a challenge for research is to expand understanding of the interactions across levels (Glanz, Rimer, & Viswanath, 2008).

Another weakness involves the lack of specificity about the most important hypothesized influences. This puts a greater burden on health promotion professionals to identify critical factors for each behavioral application (Glanz, Rimer, & Viswanath, 2008). For example, when discussing a person who wants to eat more vegetables it would be simple to focus on how this person doesn't know how to cook vegetables in a way that tastes good, an interpersonal factor, and design a program that provides them with recipes on how to cook vegetables. However, another issue could be that this person's family does not share their goal of eating more vegetables, which would be an interpersonal factor. This type of program could focus on how to include more vegetables in family meals. The number of different issues that could contribute to the problematic behavior acts as a major challenge for those working with ecological models to design a program because it is unclear which factor would be the most influential to address for a greater impact. A goal would be to develop more sophisticated operational models that lead to testable hypotheses and useful guidance for interventions (Glanz, Rimer, & Viswanath, 2008).

The reframing of health behavior as the result of diverse factors of influence, rather than the responsibility of individuals raises issues about the role of an individual's responsibility for change (Glanz, Rimer, & Viswanath, 2008). However, a final weakness for this model involves the lack of information it has on how the broader levels of influence operate or how they interact across levels (Glanz, Rimer, & Viswanath, 2008). For example, in the scenario a person who wants to eat more vegetables- a program that provides recipes for family meals may not take into an account that the produce at the neighborhood market may be more expensive which is a community factor that could be working against this person's goal. Although analyses involving ecological models emphasize the interdependence of environmental conditions within particular settings and the interconnection between multiple settings, little empirical evidence explores the interrelationships between environmental and individual factors (Zhang & Solomon 2013). Thus, this model broadens perspectives without identifying specific variables or providing guidance about how to improve research or interventions. This is in contrast to individual-level theories of health behavior which are more likely to not only specify the variables but also the mechanism by which those variables are expected to influence behavior (Glanz, Rimer, & Viswanath, 2008).

Structural Violence

Johan Galtang, a Norwegian sociologist, introduced the concept of structural violence. Galtang considers violence to be present when humans are influenced in such a way that their physical and mental realization are lower than their potential realization, even though this is avoidable (1969). Structural violence is subtle and unlike physical violence the harms cannot be traced to an individual. Instead it is built into the structures of society and manifest as inequalities (Johnson et al., 2019; Galtang, 1969). This theory is commonly used to describe forces that create and reinforce the social inequalities that can result from poverty, racism, and

unequal access to medical care that can lead to avoidable deaths, illness, and injuries (Johnson et al., 2019; Hanna & Kleinman, 2013). As Galtang describes, structural violence is apparent when resources are unevenly distributed and the power to decide how those resources should be distributed is uneven (1969). Since this type of violence is commonly embedded in social structures and normalized in stable institutions and experiences the damage produce is more subtle and difficult to repair (Winter & Leighton, 2001; Galtang, 1969).

Similar to biopower, the processes with this theory are also influenced by history and are economically driven. Structural violence can be used to describe what political, economic, and institutional power does to people and it can influence responses to social problems (Hanna & Kleinman, 2013). Even in the absence of open armed conflict, structural violence has a direct impact on the ability of disadvantaged populations since harms are built into the structures of society and manifest as unequal life chances. For a food insecure population this occurs with the lack of secure access to food of adequate quality and quantity especially in areas where ample food is available (Himmelgreen & Romero-Daza, 2010). However, once access is achieved, stigma can become a barrier to access a healthy meal. Oftentimes, structural violence is misdiagnosed as cultural differences; which is why Galtang added the concept of "cultural violence" where aspects of culture provide justification for direct and structural violence through forms of discrimination and prejudice (Galtang, 1990; Galtang & Fischer, 2013). The difference between the three types of violence could be described as direct violence as being an event, structural violence as a process with ups and downs, and cultural violence as a permanence (Galtang, 1977). Confusing the types of violence can negatively affect recipients of food insecurity programs because then the structural inequalities they face are disregarded (Carney, 2015; Farmer, 1999). Processes that require food recipients to prove their need to receive food

can serve as an example of such disregard that can cause harm. The study by Johnson et al. (2019) investigates the harm caused by structural violence among formerly homeless young adults. It described physical harm that inequalities can cause such as hunger but also emotional harms like stigma. Participants used photovoice, a research method that utilizes photography to answer research questions, and identified different forms of structural violence that constrained their ability to become food insecure. Examples of these findings included: insufficient funding through government assistance programs, the lack of affordable, healthy food vendors nearby; and corporate policies at restaurants and grocery stores that prohibit the donation of edible food to employees or to people experiencing homelessness. The data produced by this study suggested that participants' experiences of food insecurity contributed to feelings of stigma and shame, especially when they were unable to adequately feed themselves or their pets.

The United States stands out for its high poverty rates and its use of direct food assistance as a prominent component of the social safety net (Whittle et al., 2015). Food insecurity is a growing public health issue that seems to be driven by societal and political systems that prolong nutrition inequities, and place an over-emphasis on programmatic responses that only provide short-term alleviation (Lindberg, McKenzie, Haines & McKay, 2022). Although structural violence will not be used to answer a specific research question in this study, it can be used to express the need for structural interventions at a policy level to address poverty and inequalities other than what is currently being offered as a solution for food insecurity. Additionally, structural violence can be used to describe the forces that create and reinforce social hierarchies and are embedded in networks of power relationships (Johnston et al., 2019; Farmer, 2004).

Critique

This theory is useful when explaining the many causes that can lead to social and resource inequalities, especially since those who live in poverty are often targets. However, the concept is complex and as De Maio & Ansell (2018) explain, this theory is vague in its operational definition and often gets confused with structural determinants. Thus, a critique of structural violence is that it is limited if it does not recognize immediate visible threats. Another limitation is that structural violence often gets confused with cultural difference. This is problematic since concentrating exclusively on culture can cause scholars to misrecognize the pathological effects of social inequality (Farmer, 2009; Bourgois et al. 2017).

Connections

Figure 1 provides a basic visual showcasing how each of the theoretical framework used in this study are connected. Each research method in this study was developed with the three different theories in mind; table 1 goes into detail on where the theories were used.

Figure and Table

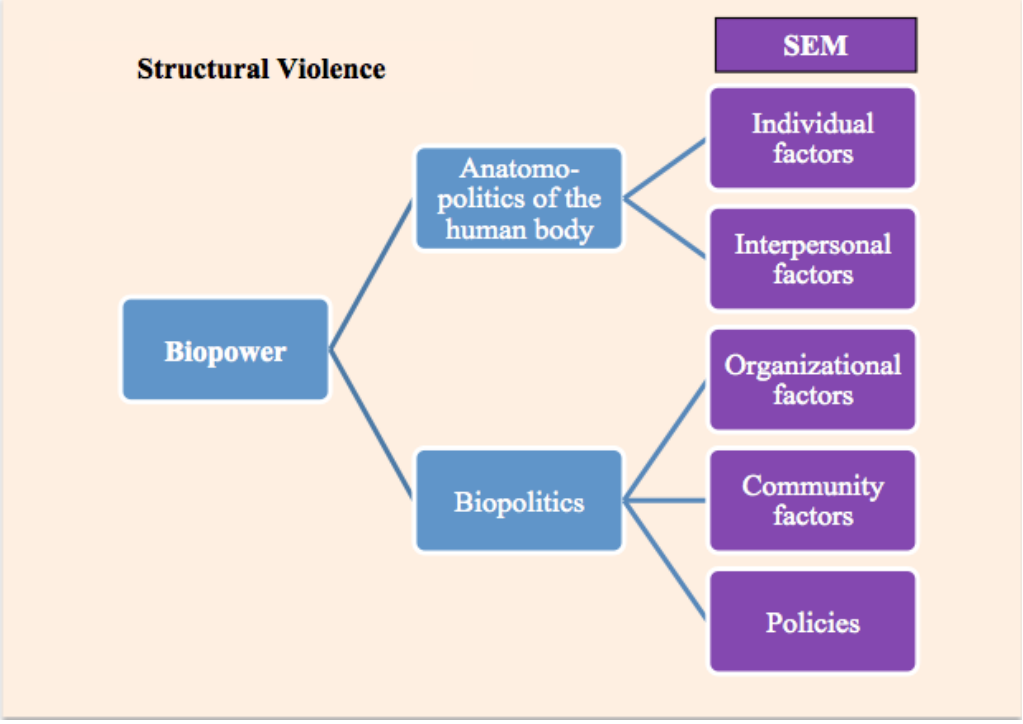

Figure 1: Links between Structural Violence and Biopower at different levels of the SEM

Table 1: Questions Related to Theoretical Frameworks.

SEM Component	Biopower Component	Structural Violence	Method	Question
Individual factors	Anatomo-political	Structural violence	Survey	How did you find out about the school food pantry? Has the school food pantry helped manage your stress/anxiety around food?
			Participant Observation	How does a student navigate a pantry their first time there?
			In-depth Interview (Students)	What are the types of food that you normally pick up from the pantry? Has food ever been a source of stress for you?

Table 1 (Continued)

			In-depth Interview (Staff)	What are the types of food that someone can pick up from the pantry? What do you think the experience of shopping at the pantry is like for the students? Do you think that food is a source of stress for these students?
	Interpersonal factors		Survey	Did you worry that food at home would run out before your family got money to buy more?
			Participant Observation	Are students coming in alone? Are they coming in with friends/peers/classmates? How is the interaction between the adults and the students like? Is there any teasing happening among the students at the pantry?
			In-depth Interview (Students)	How do students find out about the food pantry? Do students normally come by themselves or with someone else when they shop at the food pantry? Have you ever seen anyone being teased or bullied for using the food pantry?

Table 1 (Continued)

			In-depth Interview (Staff)	Have you ever seen any student being teased or bullied for using the food pantry?
Organizational factors	Biopolitics		Survey	What do you think other people in the school think about the food pantry?
Community factors			In-depth Interview (Students)	If you weren't getting food from the food pantry, where would you be getting food? Do you think anyone else could use help with food?
			In-depth Interview (Staff)	What do you think other people in the school think about the food pantry? Do you think anyone else could use help with food?
Policy factors			In-depth Interview (Students)	Does the pantry have any rules or policies students need to follow?
			In-depth Interview (Staff)	Does the pantry have any rules or policies students need to follow? Are there any rules or policies the pantry needs to follow for the school?

Since structural violence affects networks of power relationships, it is not restricted to a single component but embedded in all parts of both theories and can be linked to every question asked for each method used. As previously discussed, biopower has two distinct components: anatomo-politics of the human body and biopolitics. Simply put, anatomo-politics is concerned

with the human body as a machine. Thus, the components from the SEM that corresponds with it are individual and interpersonal factors. For the surveys and student interviews, questions were asked involving how the student specifically was affected in order to address any individual factors and interpersonal factors. Questions included with participant observations and staff interviews were asked to address the same factors and still focused on the student but were more reliant on a person's perception. Biopolitics is concerned with the population as a whole, corresponding with organizational, community and policy factors from the SEM. Only the survey included a question involving the organizational factors. Whereas the student interviews and staff interviews included questions addressing community and organizational factors.

The following can be used as an example to show how these theories interact: Most adolescents at this age do not have adequate power and control of resources to become food secure themselves, they usually rely on others. Structural violence can be used to describe the forces that create and reinforce these networks of power relationships. SEM can be used to describe this reliance for food since it can occur at home, at school, and even at the pantry. In the pantry though, there is constant surveillance by staff and volunteers on what adolescents are taking (an element of biopolitics) and encouragement to take more of certain items such as produce and meat instead of sweets and snacks (a technique used in anatomo-politics).

CHAPTER FOUR:

POPULATION AND METHODS

The purpose of this exploratory study was to assess how high school students in Pinellas County, Florida perceive the use of a food pantry on campus. Specifically, by addressing the two research questions that were previously mentioned. The study was conducted at two high schools, which have a food pantry available to students. Both food pantries had a large classroom dedicated for the food pantries, near the bus circle for easy visibility and convenience. Having it located near the buses made it easy for students to "shop" for their groceries after dismissal and make it to their bus on time. Inside the food pantry was a mix of perishable and non-perishable goods available. The perishable goods typically included fresh produce, which would be laid out on tables during distribution or kept in a large commercial refrigerator with glass doors so that students could easily see what was available inside. A large deep freezer was used to keep frozen meats. Non-perishable goods tended to be canned items such as soups or produce and dry items such as cereal or pastas. Each distribution differed slightly in the set up, since student volunteers tried to create different displays to showcase the food of the week. The recruitment for this study was done through purposive sampling of students who utilized the food pantry at the high schools. Study information packets, including active parent consent forms, were distributed to all students who visited the school food pantry in order to recruit them into taking part in the survey and interviews. Separate consent forms were given to the students and adults that volunteered and/or worked in the food pantries and food banks.

Numerous studies have demonstrated the capacity that adolescents have on understanding how food affects their daily life and their ability to engage in food advocacy. A local example of this involves how the students attending these schools were the main influencers that lead to the start-up of these pantries. These high schools follow a national program, Lead2Feed, which involves a curriculum that teaches students how to become leaders through community service. Part of the curriculum includes identifying a social issue and developing and implementing a plan to make an impact. The issue the students in these schools chose to address was food insecurity among their fellow students. With the partnership that the schools had with Johns Hopkins All Children's Hospital, the first food pantry was opened after the start of the 2018-2019 school year. This partnership is important because the staff from Johns Hopkins All Children's Hospital worked as gatekeepers in order to recruit participants. Gatekeepers are recognized as individuals who have a recognized role in the local community and are sufficiently influential to encourage community members to participate in a study (Hennink et al., 2011).

Data Collection

For this study three primary methods were utilized, a summary of these methods is provided on Table 2 for easier readability. Participants in this study included students who utilize the food pantry, which was composed of students enrolled in 9th through 12th grade attending one of these two high schools; the age of the participants ranged between 14 to 18 years old.

For the first method, I conducted participant observation at the school food pantry while the student volunteers were preparing to distribute the food and while food was being distributed. Both schools had established food pantries on site and had approximately 60 students that utilized each pantry throughout the school year. I focused on this subsample of 120 students for

my observations. Secondly, I utilized surveys to measure food insecurity, perceived stress, and anxiety levels among the students at the school pantry. A QR code was printed out so that students could scan and complete the survey on their mobile device or if they preferred, a computer or iPads was available at the pantry. Lastly, I conducted in-depth interviews via an online platform or over the phone.

The surveys and interviews were conducted with adolescents who volunteered at the school food pantry and/or collected food from the pantry. Interviews for the students involved in this study followed a semi-structured guide involving questions that screen for food security, social fears, and anxiety related to being food insecure. Because this study was interested in biopower, volunteers/staff members of the school food pantry and employees of food banks were also interviewed to analyze how power dynamics can influence food pantry use. This complements the data obtained from the adolescents and examines if examples of biopower are demonstrated at school pantries and the food bank. Staff members or adult volunteers who worked at the food pantry or employees from the local food bank were recruited with the help of the food pantry coordinators at the school to be interviewed. The literature demonstrates that the volunteers and staff members who work at the food pantry have power over individual users of the food pantry (Strong, 2019). This power is demonstrated through policies that are put into place regarding the amount of or the types of food that are allowed to be distributed to adolescents, which acts in a way that controls the conduct of hungry bodies. But, as previously mentioned, food pantries are also restricted on what they can offer based on what food banks deliver and food banks are constrained to only distribute what they obtain from donations or what their budgets allow them to purchase.

Table 2: Summary of Research Methods.

Method	Sample Size	Data Produced	Analysis	Research Question Addressed
Survey USDA Food Security Survey Module for Children Ages 12 Years and Older the Kessler Psychological Distress Scale (K10)	40	-Measure food security status -Measure anxiety and depressive symptoms among adolescents	Quantitative data	-What is the impact of having access to food on campus on student's stress and anxiety?
Participant Observation Checklist to guide observations	120	-Phase 1: Broad overview of behaviors at a food pantry. -Phase 2: Qualitative data based on the research questions.	Thematic coding	-What social factors act as barriers and facilitators for food pantry use for a high school student population?
In-depth interviews	16 student interviews 10 staff interviews	-Measure food security status -Measure stress, emotional problems, and anxiety among adolescents -Explore associations between food security status and social fears	Quantify qualitative data Thematic coding	-What social factors act as barriers and facilitators for food pantry use for a high school student population? -What is the impact of having access to food on campus on student's stress and anxiety?

COVID-19 Adjustments

With the emergence of COVID-19 many adjustments have had to be made in the school pantries for part of the school year. New policies and procedures included a no-contact method for students to collect food, which involved pre-packaged boxes that could be picked up, and

limited staff, volunteers, and vendors allowed on campus. I worked closely with the staff throughout the school year to determine the safest course of action to complete this study, which mainly included relying on electronically distributed surveys and conducting interviews through an online platform or over the phone. Recruitment was also affected. With less students attending school in person and more participating in remote learning because of COVID-19, the number of students who visited the food pantry was lower than in previous years, resulting in less participants available to recruit than what was originally planned for this study.

Survey

Survey research provides a sound basis for generalizing about a population (Bernard & Gravlee, 2015). Different types of data can be collected in a time efficient way. For the purpose of this study, a survey was developed with the first six questions asking about demographics, questions seven through nine asked about how students learned about the food pantry, how long they have been utilizing its services, and how frequent they visit. Question ten and eleven specifically ask if the food pantry helped them manage their stress and anxiety around food. Although the survey does not define what is meant by stress or anxiety this was not an issue brought up during the pilot-testing nor did any of the respondents ever ask for clarification. Even though this was not viewed as an issue, understanding on what the term "stress" and "anxiety" means could vary among students. This could be viewed as a limitation of the study and is further discussed in the survey results section.

The remaining questions on the survey involved the USDA Food Security Survey Module for Children Ages 12 Years and Older and the Kessler Psychological Distress Scale (K10) (Appendix B). These instruments are considered validated measures, and have been widely applied in relevant fields (Chiu et al., 2016). The USDA Food Security Survey Module

consists of nine items, specific for Children Ages 12 Years and Older (USDA, 2006). Responses of "a lot" or "sometimes" were coded as affirmative and then summed to create the respondent's raw score on the scale to classify them as food secure or insecure. Kessler Psychological Distress Scale (K10) was also used to measure anxiety and distress symptoms that an individual has experienced in the past month due to food insecurity (Kessler, n.d). The numbers attached to the patients' responses were added up and the total score is used to measure their psychological distress (Kessler, n.d; Easton et al., 2017; Pereira et al., 2019).

Along with demographic questions, this survey included questions from the USDA Food Security Survey Module for Children Ages 12 Years in order to measure food insecurity and Older, the Kessler Psychological Distress Scale (K10) to measure levels of anxiety and distress, and if the school food pantry helped manage their stress and anxiety around food.

Surveys were distributed electronically. I worked with the school staff so that the students were able to complete the surveys in the school's computer lab or be given a link or a QR code to complete at home. The survey was also mobile friendly so that the students could complete it on a variety of devices, such as iPads or cell phones.

Limitations

Surveys are cost effective and an easy form of data collection. However, because they are based on convenience, there is a risk of representation and measurement errors (Coufhlan et al., 2013). Due to COVID-19 restrictions and concerns, the survey utilized in this study had to be distributed electronically. However, doing so limited the participants to only those who have access to the Internet. In order to address this, the survey was mobile friendly and there were opportunities to complete it at the school. However, there is no way of knowing if such a factor skewed the results. Additionally, if the participant took the survey at home and had questions

there was not a convenient way to ask for clarification. Also, survey do not effectively capture thoughts and experiences of participants, such data collection are better captured through interviews which can be used to complement the survey data (Clealand, 2018).

Pilot test

The surveys were pilot-tested amongst a group of ten students and two questions were reworded for clarification. It was suggested that question eight be reworded from, “how often do you visit the school food pantry” to “how often do you visit the school food pantry, throughout the school year?”. The first answer option was changed from “never” to “this is my first time”. Question nine was also reworded from, “how long have you been using the school food pantry?” to “During your time as a student in this school, how long have you been using the school food pantry?” The answer options were changed from “never,” “one year,” “two year,” “three years,” and “four years” to “never,” “this is my first school year using the school’s food pantry,” “I’ve been visiting the school’s food pantry since last school year,” “I’ve been visiting the school’s food pantry for the last two school years,” “I’ve been visiting the school’s food pantry for the last three school years,” “I’ve been visiting the school’s food pantry for the last four school years.”

Participant Observations

Participant observations are a research method that enables researchers to observe and record behaviors, actions and interactions in a systematic way and produces a detailed description of social settings or events (Bernard & Gravlee, 2015; Hennink et al., 2011). Due to COVID-19 restrictions the days that I visited the school food pantries was opportunistic, however I was able to visit both schools at least once monthly to complete observations and would stay between 1.5 to 2.5 hours, if the opportunity presented itself I was sometimes able to visit one of the schools twice in a month which totaled to approximately 60 hours of participant

observations between September 2021 and May 2022. Participant observations were conducted in two stages. First, I conducted descriptive observation where everything was observed and nothing was assumed. During this time I actively participated in the pantry by taking part in either working on tasks needed to run the pantry such as stocking shelves or taking inventory or helping students shop for the food. By actively participating, I was able to talk and get to know the students, thereby building rapport with my participants. While I concentrated mainly on observing the students who utilized the food pantry, I also noted some observations regarding the teachers and volunteers. Afterwards, I recorded these observations in a notebook to analyze later on. Due to the unstructured nature and the serendipitous nature of what is observed, it was difficult to fit observational data within a quantitative data set (Morse & Niehaus, 2009). This is why the second stage of participant observation involved selective observations, informed by a checklist of observations developed based on the research questions (Appendix C). This second stage still took place in the food pantries while adolescents were shopping for food and observations were also recorded in a notebook as field notes, however I was much less active in participating in the operation of the food pantry and focused more on the behavior of the students, focusing on who the students were interacting with and how, what type of food choices were being made and what influenced those choices, and how they navigated through the food pantry. Field notes are written as a view of social life; they are documentation of how members construct meaning through interactions with others and those interactions are interpreted and organized (Emerson, Fretz, & Shaw, 1995). I made sure to write down any observations immediately after leaving the pantry or as quickly as possible because as Emerson, Fretz, & Shaw (1995) state, doing so produces fresher and more detailed recounts about the day's events that harness the researcher’s involvement and excitement. By recording these field notes in my

notebook, I was able to capture and preserve the insights and understanding that I gathered through these experiences.

Limitations

A limitation with participant observation is that what gets observed by the researcher is influenced by a mix of characteristics, experiences, and situations that take place for the researcher. To address this, participant observations are typically combined with other qualitative methods. Using in-depth interviews as an additional method was useful since it provided complementary data to understand issues from different perspectives (Hennink et al., 2011; Cairns, 2018; Best, 2007).

In-depth Interviews

Interviews for the students involved in this study followed a semi-structured guide involving questions that screen for food security, social fears, and anxiety related to being food insecure (Appendix D). Separate interview guides were used to gather the perspectives of the adult volunteers and school staff members and food bank staff on these same topics to complement the data obtained from the adolescents and to examine if examples of biopower are demonstrated at school pantries and the food bank (Appendix E and Appendix F). All guides included questions that were short, simple, and asked only one question at a time; they were presented in a logical order and were open-ended (Hennink et al., 2011). Allowing the interview guide to be semi-structured ensured that the same questions were asked to all participants, but the open-ended nature of the questions allowed for flexibility in follow-up questions to explore the unique circumstances of each participant, and encouraged the participant to share stories and details (Morse & Niehaus, 2009). The interviews began with a “grand tour” question asking participants to describe their day when they visited the food pantry. These types of questions are

commonly used to encourage the participant to speak about their experience (Spradley, 2016; Hennink et al., 2011). If a participant struggled to answer this question, a follow up question was asked that specified to describe their day the last time they were at the pantry. These types of questions are considered to be mini-tour questions which are identical to grand tour questions in that they ask for descriptions but these concentrate on unpacking meaning from smaller or more specific activities (Spradley, 1979; Bernard & Gravlee, 2015). Previous research completed with adolescents shows that participants sometimes struggle to generalize a typical experience, but can answer a specific grand tour question by describing a recent situation (Spradley, 2016). A series of general opening questions followed; the aim of these questions was to continue building rapport with the interviewee. These opening questions are usually broadly related to the key topics on the interview guide (Hennink et al., 2011). For these interviews, the questions were in relation to stigma participants may have faced or have witnessed from using the food pantry or at the school. Other key questions asked throughout the interview were related to stigma, anxiety, and stress levels such as asking if food was ever a source of stress. This was the central part of the interview guide where the essential questions on the research topic were asked to collect the core information in order to answer the research questions. These types of key questions were deliberately placed in the central part of the interview to allow for rapport to be established. Finally, a few broad closing questions were asked in order not to leave the interviewee in an emotionally vulnerable state and instead gave them enough time to fade out from the interview, and then concluded by asking if the interview has anything further to add. Closing questions are important when the research deals with sensitive issues. Similar to the study completed by Cairns (2018) the interviews were provided in a confidential setting where adolescents were able to share reflections that they may not have felt comfortable sharing with the group. I made it clear

that interviews would not be shared with program staff, except in the form of anonymous feedback. It is often difficult to determine how interviewees will interpret questions included in an interview (Hennink et al., 2011). Therefore, this interview guide was first pilot tested among a group of ten students. Additionally, I was available to ensure that the participants understood what was being asked. Changes to the interview guide were made based on the results of the pilot.

Limitations

Since analyzing the data gathered from interviews is based on the interpretation of the interviewer the main issue with in-depth interviews is the potential for biasing the information that is gathered (Krumer-Nevo, 2022; Kvale, 2006). A second limitation involves the "power dynamics" that occurs between the interviewer and the interviewee. To address this, I carefully considered the social interactions that occurred during this study, during the interview and during participant observations and the impact that these interactions could have. I worked hard on establishing rapport and designed the interview guide to ask thoughtful questions, which let the interviewee talk freely.

This study collected 16 student interviews and 11 adult interviews from the schools and the food bank. While I exceeded in meeting my goal of adult interviews, which was originally 4-7 interviews, the number of student interviews attained was much less than my goal of 40-60. During the time of data collection overall student enrollment was down at the school and according to the food pantry coordinator at one of the schools the number of students who visited the food pantry during data collection was lower than previous years, which could have contributed to my difficulty in meeting this goal. However, the information collected during these interviews began to repeat itself, suggesting that saturation was reached. For qualitative

research there does not exist a straightforward test to determine the level of saturation that is equivalent to those in quantitative research for determining appropriate sample sizes (Morse, 1995; Hennink, Kaiser, & Marconi, 2017). Identifying the point of saturation can only begin after data collection is underway. It requires an iterative process, which involves collecting data, assessing the variation in the issues raised, and then continuing to determine if saturation has been reached (Hennink et al., 2011). Research conducted by Guest et al. (2006) investigated how many interviews were necessary to achieve saturation; their findings suggest that saturation could be research between six to 12 interviews, based on theme development and importance. Another similar study suggested that saturation could be found between 10 and 17 interviews (Francis et al., 2010). And a third study identified saturation between 8 and 16 interviews (Namey et al. 2016). Although these ranges vary, the authors of these studies caution using those numbers as a generic sample size and stress that saturation depends on the study and the data. Morse also states that frequency is not what is important for saturation; the richness of the data and detailed description is what's important (1995). Because the depth of information and the experience of individuals are what are of interest, a large number of participants are neither practical nor beneficial for this type of qualitative research once saturation is reached. Further data collection then becomes redundant because the purpose is to seek variation and context of experiences.

All interviews for this study were audio recorded and transcribed for later data analysis. All participants were informed of the recording, however if they were uncomfortable with it I opted not to record the interview and took detailed notes instead. It took about five minutes to go through the consent form, however if more time was needed to answer questions I made sure that ample time was given to go through the consent form.

Data Analysis

Table 3 is a basic version of a Gantt chart illustrating the project schedule. Data collected from surveys, participant observations, and semi-structured interviews were analyzed to answer the two research questions for this study. Tables were produced for easy readability of the analytical plan involving both research questions involved (Table 4 and Table 5). All quantifiable survey data were compressed into one Microsoft excel sheet for the total sample. The dataset was then uploaded into IBM SPSS Statistics 28.0 where all descriptive statistics, exploratory data analysis, and statistical analyses were calculated and observed.

Table 3: Gaant Chart

Task	Sept. 2021	Oct. 2021	Nov. 2021	Dec. 2021	Jan. 2022	Feb. 2022	March 2022	April 2022	May 2022	June 2022	July 2022
Collect consent forms from parents	X	X	X	X	X	X	X	X	X		
Conduct participant observation	X	X	X	X	X	X	X	X	X		
Distribute survey		X	X	X	X	X	X	X	X		
Conduct interviews						X	X	X	X		
Transcribe					X	X	X	X	X	X	X
Code interviews					X	X	X	X	X	X	X

Table 4: Analyze Plan for Research Question One.

Research Question	Methods	Analyze Plan	Questions/Variables Studied
What social factors act as barriers and facilitators for food pantry use for a high school student population?	Participant Observation	Field notes will be reviewed and notable themes will be summarized	Are students coming in alone? How is the interaction between the adults and the students like? Is there any teasing happening among the students at the pantry? How does a student navigate a pantry their first time there?
	In-depth Interviews (Students)	Inductive thematic review	How do students find out about the food pantry? Do students normally come by themselves or with someone else when they shop at the food pantry? What are the types of food that you normally pick up from the pantry? Does the pantry have any rules or policies students need to follow? What do you think other people in the school think about the food pantry? Have you ever seen anyone being teased or bullied for using the food pantry?

Table 4 (Continued):

	In-depth Interviews (Staff)	Quantify qualitative codes and analyzed through Chi-square tests.	Food-security categories and K10 scores from Surveys
		Inductive thematic review	What are the types of food that someone can pick up from the pantry? What do you think the experience of shopping at the pantry is like for the students? Have you ever seen any student being teased or bullied for using the food pantry? Do you think that food is a source of stress for these students? Does the pantry have any rules or policies students need to follow? What do you think other people in the school think about the food pantry?

Table 5: Analyze Plan for Research Question Two

Research Question	Methods	Analyze Plan	Variables Studied
What is the impact of having access to food on campus on student's stress and anxiety?	Survey	Histograms for exploratory data analysis	Sociodemographic characteristics, food-security scores (high, marginal, low and very low food-insecurity) and K10 scores.
		Chi-Square analysis to look at associations among categorical variables	Food-security scores (food-secure and food-insecure) and K10 scores.
		ANOVA test to evaluate differences in variable means among sub-sample groups.	K10 status and gender, stress.
		Spearman's Rho correlation to understand linear associations between food-security and stress/anxiety.	K10 status and stress
	In-depth Interviews (Student)	Inductive thematic review	What do you think other people in the school think about the food pantry? Have you ever seen anyone being teased or bullied for using the food pantry? Has food ever been a source of stress for you?

Table 5 (Continued)

	In-depth Interviews (Staff)	Inductive thematic review	Have you ever seen any student being teased or bullied for using the food pantry? What do you think other people in the school think about the food pantry?

Descriptive statistics were obtained from the survey answers in order to examine sociodemographic characteristics, awareness, food-security status, anxiety, and depression for the sample as a whole. Food insecurity scores raw scores were translated to scale scores based on the Rasch measurement model (USDA, 2006). As recommended by the USDA (2022), high and marginal food security categories are considered food secure, and low and very low food security categories are considered food insecure. By combining "high" and "marginal" to simply "food secure" the household experience is then summarized to either no, one, or two instances of food shortage or anxiety about a potential food shortage in the future (Clealand, 2018). Table 11 in the next chapter breaks down how these scores were calculated in greater detail. The numbers of the participants responses to K10 were added up and the total score used to measure their psychological distress, including anxiety and depressive symptoms. These were then analyzed through a Chi-square test to assess associations between the food security categories and determine if further tests should be conducted. Field notes taken from participant observations were reviewed and notable themes summarized to contribute to the overall description of the overall experience in the high school food pantry. Also, since qualitative research is an interactive process a field diary was kept, where thoughts on emerging ideas and inferences were noted and so that I can be reflective and critical of the process during my observations. All

interviews were transcribed and uploaded into Dedoose Version 8.0.39, online software for qualitative analysis. Efforts were made to begin transcribing immediately once the interview was completed, and review the issues raised. Through this informal analysis, inductive inferences from the information was gathered and used to guide the next interviews and observations, where certain issues can be explored in further details (Hennink et al., 2011). Prior to analysis, the transcriptions were read through and a flexible codebook was created based on the research questions and common themes throughout the data (Appendix G). Data was analyzed using an inductive thematic approach. Using this type of approach, I pulled out relevant segments in Dedoose based on my initial codes and then grouped these codes into a smaller number of themes; emergent codes were added throughout the analysis. The codes were then used to quantify qualitative findings and the variable data will be analyzed to assess associations between food security categories (Bernard & Ryan, 2019). Thematic coding analysis is useful when analyzing data in relation to the research questions; it is effective in drawing out complex interrelating issues to create a nuance picture (Qualliam, 2015). However, a disadvantage of this type of analysis is that there is a risk of losing meaning when grouping information (Qualliam, 2015).

Ethical Considerations

All identifiable information remained confidential throughout the research process and appropriate measures were taken to protect the identities of participants, which included omitting any names mentioned within recordings and securing files with participant's names within a locked file cabinet. School "A" and "B" were used to refer to the two schools that were visited and terms such as "teenager," "adolescent," or "student" was used to refer to participants so that

no identifiable information was included within the datasets, transcriptions, analyses, or write-up.

The University of South Florida Institutional Review Board approved this study before children are allowed to participate; their letter of approval is available in Appendix A (Study 002525). Permission was received from administration of the schools prior to data collection. IRB approved assent from the adolescents and parental permission forms were obtained for all participants before their participation. Parents were informed about the research study via a written description that included the principal investigator's contact information in case they had any questions or concerns. Participants were informed prior to participation of the objectives and methodologies of the study and assured that their participation was voluntary. Overall, this research was considered to be minimal risk. The risks associated with this study were the same as what the target population faces every day. Although some questions may have made participants feel uncomfortable to answer, they were able to refuse answering any questions they chose. Ultimately, as the researcher of this study I was responsible for monitoring the research study and for protecting the wellbeing of the participants. To minimize risks and harms, there was ample time for reviewing the informed assent/consent document. If participants decided not to take part, they were thanked for their interest in the study and all research collection ceased. If participants decided to give their assent and consent, all confidential study data collected in this study was stored on a password-protected computer. Any backup files were also stored in a secure location. It was planned that if a breach of confidentiality were to occur for some reason, I was to immediately stop research collection until further instructions were received from IRB; however, none occurred.

It was also important to protect the participants from potential emotional distress. Since I asked questions that may have been sensitive for some participants, I provided a list of local food assistance resources at the end of the survey and included the following statement: “Here is a list of local food assistance resources. Please feel free to print this list of information and share it with your family, friends, and neighbors. This list was distributed to all students involved in the study, regardless of the answers that they provided. A physical copy was also available at the food pantry. Since this study collected information on students’ health it was important to have adequate information on resources and referrals available for participants. Additionally, I considered the health, social, and mental consequences for each participant involved. This was important since mental health was a priority of this study, and through the K10 survey students were screened for existing mental health issues, with a focus on anxiety and stress. Johns Hopkins All Children’s Hospital and the high schools agreed upon a protocol that I followed if a student was screened to be suffering from depression or a mental health issue. I reported the findings to the schools’ social worker and psychologists who determined the best course of action so that the student was provided with the appropriate treatment. Additionally, those who were felt to be a risk to themselves or others based on answers to the interview or survey questions were connected with emergent mental health services and this information was to be communicated back to the parent/guardian, as determined by the school’s social worker. If additional resources were needed Johns Hopkins All Children’s Hospital had a psychologist on staff that would aid with the course of action that is decided. Although respecting confidentiality was a conditional duty in research, this could be overridden by other considerations of higher priority and a common rule to address this is to require disclosure if participants had mentioned high risk of harmful behavior to participants or others such as suicidal thoughts, severe mental

disorder, drug abuse, or the need for medical care (Hiriscau et al., 2016). This disclosure was made clear at the beginning of each consent process. Other mental health information collected during the screening was kept entirely confidential.

CHAPTER FIVE:

DATA RESULTS

Demographics of Participants

In total, 40 surveys were collected from students; all demographics are listed on Table 6 for easy readability. The genders of the students were evenly distributed, with 20 females (50%) and 20 (50%) males responding to the survey, the survey did provide an opportunity to identify as another gender or to decline to answer but none of the students choose these responses. Twenty- students (55%) from school A and 18 students (45%) from school B participated. Regarding the students' grade level at the time, most of the students who responded were 30 seniors (75%), followed by seven juniors (17.5%), two sophomores (5%), and one freshman (2.5%). The ages ranged from 14 to 18 years old, with 27 students (67.5%) who were eighteen years old, five (12.5%) who were seventeen years old, five (12.5%) who were sixteen years old, two (5%) who were fifteen years and one (2.5%) who was fourteen years old.

I conducted approximately 60 hours of participant observations between September 2021 and May 2022, and completed the previously mentioned 16 student interviews and 10 adult interviews. Table 7 lists all of the demographics for the student interviewees and table 8 lists the demographics of the adults who participated. Among the students, ten females (62.5%) and six males (37.5%) participated. Both schools were equally represented in the interviews, with eight

students (50%) from school A and eight students (50%) from school B. Similarly, seniors were the largest group to be interviewed (n= 14, 87.5%), along with one junior (6.25%) and one freshman (6.25%). Ages ranged from 14 to 18, with 11 (68.75%) 18 year-olds, three (18.75%) 17 year year-olds, one (6.25%) 16 year- old, and one (6.25%) 14 year-old. The adult interviews consisted of three food bank employees, four school staff members, and three volunteers. Only gender was collected from these individuals, most of participants were female (n= 9, 90%) and the only male (n=1, 10%), who was a food bank employee.

Table 6: Student Survey Demographics

Gender	**n**	**%**
Female	20	50%
Male	20	50%
Different identity	0	0%
Decline to answer	0	0%
School attending	**n**	**%**
A	22	55%
B	18	45%
Current grade level	**n**	**%**
Freshman	1	2.5%
Sophomore	2	5%
Junior	7	17.5%
Senior	30	75%
Age	**n**	**%**
13	0	0%
14	1	2.5%
15	2	5%

Table 6 (continued)

16	5	12.5%
17	5	12.5%
18	27	67.5%

Table 7: Student Interviews Demographics

Gender	**n**	**%**
Female	10	62.5%
Male	6	37.5%
School attending	**n**	**%**
A	8	50%
B	8	50%
Current grade level	**n**	**%**
Freshman	1	6.25%
Sophomore	0	0%
Junior	1	6.25%
Senior	14	87.5%
Age	**n**	**%**
13	0	0%
14	1	6.25%
15	0	5%
16	1	6.25%
17	3	18.75%
18	11	68.75%

Table 8: Adult Interviews Demographics

	Food banker (N=3)	**School staff (N=4)**	**Volunteers (N=3)**
Females	2 (20%)	4 (40%)	3 (30%)
Males	1 (10%)	0 (0%)	0 (0%)

Survey Results

Involvement with the Food Pantry

Table 9 lists responses regarding students' involvement with the food pantry. When asked how the students found out about the school food pantry, students responded as follows: that a teacher told them (n=27, 67.5%), that they had walked by the pantry during distribution (n=5, 12.5%), a friend had told them (n=1, n=2.5%), a social worker had told them (n=1, 2.5%), and six responded "other" (15%) which prompted the survey to produce a fill in the blank option asking students to explain what they meant by "other." Five of these students mentioned that they heard the food pantry being announced over the school intercom and one mentioned that they were a student who helped organize the pantry. These answers suggest that the schools' staff promotes the food pantry to the student body and that it is a very visible and well-known component of the school.

Both the high schools' food pantries distributed food on a weekly basis. Which is why when asked how often the students visited, it was not a surprise that many responded once a week (n=11, 27.5%). What was unexpected was that the second most frequent answer was "a few times during the school year" (n=9, 22.5%). This suggests that some students utilized the school's food pantry as a short-term solution. Other responses were that this was their first time using the food pantry (n=6; 15%), they visited every other week (n=6, 15%), a few times a month (n=5, 12.5%), and once a month (n=3; 7.5%).

Students were also asked how long they had been using the school pantry. Most students answered since last school year (n=14, 35%), followed by this year as their first school year visiting (n=11, 27.5%). Although most of the survey respondents were seniors, at the time of data collection the school's food pantry for school A had only been opened for two years, which would explain why more than half of the respondents (n=25, 62.5%) answered that they had only been going to the school pantry for the last two years. The remaining responses included that this visit was their first time (n=7, 17.5%), this was their third school year (n=7, 17.5%), and that they've been visiting the school's food pantry for the last four school years (n=1, 2.5%).

Table 9: Participants' Involvement with the Food Pantry

Found out about the food pantry	**n**	**%**
Walked by	5	12.5%
Friend	1	2.5%
Teacher	27	67.5%
Social worker	1	2.5%
Other	6	15%
Visits to the school food pantry, throughout the school year	**n**	**%**
First time	6	15%
Once a week	11	27.5%
Every other week	6	15%
A few times a month	5	12.5%
Once a month	3	7.5%
A few times during the school year	9	22.5%

Table 9 (continued)

Length of time using the school food pantry	n	%
First time	7	17.5%
First school year visiting the school's food pantry	11	27.5%
Since last school year	14	35%
For the last two school years	0	0%
For the last three school years	7	17.5%
For the last four school years	1	2.5%

Stress and Anxiety around Food

Sapolsky explores the body's response to stress at length in his book Why Zebras Don't Get Ulcers (1994). He describes how when a body responds to stress, growth and repair tissue is restricted, immunity is inhibited and the risk of getting sick increases, or if a person already has a disease then the risk of their defense being overwhelmed also increases. In instances where an individual is suffering from chronic stress and especially if the stress is psychological, this response can be more damaging than the stressor since metabolic features of the stress response can increase the risk of cardiovascular disease and bring endocrine changes that mimic depression.

Not having enough food or water can be considered as stressor, so does being unable to know where and when your next meal will come from which are both common among food insecure individuals. Research completed by Shankar-Krishnan et al. (2021) and Bourke & Neigh (2011) has shown that food insecure adolescent exhibit higher levels of stress and anxiety and lower coping skills at school. This is why I was interested in the impact having access to food on campus had on students' stress and anxiety, prior to screening for mental health issues using the K10 questionnaire, the survey included a direct question asking if the school pantry has

helped manage stress around food and another question on if it has helped manage anxiety around food. The terms of stress and anxiety were not defined for the students and even though, as previously mentioned, a need for these definitions was not brought up during pilot testing of the survey nor did any of the respondents ask for clarification this could be viewed as a limitation since, as Jex et al. (1992) explains, understanding of what the terms "stress" and "anxiety" means could vary among research participants. As Cohen and colleagues discuss, the way that the term stress has been used throughout the literature has not been consistent, nor have the research methods measuring it (1997). Their research shows that the majority of the research in the area seems to refer to stressful life events. Work by Putwain (2007) builds on this, stating that terms such as "stress", "anxiety", and "worry" are used interchangeably causing there to be a confusion on what is being referred to in the literature. Future research could address these issues by providing clear definitions on such terms but Putwain does believe that self-reported questionnaires can provide useful information depending on the research's aim, especially for exploratory research (2007).

As table 10 shows, for both questions, most of the students answered yes. In regards to stress, 30 responded yes (75%) and 10 responded no (25%). In regards to anxiety, 26 responded yes (65%) and 14 responded no (35%). This corresponded with the K10 results which showed that the majority of the respondents had no (n=22, 55%) or moderate mental health issues (14, 35%). Four respondents did screen as high (10%) and these responses were reported to the school's social worker as the previously mentioned protocol stated. Chapter seven explores the findings associated with stress, anxiety, and K10 results in greater detail.

Table 10: Stress and Anxiety Regarding Food

Has the food pantry helped manage stress around food	**n**	**%**
Yes	30	75%
No	10	25%
Has the food pantry helped manage anxiety around food	**n**	**%**
Yes	26	65%
No	14	35%
K10 results	**n**	**%**
No stress	22	55%
Moderate stress	14	35%
High stress	4	10%

Food Security

Table 11 lists the responses to the food security module, answers of "a lot" or "sometimes" were coded as affirmative and given the value of 1, where answers of "never were given the value of 0. These answers were summed to create the respondent's raw score to determine the food security status.

Table 11: Responses to Food Security Module

	n	%
In the last month, did you worry that food at home would run out before your family got money to buy more?		
A lot	1	2.5%
Sometimes	12	30%
Never	27	67.5%
In the last month, did the food that your family bought run out, and you didn't have money to get more?		
A lot	2	5%
Sometimes	11	27.5%
Never	27	67.5%

Table 11 (Continued)

In the last month, did your meals only include a few kinds of cheap foods because your family was running out of money to buy food?		
A lot	1	2.5%
Sometimes	18	45%
Never	21	52.5%
In the last month, how often were you not able to eat a balanced meal because your family didn't have enough money?		
A lot	0	0%
Sometimes	13	32.5%
Never	27	67.5%
In the last month, did you have to eat less because your family didn't have enough money to buy food?		
A lot	1	2.5%
Sometimes	12	30%
Never	27	67.5
In the last month, has the size of your meals been cut because your family didn't have enough money for food?		
A lot	2	5%
Sometimes	8	20%
Never	30	75%
In the last month, did you have to skip a meal because your family didn't have enough money for food?		
A lot	1	2.5%
Sometimes	5	12.5%
Never	34	85
In the last month, were you hungry but didn't eat because your family didn't have enough food?		
A lot	2	5%
Sometimes	6	15%
Never	32	80%
In the last month, did you not eat for a whole day because your family didn't have enough money for food?		
A lot	0	0%
Sometimes	9	22.5%
Never	31	77.5%

Table 11 (Continued)

Sums of raw scores		
0	14	35%
1	7	17.5%
2	2	5%
3	7	17.5%
4	0	0%
5	1	2.5%
6	4	10%
7	1	2.5%
8	1	2.5%
9	3	7.5%

Table 12: Mean, Median and Standard Deviation of Raw Food Security Scores

Mean	2.58
Median	1
Standard Deviation	2.943

Chi-square tests were used to assess associations between the raw food security scores and gender, grade level, and schools (tables 13, 14, 15). The p-value resulting from analyzing gender was 0.122, schools was 0.653 and grade level was 0.882. These results suggest that the differences were not significant enough to explore the potential trends of the raw food security scores among these demographics.

Table 13: Pearson Chi-square for Gender and Raw Food Security Score

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	12.714	8	0.122
Likelihood Ratio	15.952	8	0.043
Linear-by-Linear Association	.649	1	0.420
N of valid Cases	40		

Notes: According to the p value from this test the differences between genders is not significant enough to explore the potential trends of raw food insecurity scores.

Table 14: Pearson Chi-square for Schools and Raw Food Security Score

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	5.945	8	0.653
Likelihood Ratio	8.204	8	0.414
Linear-by-Linear Association	0.430	1	0.427
N of valid Cases	40		

Notes: According to the p value from this test the differences between schools is not significant enough to explore the potential trends of raw food insecurity scores.

Table 15: Pearson Chi-square for Grade Levels and Raw Food Security Score

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	16.163	24	0.882
Likelihood Ratio	15.896	24	0.892
Linear-by-Linear Association	1.193	1	0.275
N of valid Cases	40		

Notes: According to the p value from this test the differences between grade levels is not significant enough to explore the potential trends of raw food insecurity scores.

The p-value resulting from analyzing the associations between the raw food security scores and how students found out about the food pantry was 0.516 and the visits to the food pantry was 0.406 (Table 16 and 17). These results suggest that the differences were not significant enough to explore the potential trends of the raw food security score among these demographics. However, the resulting p-value (<0.001) from analyzing the length of time using the school pantry was significant, warranting further testing (table 19). A one-way ANOVA test was conducted (Table 20) to further explore the raw food insecurity scores and the length of time using the school pantry but the resulting p-value (p=0.074) suggested that the differences were not significant enough to continue exploring potential trends.

Table 16: Pearson Chi-square for How Students Found Out About the Food Pantry and Raw Food Security Score

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	31.012	32	0.516
Likelihood Ratio	26.123	32	0.758
Linear-by-Linear Association	0.025	1	0.874
N of valid Cases	40		

Notes: According to the p value from this test the differences between how students found out about the food pantry is not significant enough to explore the potential trends of raw food insecurity scores.

Table 17: Pearson Chi-square for Visits to the School Pantry and Raw Food Security Score

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	41.484	40	0.406
Likelihood Ratio	40.964	40	0.428
N of valid Cases	40		

Notes: According to the p value from this test the differences between visits to the school pantry is not significant enough to explore the potential trends of raw food insecurity scores.

Table 18: Pearson Chi-square for Length of Time Using the School Pantry and Raw Food Security Score

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	68.352	32	<0.001
Likelihood Ratio	40.738	32	0.138
Linear-by-Linear Association	0.534	1	0.465
N of valid Cases	40		

Notes: According to the p value from this test the differences between length of time using the school pantry is significant enough to explore the potential trends of raw food insecurity scores.

Table 19: One-way ANOVA for Length of Time Using the School Pantry and Raw Food Security Score

	Sum of squares	**df**	**Mean Square**	**F**	**Sig.**
Between groups	71.210	4	17.803	2.337	0.074
Within groups	266.565	35	7.616		
Total	337.775	39			

The scores were then translated to scale scores based on the Rash measurement scale (0=high food security, 1-2= marginal food security, 3-5= low food security, and 6-10 = very low food security). Respondents were then categorized as having high food security (n=14, 35%), marginal food security (n=9, 22.5%), low food security (n=8, 20%), or very low food security (n=9, 22.5) (table 20). As recommended by the USDA, high and marginal food security categories were considered food secure (n=23, 57.5%), and low and very low food security categories (n=17, 42.5%) were considered food insecure (table 20).

Table 20: Food Security Scores

Food Security scale scores	**n**	**%**
High	14	35%
Marginal	9	22.5%
Low	8	20%
Very low	9	22.5%
Food security status	**n**	**%**
Food Secure	23	57.5%
Food Insecure	17	42.5%

The finding that 42.5 percent of students were classified as food insecure is high, especially since only 10.2 percent of U.S. households and 10.6% of Florida residents are considered to be food insecure (Coleman-Jensen et al., 2022; Feeding America, 2020). As demonstrated by figure 2 this rate is still alarming even when compared to other children, such as the 16% of food insecure children in Pinellas County; or the rate for food insecurity among children in Florida, which lowers to 15.70%, and for children in the United States 16.10%. However, this finding corresponds with the most recent ALICE report conducted by United Way (2019), which found that Pinellas County had 46 percent of its residents below the Household Survival budget. And with the finding that 39 percent of college students also face food security (Rowan & Bailie, 2021).

A different study conducted by Debate and colleagues found that college students were facing even higher rates of food insecurity, showing nearly 47% of students reporting that they were food insecure (2021). Although most college freshman were high school students a few months prior, there are significant differences between the two populations. In regards to food

security, high school adolescents tend to be embedded in the households while college students may not be. This means that college students are responsible for their own food security but also that they only have to worry about feeding themselves. High school students on the other hand typically rely on their parents or caregiver for food but must share the groceries that are available. It has been found that when younger siblings are in the family unit, the older high schools students sacrifice a meal so that their younger siblings are able to eat more (Moffitt & Ribar, 2018; Eicher-Miller & Zhao, 2018).

College students face financial challenges that high school students do not, which could explain their higher food insecurity rates. Tuition, fees, and other associated costs such as housing and transportation often take priority over food, which can be expensive at the dining halls (Peterson & Freidus, 2022; Salerno & Arena, 2020). College students also often face other difficulties in becoming food secure such as not being eligible for SNAP benefits because they are unable to meet the work requirement. This program was probably something they had benefited from while they were in high school because their caregivers were enrolled, but once graduated they lost access just like they lost access to the free or reduce lunch program.

As for the students who were categorized as being food secure in this study, when utilizing the definition of food insecurity as being a "period in which an individual lacks consistent access to enough food for an active and healthy life" this makes more sense. These students are able to shop for groceries for themselves and their families through the school pantry once a week, even if they do not utilize these resources they know that it was there and available to them if the need arises which would, following this definition, classifies them as being food secure.

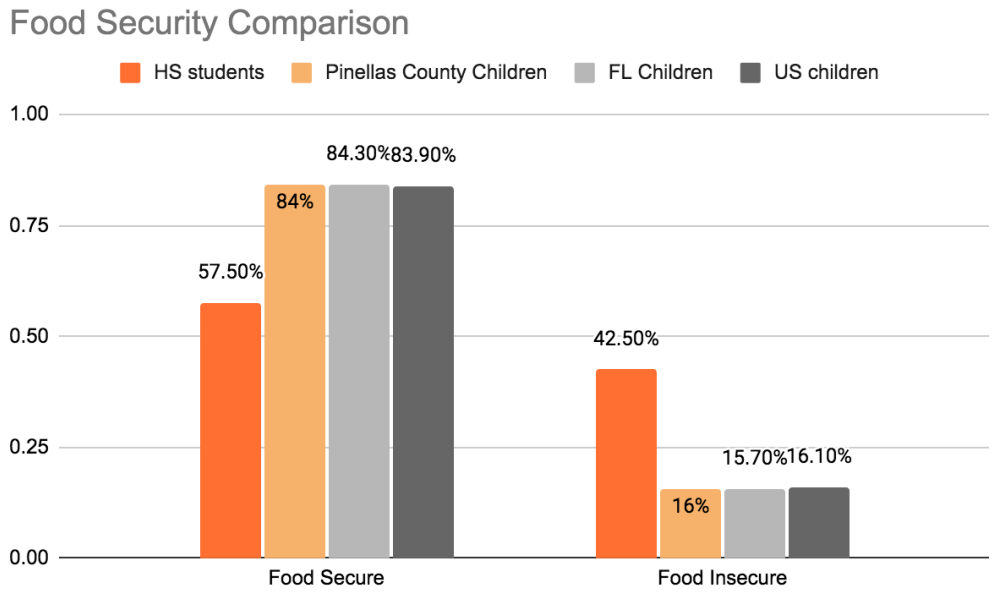

Figure 2: Children Food Insecurity Rates

The following table provides a more detailed breakdown of the food security status and the demographics of the participants and their involvement with the school food pantry (table 21).

Table 21: Food Security Status and Demographics

Gender	**Food secure**	**Food insecure**
Female	9 (22.5%)	11 (27.5%)
Male	14 (35%)	6 (15%)
Different identity	0 (0%)	0 (0%)
Decline to answer	0 (0%)	0 (0%)
School attending	**Food secure**	**Food insecure**
School A	12 (30%)	10(25%)
School B	11 (27.5%	7 (17.5%)

Table 21 (Continued):

Current grade level	Food secure	Food insecure
Freshman	1 (2.5%)	0 (0%)
Sophomore	1 (2.5%)	1 (2.5%)
Junior	4 (10%)	3 (7.5%)
Senior	17 (42.5%)	13 (32.5%)

Separate chi-square tests were used to assess associations between the food security categories and gender, grade level, and schools (tables 22, 23, 24). The p-value resulting from analyzing gender was 0.110, schools was 0.676 and grade level was 0.851. These results suggest that the differences were not significant enough to explore the potential trends of the food security status among these demographics.

Table 22: Pearson Chi-square for Gender and Food Security Status

	value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.558	1	0.110
Likelihood Ratio	2.588	1	0.108
Linear-by-Linear Association	2.494	1	0.114
N of valid Cases	40		

Notes: According to the p value from this test the differences between genders is not significant enough to explore the potential trends of food insecurity scores.

Table 23: Pearson Chi-square for School and Food Security Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	0.175	2	0.676
Likelihood Ratio	0.175	2	0.676
Linear-by-Linear Association	0.170	1	0.680
N of valid Cases	40		
Notes: According to the p value from this test the differences between schools is not significant enough to explore the potential trends of food insecurity scores.			

Table 24: Pearson Chi-square for Current Grade Level and Food Security Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	0.794	3	0.851
Likelihood Ratio	1.161	3	0.762
Linear-by-Linear Association	0.189	1	0.664
N of valid Cases	40		
Notes: According to the p value from this test the differences between grade levels is not significant enough to explore the potential trends of food insecurity scores.			

The survey also asked about the student's involvement with the food pantry, including questions regarding how students found out about the food pantry, how often they visited the school food pantry throughout the school year, and the length of time that they had been using the school food pantry. Table 25 provides a breakdown of the answers provided, separating responses based on food insecure status. As mentioned previously, the majority of students learned about the food pantry from a teacher, regardless of their food insecurity status. More of the students who screened as food insecure visited the food pantry once a week (n=7, 17.5%)

while those who screened as food secure reported visiting the food pantry a few times during the school year (n=6, 15%). Most of the students who screened as food insecure reported using the school's food pantry since last year (n=8, 20.5%), where as those who screened as food secure had three answers (first time, since last school year, and for the last three school years) that had equal number of responses (n=6, 15%).

Table 25: Food Security Status and Involvement with the Food Pantry

Found out about the pantry	**Food secure**	**Food insecure**
Walked by	3 (7.5%)	2 (5%)
Friend	1 (2.5%)	0 (0%)
Teacher	14 (35%)	13 (32.5%)
Social worker	1(2.5%)	0 (0%)
Other	4 (10%)	2 (5%)
Visits to the school food pantry, throughout the school year	**Food secure**	**Food insecure**
First time	4 (10%)	2 (5%)
Once a week	4 (10%)	7 (17.5%)
Every other week	4 (10%)	2 (5%)
A few times a month	3 (7.5%)	2 (5%)
Once a month	2 (5%)	1 (2.5%)
A few times during the school year	6 (15%)	3 (7.5%)
Length of time using the school food pantry	**Food secure**	**Food insecure**
First time	6 (15%)	1 (2.5%)
First school year visiting the school's food pantry	5 (12.5%)	6 (15%)

Table 25 (Continued**)**:

Since last school year	6 (15%)	8 (20%)
For the last two school years	0 (0%)	0 (0%)
For the last three school years	6 (15%)	1 (2.5%)
For the last four school years	0 (0%)	1 (2.5%)

The p-value resulting from analyzing the associations between the food security status and how students found out about the food pantry was 0.397 and how frequently they visited the food pantry was 0.655 (Table 26 and 27). These results suggest that the differences were not significant enough to explore the potential trends of the food security status among these demographics. However, the resulting p-value (0.041) from analyzing the length of time using the school pantry was significant, warranting further testing. A one-way ANOVA test was conducted (Table 29) to further explore the food security status and the length of time using the school pantry and the resulting p-value (p=0.020) suggested that the differences were significant. Since these were ordinal variables they were analyze using Spearman's Correlation (Table 30), however the resulting p-value (p=0.228) suggested that the correlation was not significant.

Table 26: Pearson Chi-square for How Students Learned of the Food Pantry and Food Security Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	12.629	12	0.397
Likelihood Ratio	14.692	12	0.259
Linear-by-Linear Association	0.335	1	0.562
N of valid Cases	40		

Notes: According to the p value from this test the differences between how students learned of the food pantry is not significant enough to explore the potential trends of food security status.

Table 27: Pearson Chi-square for Visits to the Food Pantry Throughout the School Year and Food Security Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	12.312	15	0.655
Likelihood Ratio	15.128	15	0.442
N of valid Cases	40		

Notes: According to the p value from this test the differences between number of visits to the food pantry throughout the school year is not significant enough to explore the potential trends of food insecurity scores.

Table 28: Pearson Chi-square for Length of Time Using the Food Pantry and Food Security Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	21.721	12	0.041
Likelihood Ratio	25.085	12	0.014
Linear-by-Linear Association	1.699	1	0.192
N of valid Cases	40		

Notes: According to the p value from this test the differences between the length of time using the food pantry is significant enough to explore the potential trends of food security status.

Table 29: One-way ANOVA for Length of Time Using the Food Pantry and Food Security Status

	Sum of squares	**df**	**Mean Square**	**F**	**Sig.**
Between groups	15.191	4	3.798	3.358	0.020
Within groups	39.584	35	1.131		
Total	54.755	39			

Table 30: Spearman's Rho Correlation Between Length of Time at Food Pantry and Food Security Score

		Length of Time
Food Security Score	Correlation Coefficient	0.198
	Sig (2-tailed_	0.228
	N	40

Summary

In total, 40 surveys were collected from students, approximately 60 hours of participant observations were conducted, 16 student interviews, and 10 adult interviews were completed for this study.

When asked how the students found out about the school food pantry most students responded that a teacher told them, regardless of their food insecurity status. An interesting finding was that students mentioned that they heard the food pantry being announced over the school intercom and that they helped organize the pantry. More of the students who screened as food insecure visited the food pantry once a week (n=7, 17.5%) while those who screened as food secure reported visiting the food pantry a few times during the school year (n=6, 15%). Most of the students who screened as food insecure reported using the school's food pantry since last year (n=8, 20.5%), where as those who screened as food secure had three answers (first time, since last school year, and for the last three school years) that had equal number of responses (n=6, 15%).

In order to measure in the impact having access to food on campus had on students' stress and anxiety, the K10 questionnaire was utilized and the survey included a direct question asking if the school pantry has helped manage stress around food and another question on if it has helped manage anxiety around food. In regards to stress, 30 responded yes (75%) and 10

responded no (25%). In regards to anxiety, 26 responded yes (65%) and 14 responded no (35%). This corresponded with the K10 results which showed that the majority of the respondents had no (n=22, 55%) or moderate mental health issues (14, 35%). Four (10%) respondents did screen as high. In regards to food insecurity respondents were categorized as having high food security (n=14, 35%), marginal food security (n=9, 22.5%), low food security (n=8, 20%), or very low food security (n=9, 22.5). As recommended by the USDA, high and marginal food security categories were considered food secure (n=23, 57.5%), and low and very low food security categories (n=17, 42.5%) were considered food insecure.

P-values resulting from separate chi-square tests used to measure association between the raw food security scores and gender (p=0.122), schools (p=0.653) grade level (p=0.882), how students found out about the food pantry (p=0.516), and visits to the food pantry (p=0.406) were not significant enough to explore the potential trends of the food security status among these answers. The resulting p-value (<0.001) from analyzing the length of time using the school pantry was significant, warranting a one-way ANOVA test which showed a p-value of 0.074 which suggested that the differences were not significant enough to continue exploring potential trends.

The raw food security scores were then translated to scale scores and p-value resulting from separate chi-square tests used to measure association between food insecurity and gender (p=0.110), schools (p=0.676) grade level (p=0.851), how students found out about the food pantry (p=0.397), and visits to the food pantry (p=0.655) were not significant enough to explore the potential trends of the food security status among these demographics. The resulting p-value (0.041) from analyzing the length of time using the school pantry was significant, warranting a one-way ANOVA test which showed a p-value of 0.020 that suggested that the differences were

significant, but when conducting a Spearman's Rho correlation test the p-value (p=0.228) showed that the results were not significant. Although there was no correlation, it could be because at the time of data collection the school's food pantry for school A had only been opened for two years, skewing the data. However, it would be beneficial to continue exploring this association since there is literature showing that more than two-thirds of people who visit food pantries do so on a regular basis but the reason why remains unclear (Berner, Ozer, & Paynter, 2008). There exist the hypothesis that poverty and length of food pantry use are associated, but this is not consistently supported in the literature even though there is acknowledgement that there seems to be two distinct groups utilizing these services: those who need emergency food and those who are long-term users (Paynter, Berner, & Anderson, 2011, Kicinski, 2012)

Conclusion

The answers provided by the students in the survey suggest that the schools' staff promotes the food pantry to the student body and that it is a very visible and well-known component of the school. Additionally, the responses to how frequent and the length of time that the students utilize the food pantry suggests that the school's food pantry acts more as a short-term solution, especially with the differing responses between those that screened as food secure and insecure.

While no associations were able to be found between food insecurity categories and demographics the number of students that screened as food insecure was uncharacteristically high and should be further researched in future studies.

CHAPTER SIX:

SOCIAL FACTORS INFLUENCING FOOD PANTRY USE

Interview data from students, school staff/volunteers, and food bank employees were combined to answer the research question: What social factors act as barriers and facilitators for food pantry use for a high school student population in the following chapter.

Barriers

COVID-19

During the interviews, participants commented on how COVID acted as a barrier to receiving food. As mentioned previously, COVID caused major disruptions in society, which caused ripple effects and are still felt years later. One pantry coordinator commented on how COVID caused the need for food in her school to increase and how the related job losses and other effects were still being observed at the time of the interview.

> I know that the need is definitely there. I know we have a lot of families who have been impacted by COVID and there's a loss of jobs... The number of students that we have that are coded as homeless this year is way higher than it has been in the past, and a lot of that is pandemic related.

Even with the high need for this program, the food pantries had to close when lockdown mandates were issued and schools were shut down, further limiting access to food for students and families who utilized the resource. Although the pantry coordinators worked hard to continue providing opportunities for students to receive food, they were not sure if the food was going to their students specifically. As one staff member stated:

> We did our mobile drive-through, which were a huge success. Now do we know how it got to the kids? Not necessarily. I mean we opened it up to the community, so we hope that our students would come and their families would come up. I mean, we had huge, huge turnouts then and and really just trying to make sure that the people around our community, our school community, and families and those around were taken care of. So yeah, I mean I, I think we did our best to try and make sure of that even in a pandemic, we still made sure that they were taken care of.

A food bank employee expressed a similar concern that there was no way of knowing if the food was going to the students whom it was intended for. She also exhibited frustration on how, while it was great that so many programs were starting up in order to address food insecurity because of the pandemic, this had been an issue long before.

> …there were a lot of programs that popped up that were able to help support kids during the initial crisis. That was the pandemic…you saw a lot more distributions that were happening in neighborhoods 'cause all of a sudden people cared, right? It's not that they didn't care before then like all of a sudden it was like headline news like people are hungry, we need to do something but they weren't always necessarily specifically aimed at students. So, a lot of our schools couldn't open and so a couple of them did, like parking lot distributions, but they weren't allowed access to the facility.

As the survey results showed, some students learned about the school pantries by walking by or hearing it on the announcements. Schools shutting down limited that type of exposure, resulting in some students not knowing the pantry existed. Even once the schools did open up because of the option to attend virtually, many students were still not aware of the food pantry. “I honestly didn’t know about the food pantry because of COVID and everything. I wasn't at school I was an online student. So, I didn’t know we had this um during COVID.”

Optimistically, with such a high need in the school it seemed as though the use of a food pantry was normalized and embraced by many, including the adults.

> I think our faculty and staff, also, you know, have embraced it and we have a lot of faculty and staff right now that have multiple households in one, due to COVID, or other circumstances that I think they've utilized it and maybe not wanted to admit that they need help, but you know definitely appreciate the help.

Differing Food Preferences

Walking into either one of these food pantries was similar to walking into a grocery store. Although there were no aisles, everything was grouped together and displayed based on the type of food so that the students could easily see what was available. There were shelves lined with dry goods, a large deep freezer which housed the meat, and a refrigerator for any dairy products. How the produce was displayed changed daily, sometimes it was put on tables, in the refrigerator, or kept in large bags.

Figure 3: A fridge full of celery.

Figure 4: Frozen chicken quarters in the deep freezer.

Figure 5: Canned and dry goods.

Although there seemed to be a variety of food available, another barrier that was not mentioned by any of the students who were interviewed but was observed during my time at the food pantries was that there were certain items that students wanted but that the adults would not order or allow because of various reasons. For example, when I asked one of the food bank staff how they decided what types of groceries they sent to the food pantries they ended the

conversation by stating how they were willing to send just about anything that the students wanted, within reason. “You know if the students asked for, you know, cases of Snickers bars. We'd be like, no, we're not really going to send that over there.” This sentiment was echoed during interviews with the other adults, how they encouraged the students to take healthy food or groceries that could be used to make a meal rather than a lot of snacks. Most students and adults considered the produce and meats as “healthy” but had differing opinions regarding the dry or shelf stable goods. Interviewees who attended school B continuously referenced the “green” foods from the “go, slow, and whoa” guidelines that were developed by the National heart Lung and Blood institute on which foods should be eaten, but as one school pantry coordinator admitted these guidelines weren’t strictly enforced.

> ...when we first started [the food pantry], we had the go, slow, whoa guidelines. So, we really try to encourage more of the green items, less of the red items. Right now. We just want them to eat. You know, I think right now it's it's just to get them food.

The schools utilized “food nudges” which involved strategic placing of foods that would encourage students to take more of the items that were considered healthy. For example, placing an abundance of produce in the middle of the room where it was easily visible would be considered a nudge. Such techniques would not be considered unethical, and are commonly used in grocery stores to encourage consumers to buy certain items or store brands. However, because of the differing power dynamics between students and food pantry coordinators there should be caution with utilizing such techniques to make sure that students still have a choice in choosing what they want to eat and are not made to feel guilty otherwise.

Figure 6: The go, slow, whoa guidelines poster in the pantry.

Admittedly, making sure that the students took items that could be used to make a meal was something that I was also concerned about while I worked at the food pantry. I had observed that many of the students who visited the food pantry for the first time walked in confused and unsure what to do. A lot of them would quickly pack a few granola bars or crackers and then go to leave, which would cause me to remind them to look into the fridge for some produce or the freezer for some meat. The students who were familiar with the food pantry did not hesitate to look at what was in the fridge and freezer but first time visitors did not recognize that as an option. Seeing this as an issue, one school put up a handwritten sign inviting students to look into the fridge and listing what was available. A lot of the time I would suggest what they could do with the groceries that were on the shelf if they wanted a quick and easy dinner that night.

Towards the end of the school year this would occur less as students became more comfortable in shopping for groceries by themselves or I learned that some students really did come in only for snacks.

The two participating schools differed in how they handled the students who only came to the food pantry for snacks. In school A the pantry coordinators were not bothered by this and explained that if those students ever did need more than just a snack then at least they knew where they could get food and were comfortable with doing so. In contrast, school B viewed this behavior as the students using the pantry as a convenience store and discouraged it. On one occasion while at school B, I heard some students outside yelling that all they wanted was an apple. The pantry coordinator who was checking them in told them they could go shopping for some groceries and could take some apples as well but the students responded that no, they just wanted an apple. The pantry coordinator stood firm and kindly explained that no this was a food pantry if they needed food they were more than welcome. Those students did not come in and I did not hear or see them for the remainder of the school year.

Figure 7: Apples were a common snack item that the students loved.

Facilitators

Lenient Policies

When asked about what rules or policies the food pantry enforces, students and adults stated that there were no formal rules. Students explained that all of the rules which were followed were unspoken ones that should be followed anywhere else, such as being respectful, "… I don't know of any rules. Don't be disrespectful of the stuff, like the normal rules like you would follow anywhere." Or to not be judgmental, like a different student explained:

> I think the main rule is like be respectful and like don't judge other people that do come in and don't like exploit them like 'oh I saw you at the pantry' but like it's for everybody so I think that's like the unspoken rule, just like be respectful about everybody's privacy like if you're in there then you're in there, either way you're going to get help.

When asked about the amounts of groceries that people could take home, all of the students who were interviewed said that there were no restrictions and that everyone could take what they needed. The adults clarified that sometimes certain food items did need to be restricted.

> ...every once in a while um if there's something like the strawberries or the snack crackers, I've started to catch on to the things that I need to really monitor and place myself closer to. So, I've had kids open the strawberries and start eating them and I've had to be like we're not doing that. And I've found them on the ground laying there or trying to hoard stuff just being goofy where I've learned I don't put everything out like I used to. For the snack crackers, the strawberries I hide them so I know because otherwise they'll be wiped out and then people are like oh where's the strawberries and then I'll say well let me get those for you so I'm learning that kind of stuff on just how to manage the flow and that's worked out pretty well.

Or that students needed to be reminded that this food was for everyone.

> We just ask them to not, you know, if there's some granola bars that they don't take 18 boxes of granola bars. You know, like you gotta take one and make sure you leave enough for everybody else... In the beginning I think we had a few, like at the beginning of the school year, a few kids that will try to like take just all like the snacks and not take the healthy stuff but once we tell them like no, you can't do that you gotta leave, you know, some for everybody and what about this and this and this? It's not an issue.

Even the requirements from the food banks and school administration were minimal. As one of the coordinators explained, the main concern is that the food pantry is kept clean and that food safety protocols are followed.

> "...they let us do what we want to do. Other than we follow, you know, what are the safety practices that were in that guidelines and they were totally fine with it, you know, we just make sure that everything is nice and clean and they're fine with it."

When interviewing the food bank staff about what type of policies they require from the schools, the same kinds of answers were echoed.

> So, most of the agreement that we set is around like keeping the food safe, not discriminating, not charging for the food, things like that. As far as when students come through the pantry, you know, we we obviously need them to sign in so we know who we're serving and what the impact is, right? And we need them to be respectful of the space.

Having such lenient policies are helpful because it allows the food pantry coordinators to concentrate on running the school pantry, instead of worrying whether they are following protocols. It also is helpful to students, who feel like they can act normal at the food pantry without worrying about repercussions.

Interestingly, staff from both food banks that did not have such leniency regarding food procurement policies. Some of the food items that were given to the food pantry were donated, either from supermarkets or from farmers' post-harvest. These foods have to be collected and organized in a certain way, with special attention placed on expiration dates and the condition of the food (i.e. not spoiled, nutrition labels must be present, no rust on cans). Even during the transportation to and from the food bank, certain practices must be followed by the food bank employees. For example, weight limits must be enforced when loading the trucks that are used to transport the food. Also, the temperature of these trucks must be kept between a certain range depending on what types of foods are being transported (frozen/refrigerated vs dry/canned goods), along with logs reporting the times of these temperature checks. Foods that are purchased are typically done so with funds from private funders, corporations, or grants. These funds tend to require that the food bank provides a report on how these funds were used, occasionally they are also restricted to be used only for certain programs, populations, or to purchase specific types of food during a specific time period.

Atmosphere of the School. The literature has shown that the most successful school pantries are ones that are easily visible in the schools and are supported by administrators. The food bank staff that were interviewed supported this based on their experiences with school food pantries. For example, a food bank staff member stated:

> So, the the schools that are the most successful, you know it's they have administrative teams who understand how you know, like the purpose of the school is education. That's their goal. You know we wanna raise up our kids so that they're you know, able to to grow up and learn things and do things. And you know, be who they want to be with their life and education is a big part of that. But education has a foundation of having your basic needs met, right? And so you know, I, I think a lot of you know we've got a lot of schools where the administration really loves it. They see the full picture. They see how it helps. You've got a lot of the schools where like the teachers are fighting over who gets to volunteer and who gets to you know help with the pantry because they recognize just how important it is like to have their students ready to learn to have that foundation of you know, having access to food and their their other basic needs met.

While at the food pantries I noticed that administration was very supportive at both schools. On special occasions, such as before a holiday or break, they allowed the students to leave the classrooms early or held the buses for a few extra minutes so that the students would have enough time to shop for their groceries. The announcements made on the intercom occurred every single Friday, reminding students to stop by the pantry and pick up the groceries that they had available. Based on the responses from the surveys, the announcements were effective in getting the word out that the pantry was open to everyone but one of the food pantry coordinators explained during her interview that the announcements were purposely made so that students viewed the food pantry as a normal part of the school. For example, a food pantry coordinator said the following:

"...at other schools you know [the food pantry] was like this weird secretive thing and I was just like that's not what I'm shooting for at all, you know?." School support did not stop there. The whole school seemed to have embraced the food pantry and I saw multiple faculty and staff members stop by and ask if the food pantry coordinators needed any help, a few times I even saw the school resource officer stop by and help move tables. One of the food pantry coordinators acknowledged this observation, stating:

> You know our administrative team is always very supportive of what we do, especially when it comes to the pantry. And a lot of our faculty and staff now also know about the

> pantry and utilize or or will share with students (the) information about it… I think in the beginning I think they were kind of cautious and a little bit unsure of it because I think they thought there would be more of a stigma and there would be more issues but our pantry was started by students going to our administration saying we have a need for this, we know we have a need for it. So, I think once it actually came into play and they saw the students' responses, they saw that there was no stigma. They've come through, and seen how the pantry goes. They've embraced it and really love it.

How thoroughly the school has embraced the food pantry can be seen when stepping into the space. Both schools had full rooms dedicated to only the school food pantry, located in an area that was easily accessible to the students after school. The food pantry coordinators and the students worked hard to make sure that the space was kept clean and inviting.

> So, the goal is to really make that space um, you know, warm and welcoming. We want it to be a dignified experience to where, like obviously it's a school pantry, it's not a grocery store, right? But we do want it to feel like a place where you can consistently come and have access to food that it's judgment free, you know.

Figure 8: Food pantry plaque.

Figure 9: School Food Pantry space.

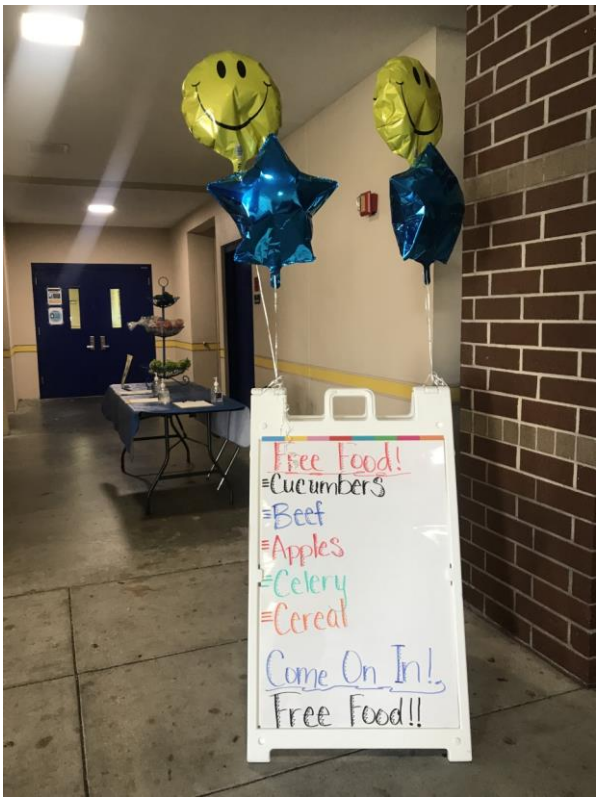

Figure 10: Sign advertising the food pantry.

Figure 11: Sign in sheets and a display of what produce is available.

Based on my observations, the goal of making the food pantry warm and welcoming was met. Week after week, I saw students coming in together, socializing, laughing, and chatting as if they were at an afterschool event. When the students were asked what they thought about it a common response was that they love it. One student commented:

> Oh, love it I'm a senior now so um I'm about to be gone but the kids love it all of the other kids I see them walking around with the bags I see them stopping by the tables I see people walking home eating already I see people outside waiting on their ride eating already. So, everybody loves it, it's doing good.

The response remained positive when I asked what they thought other people, those that do not use the food pantry, thought about the pantry. A student said the following:

> Probably like um our school actually cares whether they eat or not, it's somewhere people can feel safe. They know on weekends if their family doesn't have food or anything they won't be judged, they can go and get some food and they won't be starving for the weekend.

Since the literature spoke so much about how use of a food pantry at high schools was stigmatized, I asked all of the interviewees if bullying or teasing people from using the pantry had ever been an issue. Adults assured me that, even though at first it was a concern, it had never been a problem among their students.

> Not here. Not here. [Name] and I were worried about that in the very beginning years ago. But I don't know if it's just our culture or what it is, but that's never been an issue here.

The opposite has actually occurred, according to one of the pantry coordinators, where students are referring others and encouraging them to use the food pantry.

> I've had kids come to me and say, you know, I have a friend and they don't have any food at home. I think maybe they could, you know, can you talk to them and see if they could go? … there's zero, you know, judgment.

Every student whom I asked this question to looked at me as though this question was most ridiculous. While most simply answered "no that doesn't happen here" one student elaborated that "maybe that happens at different schools but not here".

During the interviews with the food bank staff, I asked what they thought was the reasoning behind the lack of stigma and they believed that it was because the majority of the students at the schools were in need, which would correspond with what is found in the literature (Leos-Urbel et., 2013; Corcoran et al., 2016).

> Unfortunately, because there are so many people that are in need, it's less stigmatized. You know, especially the schools that we've targeted, it's so successful because so many of them are in need. It's like. Once you get 20, 30, 40% of the kids that are in need, you know, sort of the bullying and you know the stigma starts to go away. Bullies are out there but then the bully starts to become the minority as opposed to you know the kids in need who are the minority.

A different food bank staff member elaborated, saying that:

> The students who are at the school are reflective of the community that they live in, right? And so if you see students who are coming to school who are hungry, who are looking for, you know, access to food, they're coming from a family that's hungry and looking for access to food within a community.

Student Autonomy. As mentioned previously, many students who visited the food pantry for the first time were unsure of what to do or how to shop, and many were surprised that they were allowed to pick what they wanted in the first place. But there were some "regular" shoppers who knew exactly how the food pantry was run and what they needed to do. In one instance, there was a student who told me that she was in charge of cooking dinner for her younger siblings so when she visited the food pantry she shopped for items she knew how to cook while also thinking about meals that she could make later that week. This illustrates the importance of choice when it comes to picking what foods to take home, a topic that was of particular interest to the adults who were interviewed and the reason why both school food pantries choose to return to a client choice model as soon as COVID restrictions were lifted. One of the food bank members stated:

> You know it's not just you show up, here's your box of canned goods. It's like come see what we have. See what you know, what you like, what fits your culture, what fits your diet. You know there's all these factors that play into the food that we eat and we want to make sure that we get people food that they want. So, you know, being able to come through and look at, you know, look at the produce, maybe learn, learn about some new produce you never had before, you know and take that home with you. But oh, I love sweet potatoes and I'll take some of those and then looking around you know the canned goods or the meat section. You know, just getting the food that's going to best serve your family. You know, being able to have that choice is such a huge part of it.

However, many times there were items, specifically produce, available at the food pantries that the students were unfamiliar with. To address this, the food pantry coordinators would typically post a sign explaining what the item was, how it could be eaten or cooked, and occasionally a recipe with the item.

Figure 12: Educational handout about radishes.

Getting the students involved was also important for the success of the school food pantries. One of the pantry coordinators told me that every year they have a slow start and that the pantry numbers start to pick up when students help her unload all of the food into the pantry. By doing so they get a chance to see what there is and the students get excited and tell their friends. “They help you know, get this space ready and so by engaging those kids and getting them excited about it and having you know conversations with them”. Receiving input from the students was also important, the food pantry coordinators were constantly asking the students what types of food they would like to see in the food pantry and noting their request for the next food order. However, as mentioned previously there were some items that were not going to be

included in the pantry regardless of requests. These items included any beverage that was not milk or water, candies, and a limited amount of cookies or other baked goods.

Social Network of Students

Towards the middle of the school year, I started observing that most of the students who visited the food pantry came in groups instead of alone. They would chat and socialize, while getting groceries and even though not everyone in the group would fill a bag they would still "shop" around with their friends and tell them that they had to share certain items. During one visit to the school food pantry I was concerned because very few students had visited. When I asked the food pantry coordinator what was going on she explained that many of the athletic kids were out for the day because of sports. I had not realized that such a large chunk of the population who used the food pantry were student athletes but this could have contributed to the food pantry's success since athletes tend to be more aware of how important proper nutrition is for athletic performance. This finding also made me wonder if that was why so many students were coming in groups, they were all from the same social network. When I asked the students during their interviews about this, they did not confirm or debunk my suspicion. Many shrugged and explained that how someone visited the food pantry depended on the person. Some people liked shopping by themselves but some wanted to go with friends, some rode the bus together or had practice afterschool so they just walked to the food pantry together first. One student explained how she " came by myself the first time while I figured it out, well it was my first time. And then a couple of times I brought my friend, we call it 'grocery shopping', so we go grocery shopping on Fridays." Many students did admit that sometimes when they knew that someone may need something or liked a certain food item, they would leave the pantry specifically to get them.

Non-Student Use of the Food Pantry. Another observation that I noticed was that adults also shopped at the school's food pantry, faculty, staff members, even the bus drivers shopped for groceries and chatted with the students, exchanging recipes and excitement over what food was being offered that day. Further demonstrating how the food pantry was open to everyone, and a normal resource that could be utilized.

Although many teachers who visited the food pantry shopped for themselves, they also picked up items for the students in their class. They told me that they had kids who were constantly coming into the room and saying they were hungry. They noticed that this hunger was disruptive and negatively affected the students' schooling so they focused on keeping items like peanut butter and jelly or granola bars in their classroom. One of the students confirmed this saying that his teacher acted like their "school mom" and that she commonly used food from the food pantry food activities that they had in their classroom to feed everyone. Prior to the food pantries many of these teachers were purchasing these food items using their personal funds since the budget they were provided by the school only covered school supplies. Although some items still needed to be purchased out of pocket, the snacks given to them through the pantry provided help that was very much appreciated.

The school nurse had also begun stopping by and picking up items for the school's clinic. Snacks like granola bars or peanut butter crackers were especially helpful to have on hand for students who had to take medicines on campus, since some of the medicines were so strong that they should not be taken on an empty stomach.

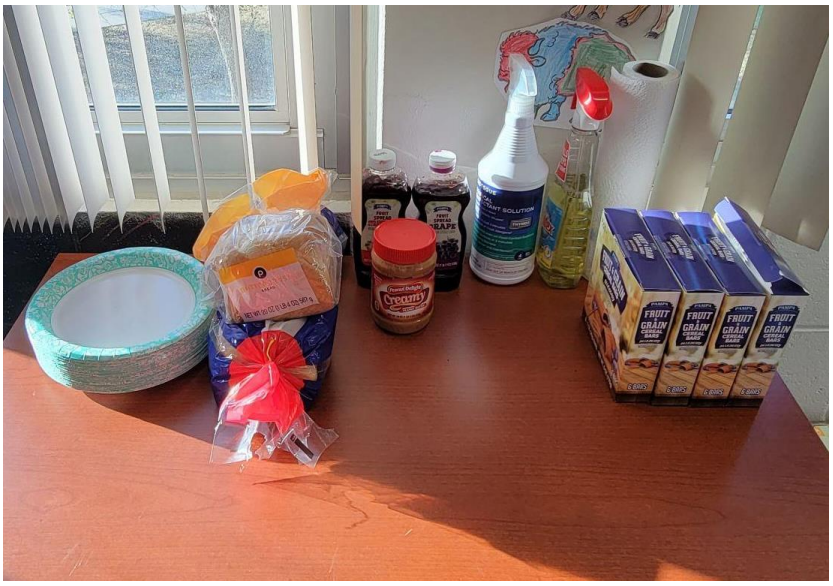

Figure 13: Snacks kept in a teacher's classroom.

Although many teachers constantly told me that they never wanted to take away food from their students, some expressed their need for it. As one teacher told me: "I have to be real with you. I'm going through a messy divorce where he's not paying child support like he's supposed to, so this [food] is really getting [my family] through". What was most unexpected to me were the bus drivers that visited the school's food pantry. I knew one of the students had told his bus driver that the food pantry was open for everyone early on and I assume she shared this information with her coworkers because as the year progressed more bus drivers started visiting. At the end of the school year I received an email from a teacher that illustrated why it was such a popular site. The email stated:

> Many of the staff have repeatedly expressed their appreciation for the pantry. Our plant operators and class/bus assistants make $11.77 an hour. It is shameful that their pay is so low and I know the food makes a big difference for them.

Other Necessities Provided

On occasions, the school's food pantry had items other than food which is consistent with the research done by Waxman et al. (2005), claiming that personal care items such as toilet

paper, feminine hygiene products, and soap were important supplies to have available for families since it is often a challenge to be able to afford them. The students and volunteers explained that they had seen items like “jeans”, “school supplies”, “shampoo and conditioner,” “shoes”, “kitchen necessities like a guacamole holder or a salad spinner,” Even though it was called a food pantry, the students acted as though it was perfectly normal to shop for toiletries as well. As one student explained: “I’ve had someone come to me in class and they needed deodorant so I took them to the pantry to get some.” But the items that seem to be the most popular were feminine pads. Only once did I see boxes of pads while visiting the school’s food pantry and they did not last long, girls were stopping by to grab handfuls of pads before they even looked at the food. When I asked where the pantries received these items the food pantry coordinator explained that sometimes the food bank or Publix donated them but they could also put a call out on social media, Facebook specifically, and that the donations always pour in. Alumni, parents, neighbors, everyone seemed to want to help, and many wanted to donate anonymously.

Figure 14: Toilet paper is a personal care item that is available at the pantry.

Figure 15: Bags of toiletries available at the food pantry.

Summary

Table 31 provides a summary of the different social factors that influenced food pantry use. COVID-19 served as a barrier to food pantry use because of the inability of students to access the food pantry since the school was unopened. Food assistance programs were still occurring but there was no way of knowing if the students were directly benefiting from such programs. However, this barrier seemed to be short-term since once the school did open up there was such a high need that the free food was embraced by many, including the adults at the school. This non-student use of the food pantry also served as a facilitator of the food pantry since it demonstrated how it was a normal resource that could be used by anyone. Regarding

food preferences, it was observed that there were certain items that students wanted at the food pantry but that the school staff or food bank employees would not allow because of the perceived unhealthiness of items or the idea that the food pantry should be used to get groceries for meals and not as snacks.

There were no formal rules or policies enforced by the school food pantry, even the requirements from the food banks and school administration were minimal which was considered a facilitator because it allows the food pantry coordinators to concentrate on running the school pantry, instead of worrying whether they are following protocols. It also is helpful to students, who feel like they can act normal at the food pantry without worrying about repercussions. In contrast, food bank employees did have policies that they had to follow regarding the transportation of the food, how the items are collected and organized, and certain reports that need to be completed regarding the use of the food or funds used to purchase food items. Another facilitator of the pantry was the overall warm and inviting atmosphere of the school regarding the food pantry, it seemed as if the whole school embraced the idea and supported the program in different ways. Findings from this study contrasted with what was found in the literature that the use of a food pantry at high schools was stigmatized, I asked all of the interviewees if bullying or teasing people from using the pantry had ever been an issue. Instead, the opposite occurred when students refer and encourage others to use the food pantry, causing the social network of students to also be a facilitator. The lack of stigma associated with the food pantry is believed to be caused because the majority of the students at the schools were in need. Student autonomy, from the students getting to pick what foods to take home to allow them to participate in how the food pantry was ran. A final facilitator was that other non-food items were

provided at the food pantry, the most popular being feminine pads, which were necessities for these students

Table 31: Summary of Social Factors Influencing Food Pantry Use

Barriers	COVID-19 • School lockdown causing the closing of the food pantry • Not knowing if students were receiving food assistance from elsewhere. Differing food preferences between students and adults • Perceived unhealthiness of certain food items • Thought that the food pantry should not be used for snacks
Facilitators	Lenient policies • No formal rules for students to follow. • Minimal requirements for school staff/volunteers. The atmosphere of the schools • Warm and inviting place • Supportive school staff • Easily visible food pantry Student autonomy • Client choice model where students choose what foods to take. • No/limited restriction on the food amounts students can take. The social network of students • Students refer others to the school food pantry. • The food pantry is viewed as a social place for the school. Non-student use of the food pantry • The school food pantry helps school staff with their food budget (for their classrooms and their households). Other necessities provided • Toiletries, clothes, shoes, etc. are items that students need but may have a hard time purchasing.

Conclusion

Facilitators that were found in this study should be considered when planning the opening of a new food pantry at a school. Having lenient policies and allowing non-student use of the

food pantry is beneficial for the students but also for the school staff and helps lower the stigma behind food assistance. The overall atmosphere of the school, allowing student autonomy, and providing other necessities that are not food also contribute to lowering stigma and helps the food pantry's success.

While COVID-19 seemed to be a short-term barrier the difference in food preferences between adults and students should be taken under consideration and some flexibility should be allowed to help aid in student autonomy regarding food choices.

CHAPTER SEVEN:

THE IMPACT OF HAVING ACCESS TO FOOD

K10 Scores

Table 32 provide a detailed breakdown of K10 scores and the demographics of the participants. Separate chi-square tests were used to assess associations between the K10 scores and gender, schools, and grade levels. The p-value resulting from analyzing gender was 0.024, schools was 0.464 and grade level was 0.81 (tables 33, 34, 35). These results suggest that the differences were not significant enough to explore the potential trends of the K10 scores among these demographics. However, the resulting p-value (0.024) from analyzing gender was significant, warranting further testing.

Table 32: K10 Scores and Demographics

Gender	**No stress**	**Moderate stress**	**High Stress**
Female	15 (37.5%)	3 (7.5%)	2 (5%)
Male	7 (17.5%)	11 (27.5%)	2 (5%)
Different identity	0 (0%)	0 (0%)	0 (0%)
Decline to answer	0 (0%)	0 (0%)	0 (0%)
School attending	**No stress**	**Moderate stress**	**High Stress**
School A	14 (35%)	6 (15%)	2 (5%)
School B	8 (20%)	8 (20%)	2 (5%)

Table 32 (Continued)

Current grade level	No stress	Moderate stress	High Stress
Freshman	0 (0%)	1 (2.5%)	0 (0%)
Sophomore	1 (2.5%)	1 (2.5%)	0 (0%)
Junior	3 (7.5%)	3 (7.5%)	1 (2.5%)
Senior	18 (45%)	9 (22.5%)	3 (7.5%)

Table 33: Pearson Chi-square for K10 Status and Gender

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	7.481	2	0.024
Likelihood Ratio	7.837	2	0.020
Linear-by-Linear Association	3.486	1	0.062
N of valid Cases	40		

Notes: According to the p value from this test the differences between genders is significant enough to explore the potential trends of K10 scores.

Table 34: Pearson Chi-square for K10 Status and Schools

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	1.537	2	0.464
Likelihood Ratio	1.543	2	0.462
Linear-by-Linear Association	0.971	1	0.325
N of valid Cases	40		

Notes: According to the p value from this test the differences between schools is not significant enough to explore the potential trends of K10 scores.

Table 35: Pearson Chi-square for K10 Status and Current Grade Level

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	2.985	6	0.811
Likelihood Ratio	3.412	6	0.756
Linear-by-Linear Association	0.603	1	0.437
N of valid Cases	40		

Notes: According to the p value from this test the differences between grade levels is not significant enough to explore the potential trends of K10 scores.

Since only two genders were reported in the survey, an independent samples t-Test was conducted to further explore K10 scores between males and females (Table 23). There was a significant difference in K10 scores between males (M=0.3500, SD=0.67082) and females (M=0.7500, SD=0.14281); t(38)=-1.931, p=.030. This corresponds with the literature that suggests that females have a heightened stress response compared to males (Becker et al., 2007; Bourke & Neigh, 2011; Shepperd & Kashani, 1991). When examining students, Sulaiman et al showed that stress levels among females were attributed to their emotions and attitudes towards their environment (2009). Oskis and colleagues build on this, providing a biological explanation on how stress regulating hormones: cortisol and dehydroepiandrosterone (DHEA) peak during adolescence for females but not males (2015). Shepperd & Kashani (1999) also found a correlation between cortisol and high stress levels among female adolescents but they attributed lower levels of stress with higher levels of control, however this was true for both genders.

Table 36: Independent Sample t-test for gender and K10 scores

	Gender	N	Mean	Std. Dev	Std. Error Mean
K10 status	Male	20	0.3500	0.67082	0.15000
	Female	20	0.7500	0.63867	0.14281

		Levene's Test for Equality of Variance		t-test for Equality of Means					95% Confidence Interval of the Difference	
		F	**Sig**	**t**	**df**	**Sig (2-tailed)**	**Sig (1-tailed)**	**Mean Difference**	**Std. Error Difference**	**Lower**	**Upper**
K10 Status	Equal variance assumed	0.000	1.00	-1.931	38	0.030	0.061	-0.40000	0.20711	-0.81927	0.01927
	Equal variance not assumed			-1.931	37.909	0.030	0.061	-0.40000	0.20711	-0.81931	0.01931

Table 37 provide a breakdown of K10 scores and how often participants responded that they visited the school food pantry throughout the school year, and the length of time that they had been using the school food. Table 38 and 39 show results from the separate chi-square tests that were used to assess associations between the K10 scores and frequency of use and length of time. The p-value resulting from analyzing frequency of use was 0.795, and length of time was 0.257. These results suggest that the differences were not significant enough to explore the potential trends of the K10 scores among frequency of use and length of time.

Table 37: K10 Scores and Length of Use of Food Pantry

Frequency of Use	No stress	Moderate stress	High Stress
First time	3 (7.5%)	3 (7.5%)	0 (0%)
Once a week	6 (15%)	4 (10%)	1 (2.5%)
Every other week	5 (12.5%)	1 (2.5%)	0 (0%)
A few times a month	3 (7.5%)	1 (2.5%)	1 (2.5%)
Once a month	1 (2.5%)	1 (2.5%)	1 (2.5%)

Table 37 (Continued):

A few times during the school year	4 (10%)	4 (10%)	1 (2.5%)
Length of Use	**No stress**	**Moderate stress**	**High Stress**
First time	3 (7.5%)	3 (7.5%)	1 (2.5%)
First school year visiting the school's food pantry	5 (12.5%)	6 (15%)	0 (0%)
Since last school year	8 (20%)	3 (7.5%)	3 (7.5%)
For the last two school years	0 (0%)	0 (0%)	0 (0%)
For the last three school years	6 (15%)	1 (2.5%)	0 (0%)
For the last four school years	0 (0%)	1 (2.5%)	4 (10%)

Table 38: Pearson Chi-square for Frequency of Pantry Use and K10 Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	6.239	10	0.795
Likelihood Ratio	6.770	10	0.747
Linear-by-Linear Association	0.779	1	0.377
N of valid Cases	40		

Notes: According to the p value from this test the differences between Frequency of Food Pantry Use is not significant enough to explore the potential trends of K10 scores.

Table 39: Pearson Chi-square for Length of Pantry Use and K10 Status

	value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	10.116	8	0.257
Likelihood Ratio	11.722	8	0.164
Linear-by-Linear Association	0.882	1	0.348
N of valid Cases	40		

Notes: According to the p value from this test the differences between length of use of the food pantry is not significant enough to explore the potential trends of K10 scores.

Table 40 shows the calculated K10 scores based on the food security status. Similarly, those that were screened, as having no stress, were mainly food secure (n=13, 32.5%). However, the number of students who were food insecure and had no stress remained high (n= 9, 22.5%). The food security categories were compared to the K10 scores using a Pearson chi-square test. The p-value resulting from analyzing K10 scores was 0.122 (Table 28). This result suggests that the differences are not significant enough to explore the potential trends of the food security status and so no more tests were conducted however future research, with a higher number of participants, should be conducted to explore this further.

Table 40: Food Security Status and K10 Results.

K10 results	Food secure	Food insecure
No stress	13 (32.5%)	9 (22.5%)
Moderate stress	6 (15%)	8 (20%)
High stress	4 (10%)	0 (0%)

Table 41: Pearson Chi-square for K10 Scores and Food Security Status

	value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	4.208	2	.122
Likelihood Ratio	5.660	2	.059
Linear-by-Linear Association	406	1	.524
N of valid Cases	40		

Notes: According to the p value from this test the differences between K10 scores is not significant enough to explore the potential trends of food insecurity scores.

Student's Stress and Anxiety

Although the results found in this study were not significant, prior research shows that being food insecure can have a negative effect on a person's mental health. Additionally, many students did report on the survey that the food pantry helped with their stress and anxiety. Thus, I decided to continue exploring the impact that the food pantry had. During an interview with a food bank staff member, I asked for his opinion on if the food pantry helps students with their stress and anxiety levels, his response was adamant that it did.

> Absolutely. I mean one of the huge reasons that I'm involved in an organization that supplies food is because I feel so strongly about how we can handle whatever comes at us in life as long as we get some sleep and eat some food, you know, to me those are like two such huge parts of being able to deal with what comes at you in your life. But when you're tired and hungry and you know you don't have those basic needs met, that's when you can't, you know, you can't deal with this stress, you can't deal with the anxiety. And then when you have a hard time dealing with something and you get anxiety about it and then it just sort of starts ballooning from there. So being able to supply students with food I feel like that directly correlates to them being able to do better in school, be under less stress from from home, you know, less anxiety and all of those things are going to sort of add up to them just doing better in their lives and being more productive or being happier and being able to do what they want to do without being worried about things that they shouldn't have to worry about.

Tables 42 and 43 show a breakdown on how students answered whether the food pantry helped in their management of stress or anxiety, based on their food security status. Although most of the students were calculated to be food secure, those were also the students who most reported that the food pantry did help them with their stress (n= 17, 42.5%) and anxiety (n=16, 40%). When asked about how the pantry helps with anxiety one student explained that having food available at the pantry "takes the pressure off [students] or their parents to get food." However the p values from analyzing the associations between food insecurity and the management of stress (p=0.853) and the management of anxiety (p=0.481) suggested that the differences were not significant (tables 43, 44).

Table 42: Food Security Status and Management of Stress and Anxiety

Has the food pantry helped manage stress around food	**Food secure**	**Food insecure**
Yes	17 (42.5%)	13 (32.5%)
No	6 (15%)	4 (10%)
Has the food pantry helped manage anxiety around food	**Food secure**	**Food insecure**
Yes	16 (40 %)	10 (25%)
No	7 (17.5%)	7 (17.5%)

Table 43: Pearson Chi-square for Anxiety and Food Security Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	0.496	1	0.481
Likelihood Ratio	0.494	1	0.482
Linear-by-Linear Association	0.483	1	0.0487
N of valid Cases	40		

Notes: According to the p value from this test the differences between the answer to if the food pantry helps with anxiety is not significant enough to explore the potential trends of food insecurity scores.

Table 44: Pearson Chi-square for Stress and Food Security Status

	value	**df**	**Asymptotic Significance (2-sided)**
Pearson Chi-Square	0.034	1	0.853
Likelihood Ratio	0.034	1	0.853
Linear-by-Linear Association	0.033	1	0.855
N of valid Cases	40		

Notes: According to the p value from this test the differences between the answer to if the food pantry helps with stress is not significant enough to explore the potential trends of food insecurity scores.

The day before one of the school breaks, I observed that the food pantry was especially hectic. There were some kids who were taking huge amounts of food as though they were stocking up it- seemed excessive to me. There were some students who put multiple bags on the floor that were filled to the brim and people were tripping over them. I had a conversation with one of the food pantry coordinators about this and she explained that a lot of the families were stressed about the food costs being at an all-time high, they remembered how inaccessible food

was during COVID and now with inflation everything seemed to be repeating. During a different interview, one of the adults explained that this was nothing new and that stress due to a shortage of food always occurred around holidays.

> ...it's especially evident during exam time and the prep for a holiday or a vacation or a break. When they kind of freak out that they ask, well, will the pantry only be opened on Friday? What if I don't have an exam on Friday, I'm not gonna be here. Can I come get food another time? And it's almost like they know it's going to cause them stress to go on like a three day weekend or a winter break without food you know and yeah, it's you can definitely see [stress] in them.

Contribution to Family's Food Budget

The food bank staff shared with me that early on in the development of their child based hunger programs they learned that even though their programs may be meant for a child, the groceries that were taken home are shared among the whole family.

> The focus is on the child because it's a child hunger program, that makes sense, right? But when you're working with children, you've got to remember you know you've got a hungry child, who's in a hungry family, who's in a hungry community, right? And so having the school pantry really allows us to support that child best by supporting their whole family and giving them the opportunity to cook meals together and sit down and eat dinner together every night.

Research shows that a common coping mechanism for an older child is to go hungry so that their younger sibling can eat (Eicher-Miller & Zhao, 2018; Mmari et al., 2019; Popkin, 2016; Waxman et al., 2015). This is similar to the child protection hypothesis that Mmari et al. discusses in their research, which is when parents sacrifice food to provide for their children when resources are low (2019). Adolescents are better able to obtain food outside of the household than children and food costs for them are significantly higher than children which could be why they choose to go without so that their younger siblings are better protected from food insecurity than their older siblings (Moffitt & Ribar, 2018; Eicher-Miller & Zhao, 2018).

Although adolescents may get a job as a way to gain financial independence, occasionally parents who are struggling economically may put pressure on their children to take on some of

the economic responsibility (Waxman, 2016). Thus, another coping strategy is for adolescents to get a job so that they can generate income that can be put into the household's food budget. (Mmari et al., 2019; Popkin, 2016). Although this strategy may help with the household's income and food security status it may disrupt their childhood experiences and with less time to dedicate to school work, taking on the responsibility of a job could negatively impact their grades or even cause them to drop out of school (Mmari et al., 2019; Popkin, 2016; Waxman et al., 2015).

For high school students specifically, this program allowed them to contribute to their family by taking the strain off their parents to provide food without them having to rely on these strategies.

> You know that there's a lot of research about like kids dropping out of school because families are hungry, so they go and get a job right? But I think you know. Being in high school isn't easy and like everything feels like the end of the world sometimes, right? Uh, but I think having you know, access to you know [the food pantry] it's something that relieves stress because you know you always have access to it. You don't have to worry about what's gonna happen over the weekend. You don't have to worry about what's going to get home right. Like you know, even the younger kids like they know something's happening. The high schoolers know exactly what's happening, right? And so I think it does relieve the stress by allowing them to have the opportunity to come in and feel like they're contributing to their family too, right? They know their parents are stressed. And so I would say that it's a stress reliever.

Multiple students expressed to me how their households completed their grocery shopping after they found out what the food pantry did not have. One student explained that "… [the food pantry] has a lot though because my mom when I tell her what they have she'll say okay I don't need to go buy corn or I don't need to buy macaroni because there's a lot of food here." Another student communicated a similar sentiment stating that "If [the meal you're cooking] was something simple like you don't need to go to the store because the pantry has everything". Some students explained that they did not utilize the food pantry every week but were thankful when occasions arose where their family did need the food. For example, if a parent lost a source

of income or if there were other financial or time constraints affecting the family, as was the case with one student I interviewed.

> "Yes I know it helped me a lot because when my mom um like a couple of years ago my grandma went into a nursing home with dementia it was sometime hard for my mom to get food and sometimes I would ask you know Ms. [name] to open the food pantry after school and I'd go right in there and it'd literally have almost everything that I would eat at home. I'd just be like 'hey mom you don't have to go to the store you don't have to do this I can get it from the pantry' …And everything worked out perfectly cause she didn't have to run to the store I brought it home, it helps her out being in the cabinet."

A Culture of Dependence

While collecting data for this project, I was asked if I believed that the food pantry created a culture of dependence among the students and if I was concerned about enabling the students and how once seniors were going to graduate and lose a source of food. This was something that I had not considered before and remembered that during one of my interviews a student did mention that some people did rely on the pantry every week and when COVID caused it to shut down it created a new stressor. Worried, I asked the adults whom I interviewed what they thought about this situation and their view was the opposite. One of them assured me that none of their students were solely dependent on the food pantry. "I think it supplements. You know with whatever other services are getting". Or as another student mentioned before, not everyone used the food pantry all of the time. It was there when situations arose that were out of their control and they needed the food until those situations were resolved. One food pantry coordinator thought that it did not matter if they were depending on the food pantry because the students were still going to school and that the goal was to get them to graduation, once they graduated they would have more financial control and not have to rely on such programs.

> ...right now they do not have control of their household budget, right? Whereas as an adult and once they leave school they do. So, they're getting an education and are given the skills to give them more opportunities.

A final viewpoint was that the food pantry served as a teaching example. It demonstrates to the students that there exist different types of resources and programs for those that need help and that if in such a situation, seniors should look at what resources were available out in the community for them to utilize after graduation. Or better yet, as one of the volunteers expressed, that the students who use the food pantry are well equipped to implement such a program at a different location.

> … so even if kids here leave and they're like oh I don't have access anymore how do we know that's not the kid that needs to implement it at their school, their life, their job whatever they decide to do? So, I don't think you're setting them up for failure, I think it's good.

Considering how much food is available, there is a question of why students need food pantries are needed in the first place. As one of the food pantry coordinators explained, the adolescents who utilized the pantries do not have control over their household budget. Although they could get a job and contribute, as was discussed in the previous section, what foods are available to them largely depends on what their caregivers buy or what is given to them at school. If they do have funds to purchase groceries or meals than they are restricted to what foods are located at the stores they have access to. Adolescents living in food desserts or food mirages are met with various structural issues that restrict their food purchases even more, as discussed in chapter two and later in chapter eight.

Summary

P-values from separate chi-square tests used to assess associations between the K10 scores and schools (p=0.464), and grade levels (0.81), frequency of food pantry use (p=0.795), and length of time using the food pantry was (p=0.257). These results suggest that the differences were not significant enough to explore the potential trends of the K10 scores among these items. The p-value resulting from analyzing gender (0.024) was significant, warranting

further testing through a t-test which showed that there was a significant difference in K10 scores between males (M=0.3500, SD=0.67082) and females (M=0.7500, SD=0.14281); t(38)=-1.931, p=.030.

Students who screened as having no stress were mainly food secure (n=13, 32.5%) and the number of students who were food insecure and had no stress remained high (n= 9, 22.5%). The p-value resulting from analyzing K10 scores was 0.122 which suggests that the differences are not significant enough to explore the potential trends of the food security status

Conclusion

Although most of the results found in this study were not significant, the sample size was small (n=40) and prior research shows that being food insecure can have a negative effect on a person's mental health. Additionally, many students did report that the food pantry helped with their stress and anxiety due to it allowing them to contribute to their household's food budget in a simple way even if they did not utilize it every week the knowledge that it was there provided peace of mind. These findings make it seem as though the food pantry does have an impact on food insecurity status and mental health. It is then suggested that more research be done with a larger sample size to study the association between food pantries and food insecurity status and mental health in the future.

CHAPTER EIGHT:

DISCUSSION

It was hypothesized at the beginning of this study that with the introduction of the food pantries there would be an increase in food security among the students, a decrease in stigma related to food insecurity, and an improvement of perceived stress and anxiety among the students, in relation to food. Based on the participant observations and the results produced by the survey and in-depth interviews it seems as though these hypotheses were correct.

In the United States 10.2 percent of households are classified of being food insecure, of those with children under the age of 18 this percentage goes up to 12.5 percent (Coleman-Jensen et al., 2022). When examining the state of Florida, 10.6 percent of residents are found to be food insecure and when examining Pinellas County overall the percentage is 12.2 percent (Feeding America, 2020). When comparing these percentages to this study, the number of adolescents who screened as food insecure in this study (45%) is high. Research on food insecurity among adolescents specifically is extremely limited, however when compared to what is available this number remains high with only 10.8% of adolescents screening as food insecure (Brown et al., 2022)., This is similar to the high percentage of college students also face food security (39%) (Rowan & Bailie, 2021). This calls into question why are students specifically facing such high rates of food insecurity compared to the general population. One possible explanation could be because they are not employed full-time due to their school schedule and so they lack funds to purchase food. Another, as mentioned various times throughout this dissertation could be based

on where they live since many college campuses are also located in food deserts (Mattoon, 2021). As for the students who were categorized as being food secure, since these students have the food pantry available to them and their families once a week throughout the school year they do not lack consistent access to enough food for an active and healthy life, which according to the USDA is the formal definition for food insecurity. Unfortunately, I cannot say that the introduction of the food pantry was what caused an increase in food security since I did not measure their food security before the pantry was implemented on campus or before their first visit. Utilizing a dose-response methodology as such would be useful in future studies.

Stigma from use of the food pantry was non-existent at the participating schools. While the adults admitted to being concerned about the possibility and acknowledged that food pantries at other schools did deal with this issue, the students involved did not seem to even consider the possibility that they or their peers could be teased or bullied for using the food pantry. This goes against what is found in most of the literature regarding food assistance programs for adolescents. It has been reported that stigma deters participation, especially in high schools (Mirtcheva & Powell, 2009; Marcus & Yewell, 2022; Fitzpatrick, 2011; Salerno & Arena, 2020). Neff (2019) even suggests that student volunteers not run the school food pantry, in an effort to deter stigma that may be perceived by their peers. Which is the opposite of what was found in this study which showed that allowing the students to be involved in the food pantry gives them greater autonomy, increases excitement over what foods are available at the pantry, and creates a more inviting atmosphere for the students that utilize the services. This is similar to what students in research completed by Salerno & Arena (2020) suggested as a way to address the stigma, which was to create teen advisory groups to assist with designing the program. Educating and training school personnel on the issue of stigma prior to implementing a food pantry at a

school was suggested by Frongillo (2013), with a focus on paying systematic attention to why students were food insecure and assessing holistic responses.

Research by Burris et al., 2020b stated that teenagers sometimes did not participate in these programs because they felt that adults or other members of the community would view them negatively, and blame them for their circumstances. It is feasible that the participating schools in this study do not face this issue or felt stigmatized because the majority of the schools' population is low-income and could benefit from using such a resource. Such an occurrence was reported in a study completed by Waxman et al. where such a large amount of families in a community utilized SNAP that most adolescents saw it as a normalized, widespread experience (2015). With such a high number of students screening as food insecure and with so many qualifying for free and reduced lunch this possibility is very likely. It could also be because the use of the food pantry is ingrained in the schools' culture, for the students and the adults so much so that it has been normalized. In both schools this was done intentionally, from announcing what was available at the food pantry over the afternoon announcements to making sure that the food pantry was located in a well viewed area the food pantry coordinators all reported that they wanted to make sure that the food pantry was inviting to all and not a secretive stigmatizing experience. Another explanation would be that there is a sense of community among the students who visit the food pantry. When talking about the food pantry and how students refer their friends if they think they need it one of the adults whom I interviewed stated, "our kids take care of each other". A similar sentiment can be found throughout the literature, mainly with adult recipients. Examples that are given on how this sense of community is shown are when recipients sometime pick up food for others, share food, or give away items to others (Clealand,

2018; Chahabra et al., 2014). These same examples are ones that I witnessed during my observations.

Another explanation could be that the attitude towards food insecurity could be shifting. A recent study has found that food insecure students are no longer embarrassed to use the food pantries that are available to them (Peterson & Freidus, 2022). This could be because more people are now accessing these programs, especially after the food shortages caused by COVID-19. Participants in research conducted by Peterson & Freidus believe that social media has also contributed to normalizing food insecurity among students, dissolving negative attitudes and stereotypes that may have contributed to stigma in the past (2022).

The chi-square tests that were used to assess associations between the K10 scores schools, grade levels, frequency of food pantry use, and length of time using the food pantry were not significant enough to explore the potential trends of the K10 scores among these demographics. However, the resulting p-value from the chi-square and t-test from analyzing K10 scores and gender was significant, which corresponds with the literature. Becker et al. has found that women experience depression at twice the rate of men and has proposed that the underlying factor is that females have a higher sensitivity to stress (2007). As discussed in Chapter five, although stress is a necessary response to certain situations, chronic stress can be harmful. Studies show that higher stress levels in adolescence are associated with inflammation, asthma, and immunosuppression (Bahreinian et al., 2013; Gross, 2008; Augustine et al., 2016; Burris & Wiley, 2021). This is why Bourke & Neigh have proposed that for females especially, stress felt during adolescence may have persistent effects into adulthood and should be addressed if occurring chronically (2011).

It has also been suggested that there is an association between food insecurity and increased psychological distress among females (Ciciurkaite & Brown (2017). Although the differences between the two genders in this study are small and the chi-square tests that were used to assess associations were not significant between gender and raw food security scores (p=0.122) or the food security categories (0.110), the literature shows that there is a gendered difference showing that females are more likely to experience food insecurity and that this may generate health disparities (Hadley et al., 2008; Alaimo et al., 2002; Jyoti, Frongillo, & Jones, 2005). Hadley and colleagues argue that adolescent boys are more likely to be employed and that may contribute to their food security status but this explanation was not supported by their data.

In addition to stress, this study examined anxiety management with the food pantry. Burris & Wiley discuss how when someone screens as marginally food secure, they most commonly answer yes to feeling anxious that food will run out before a household has money to buy more (2021). Although the chi-square results were not significant when comparing food secure categories to the K10 scores, there did seem to be an improvement of stress and anxiety among students who used the food pantry. According to many of the survey answers, the food pantry did help with stress and anxiety management. This was confirmed during the in-depth interviews where the adults depicted ways that they could see this occurring among students and the student interviews where students described personal experiences on when the school's food pantry helped them.

Lack of Significance

Although it is unfortunate that most of the quantitative results in this study are not significant, it was expected due to the small sample size. Finding statistically significant findings with small samples is very difficult since they decrease statistical power and are not robust

enough to use for measuring categorical and ordinal outcomes (Heidel, 2023; Hoem, 2008). While having statistically significant findings can be valuable, simply classifying data as "significant" and "not significant" does not convey useful information. (Hoem, 2008). Additionally, finding non-significant differences with small sample sizes can lead to committing Type II errors which occur when failure to reject a null hypothesis when it is false (Heidel, 2023). Therefore, it was helpful that this study included qualitative data to supplement and help answer the research questions.

Another factor that could have affected the data was that at the time of data collection school A's food pantry had only been opened for two years compared to school B which had been opened for four years. While it is unlikely that the difference in years could have affected the statistically significance of factors such as gender or K10 scores, the length of time someone had been visiting the school food pantry could have been influenced. So could have the answer to how many times they visited the school food pantry during the school year or the grade levels of who is visiting the pantry.

Surrounding Community

Stapleton & Cole comment on how a school could also be considered a food desert, which is why educators and school decision makers should take the type of food that they offer to their students through the lunch program seriously (2018). Although efforts to make adjustments to the school lunches have occurred, such efforts are mainly driven by individuals who are not educators and are not from the school (Stapleton & Cole, 2018). Having a food pantry on a high school campus can be beneficial, especially since it addresses the issue of accessibility by being located in an area where adolescents already spend a large amount of time at. However, in order for it to be successful the pantries have the support of the school.

According to Stapleton & Cole teachers especially are influential to their students. This was shown through these survey results where, when asked how did students learn about the school food pantry, the majority answered that a teacher told them (n=27, 67.5%). The positive influence of teachers was echoed in the student interviews while the support of the administration staff was mentioned among the adults who were interviewed, showing that school personnel does have an effect at these schools.

Many interviews referenced the school as being part of a community. One of the food bank staff members during an interview talked specifically about how "schools are often the center of the community for a lot of places." Although not a part of my original research question, this comment made me curious about the surrounding space around the school. The USDA defines food deserts as "low-income census tracts with low access to healthy food, meaning residence more than one mile away from a grocery store or supermarket in urban areas" (Liu, Han, & Cohen, 2015). When utilizing the USDA's food access research atlas I learned that both schools were located in areas classified as food deserts (USDA ERS, 2022). I knew that there was a possibility that some of these students could live outside of the surrounding area but I wondered if going to school in a food desert affected them in any way. The answer given to me by one of the pantry coordinators was unexpected and not a situation that could be easily fixed. She explained that lunchtime at these schools occurred ridiculously early, around 10am, and when school was dismissed around 2pm many students were hungry again. Previous studies have shown that students who have early lunch periods tend to eat less making them much more likely to be hungry by the time school gets out (Sparks, 2019; Jung, 2022). As Jung (2022) points put, while this is problematic for all students, it is especially critical for student from urban and low-income communities who obtain most of their daily caloric intake through school meals.

Unfortunately for the students attending the schools I was studying, unless they had a car, the students who stayed after school for tutoring, athletic sports, or another extracurricular activity would often go hungry since they could not leave campus to get a meal. Some of the students I spoke with explained that they would keep snacks like granola bars or bananas in their backpacks to hold them over until dinner. On occasion, the food pantry coordinator would open the food pantry for them to get a quick snack but what they really needed, and wanted, was a meal. Especially since, for the athletes specifically on game days, some of them did not get home until 9pm. The possibility of including frozen meals in the school's pantry that could be microwaved or partnering with a food truck that could sell food in the school's parking lot was discussed but both options were expensive, logistically difficult, and could not be implemented long-term. Although the information on the food access research atlas was from 2019, I checked if any other Pinellas County public high schools were also located in food deserts and learned that over half of them were. Since they all follow the same lunch schedule this calls into question if their students had the same issues and if they had no school food pantry on campus, what were they doing for food afterschool?

The sense of community among food pantry recipients can be found throughout the literature with many explaining that they frequently picked up food for others, were willing to share food, or would give away items that they knew they would not use to those who would (Clealand, 2018; Chahabra et al., 2014). This sort of comradery was also apparent at the school's food pantries with students reporting that they would invite their friends to visit the food pantries and come with them. One of the school pantry coordinators explained that sometimes the students would feel like such an invitation would be better received if it came from an adult, so they would anonymously refer others. Like one student said: "…I I have a friend and they don't

have any food at home. I think maybe they could, you know, can you talk to them and see if they could go?". Which was supported by the students reporting in their interviews that they would invite others to visit the food pantry, or if they knew others who did not attend their school they would take food or share their foods with them, showcasing how this food was feeding many others outside of the community. One student mentioned a family member she shared the food with: "Yeah…we give it to my uncle and stuff like that we share a lot when we get things". A different student referenced her friend:

> "Like I know um a friend she don't go here but she go to [school] and I know sometime she go home and she just go straight to sleep and not eat…. Sometimes when I go over to her house I bring her food."

Some students even advocated opening the food pantry up to the community so that others could benefit. As one stated: " I think if we opened it up to the community every once in a while that would probably be good." As one student didn't limit opening up the pantry to any one group, he simply said: "I think the whole world could use some help with food."

Racial and Ethnicity Factors

In the United States there is an inequitable distribution of food insecurity, which Whittle et al. claims, can be addressed by using the concept of structural violence to find out what structures are involved and how they are systematically translated into food insecurity (2015). There are racial differences when examining socioeconomic status, which is also linked to food insecurity status. Although this study did not investigate racial and ethnicity factors and their influence on food insecurity among teenagers, it is important to recognize that issues of power and structural violence are commonly linked to race and ethnicity.

Black and Latino headed households are twice as likely to be food insecure when compared to their white counterparts (Schanzenbach & Pitts, 2020). When examining the

demographics of the two schools 58% of school A and 53% of school B qualified for the free/reduced lunch program; also 72% of the student body in school A and 73% of school B consisted of racial minorities, which is higher than Florida's average of 64% (Public School Review, 2020). Kim et al. discusses how the intersectional effects of race and ethnicity also influence health outcomes, with minorities suffering from more negative outcomes (2021). Racial disparities in income and wealth could explain the different rates of food insecurity but Bowen, Elliott, & Hardison-Moody (2021) have also found that racial minorities are more likely to live in states that have stricter restrictions on social assistance programs such as food assistance programs. States where severe cuts to welfare have been made and where Medicaid has not been expanded, which further contributes to the problem.

The Impact of COVID-19

COVID-19 was a reoccurring theme during the interviews, mainly being referred to as a barrier for accessing food from the food pantry due to school shutdowns or online learning. COVID-19 acted as a barrier for food banks and pantries nationwide. As mentioned previously, food security has four different dimensions: availability, accessibility, utilization, and stability. With so many people trying to utilize food assistance services of there was an inability to access a higher amount of food due to rationing or decreased availability for food banks and pantries. There was also decrease accessibility of food due to high food costs and shortages of products. Utilization and stability were also effected with widespread changes in food purchasing behavior and questioning of what will happen if a similar event were to occur again (Butler & Barrientos, 2020; Bradley, 2021; Niles et al., 2020).

Blending of Resources

As previously discussed, there are differing opinions on who is to blame for the existence of food insecurity and who is responsible for providing resources to address the issue. When cutbacks were given to the Food Stamps Program, congressional legislation allowed federal owned surplus food to be distributed to soup kitchens and other food relief organizations (Alaimo, 2013). The USDA has also provided funding for competitive grants program for nonprofits to start up or move forward with community-based projects (Alaimo, 2013). While the government does collect information about food insecurity rates, they do not have a legal requirement to address the issue or create an action plan on how to reduce the rates (Fisher, 2017). How to treat hunger and who is responsible for doing so is determined by social and political conditions and there can sometimes be a "blending" of who resources that helps assist (Alaimo, 2013; Scott-Smith, 2020). Throughout history, it has been religious or humanitarian organizations that have served as emergency food providers. How they have done so has changed with the times, for example, about two hundred years ago setting up a local soup kitchen was the dominant response for starvation (Scott-Smith, 2020). While soup kitchens still serve food insecure participants, they are much less popular and individualized, medicalized approaches are now being used (Scott-Smith, 2020). It is also now not just religious organizations that are providing relief, but hospitals, schools, and even grocery store chains that are working to address the issue and federal funding is still available. Just as the way to address food insecurity has evolved, it seems as though the responsibility of who is doing so has also evolved and will continue to do so based on the social and political conditions of the time.

Non-Food Items

Offering non-food items was considered a facilitator for food pantry use. The benefit of offering more than just food at a food pantry is continuously brought up throughout the literature. Fiese, Koester, & Waxman (2014) state that all of the participants in their study identified a need for non-food household products. Some items were considered as necessary for survival, the most regularly identified were: soap, toilet paper, personal hygiene products, and oral healthcare products. Incidentally, these items were the most commonly seen at the school's food pantry for this study. Other items such as laundry soap, paper plates, dish soap, and household cleaning supplies, were identified by participants in Fiese and colleagues' study as necessary but not for survival. These types of items were not seen at the food pantry, nor were they brought up during the student or adult interviews.

Theoretical Underpinnings

When developing the research instruments, all three theories (structural violence, biopower, and SEM) were useful in ensuring that enough data would be collected to answer the two research questions. However, as data collection began and themes began to emerge it became obvious that certain theories were able to fit better for each question. Structural violence continued to be embedded in all parts of this study. Both of biopower's components (anatomo-politics of the human body and biopolitics) were also used to answer both research questions. For the first question: what social factors act as barriers and facilitators for food pantry use for a high school student population? The SEM factors that were better able to answer the questions were: individual, interpersonal, organizational, and policy. For the second question: What is the impact of having access to food on campus on student's stress and anxiety? The SEM factors that were

used were: individual, interpersonal, and community. Figures 15 and 16 provide a modified visual on how the theories were used to answer each research question.

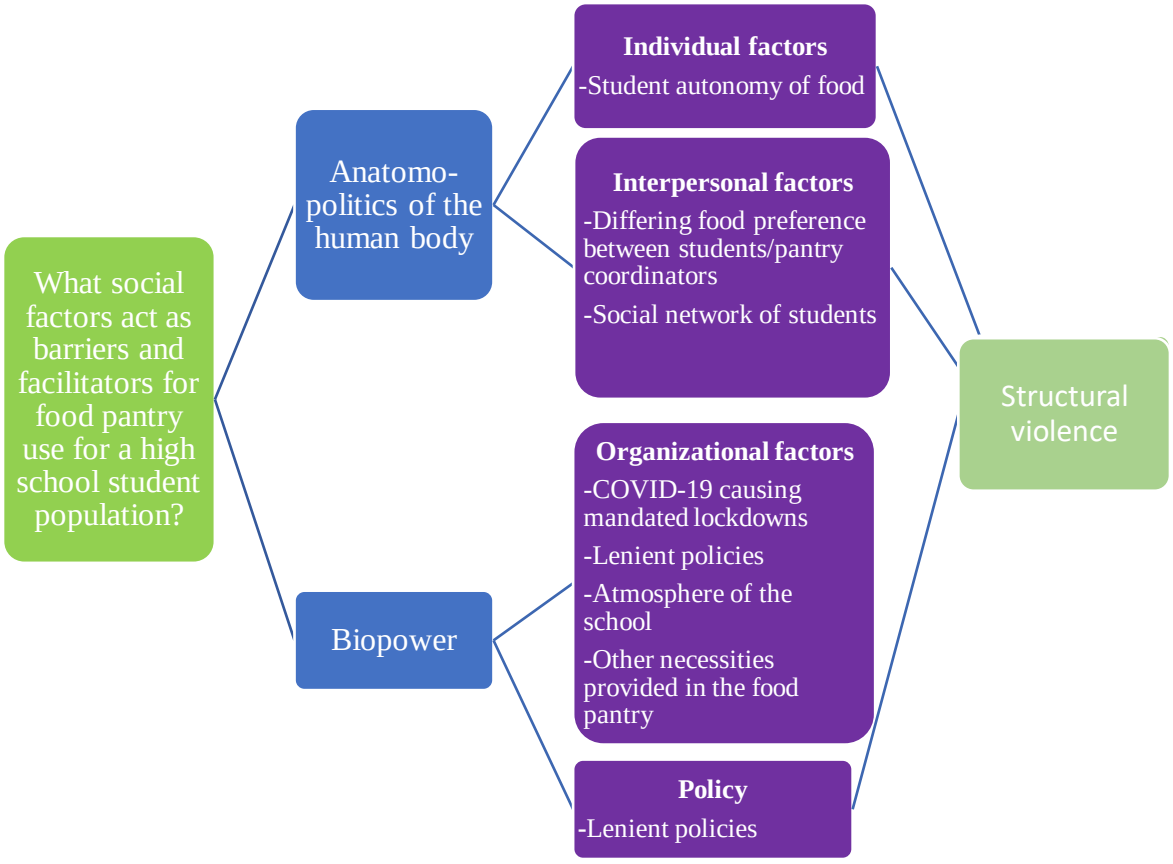

Figure 16: Theoretical Frameworks Connections to Research Question One

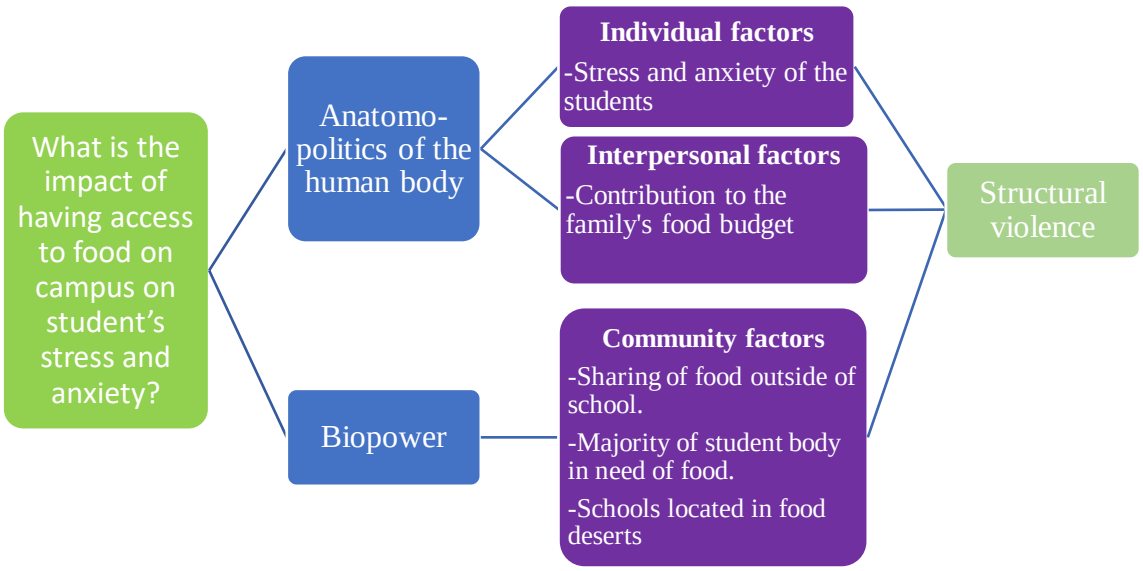

Figure 17: Theoretical Frameworks Connections to Research Question Two

This study uniquely uses theory to demonstrate the interconnectedness that different factors can have on access to food, especially the transmission of power. The information gathered from this study can be applied to existing food pantry programs to improve the recipients' experience. Additionally, this research can help expose the barriers that exist for achieving food security as a teenager. Although this study focused on food pantries the same barriers and solutions that were discussed (stigma, food preferences, want of autonomy) can be applied to other food relief programs. It also shows how the shifting of power can occur at

different points of the emergency food system and how these dynamics can deter people from participating in any form of food relief.

Additionally, this study gives recognition of how teenagers are affected by food insecurity even though it is under researched. Currently, there is a worldwide food crisis, rising inflation, and economic instability and the younger generation are the ones whose futures will be affected. Hawkes et al. discuss a survey conducted with the younger generation and across the globe universal access to nutritious food was considered a top priority (2022). These findings can help enhance the dialogue among decision makers for the schools on how to increase food security for their students.

Positionality of Author

In his article Rosaldo describes how the observations that occur during fieldwork resembles Foucault's description of the surveillance of subjects (1986). This comparison made me uneasy because I did not want my participants to feel as though they were under a microscope and that I had some sort of power over them. But the truth is that the field of anthropology deals with unequal relations where the researcher's position can influence the establishment of relationships of their participants (Farmer, 1999; Augusto & Hilário, 2019; Tyler, 1986). And, as Emerson, Fretz, & Shaw point out; unfortunately no field research can ever be completely neutral (1995). The students that I worked with for this project were considered a vulnerable population, because some were food insecure and because, even though most of them were eighteen, they were still considered children. Although I am considered to be young and have worked in food insecurity environments for the majority of my working life, I was over a decade older than most of these students and have never personally faced food insecurity and its effects. I also do not have a personal connection to the area that these students live in and have

never attended their schools prior to data collection, so to them I was an outsider. With these limitations in mind, during my time at the schools' food pantries I worked to build rapport with these students, sometimes by simply being present on Fridays to help them navigate the food pantry. I also tried to be sensitive to the ways that my position affected my interactions with them. I relied heavily on the school pantry coordinators who had established relationships with the students to introduce me and recruit them for my study. I considered them the true experts in this field. As Augusto & Hilário (2019) suggested, I kept a field journal where I reflected on my observations and experiences, critically unpacking my assumptions and expectations, and wrote down any questions that I wanted to explore later on. I discussed these reflections with the food pantry coordinators and some of the students whom I interviewed. These conversations, although unscripted and not scheduled, provided some of the best insights into the experiences felt at a high school food pantry and gave me the opportunities to ask questions that may have remained unanswered if I had stuck to only following what my interview guide said.

Dissemination of Results

Food choice is a complex process because it is deeply embedded in culture, is influenced by many factors internal and external to the person, and it carries with it many different meanings. At the same time, the food choices people make have health and other consequences. Food insecurity is another complex issue that is influenced by many different factors and can also affect individuals and communities in a number of unhealthy ways. While nutrition and food insecurity is an area of interest shared among public health professionals, seeing the issue from an anthropological lens provides a comparative view (Dufour & Piperata, 2018). In addition to being part of a doctoral dissertation, this research will be further disseminated through peer review articles to journals such as the *Ecology of Food and Nutrition, Appetite,* or *Medical*

Anthropology Quarterly. Additionally, a copy of the dissertation will be provided to Johns Hopkins All Children's Hospital. An executive summary will be provided to all of the school sites involved, with the option of obtaining the full report if requested.

Impact of the Research

Anthropologists are well trained to consider issues of food insecurity and hunger. They contribute to the understanding of how values influence food consumption and contribute to understandings of culturally appropriate coping strategies to acquire and manage foods (Arriola, 2015). Results from this study will provide the staff at the pantry recommendations on how to mitigate the stigma among the students who visit the food pantries. Potentially, implementation of these recommendations could lead to a change in the high schools' culture which could lead to the removal of stigma associated with visiting a high school pantry altogether. Results from this study will be useful in contributing to knowledge about food insecurity among adolescents, in the fields of public health and in anthropology. By further disseminating through peer review articles to journals this dissertation will add to the anthropological discussion of teenage food insecurity, the gaps of food assistance programs, and other services with the goal of alleviating food insecurity and improving the health and wellbeing of adolescents.

Future Research

Although this study was beneficial in contributing to the literature additional research should be completed on food insecurity among adolescents. Some recommendations include expanding the study to include all adolescents in the participating schools instead of limiting it to only those who use the food pantry. Such a study would provide better insight on if the food pantry has an effect on food security and mental health among those who use the food pantry compared to those who do not.

Unfortunately, this study was not able to measure food insecurity at different points in time. Future research should be done measuring food insecurity among students when a food pantry first opens at a school and then utilize a dose-response methodology to see if the number of times a student uses the food pantry has an effect, or if food insecurity improves at the school after the food pantry has been open for a certain amount of time. Since this study was done on already established food pantries a conclusion cannot be made on whether the food pantry caused an increase in food security at the school, which is a limitation when measuring impact on the school.

CHAPTER NINE:

CONCLUSION

This study aimed at making a contribution to the literature on food insecurity by conducting exploratory research to assess how high school students in Pinellas County, Florida perceive the use of a food pantry on campus. Utilizing a survey, participant observations, and in-depth interviews as methods the following two research questions were addressed:

- What social factors act as barriers and facilitators for food pantry use for a high school student population?
- What is the impact of having access to food on campus on student's stress and anxiety?

The social factors that seemed to act as barriers at these two high schools were COVID-19 and when student food preferences differed from the adults. Facilitators included lenient policies for the students and the food pantry coordinators to run the food pantry, without having to worry about red tape. The overall atmosphere of the school also acted as a facilitator, with the use of the food pantry being seen as a normal resource accessible to students or adults. Providing other necessary items and involving the students in decision making also contributed to the pantry's success. Overall, having access to food on the school's campus seemed to have a positive effect on the students' stress and anxiety level. Although, based on the chi-square the results were not statistically significant and so such a claim cannot be made using the K10

scores, the responses to the questions regarding if the food pantry helped with the management of stress or anxiety. This could be because the number of responses was too low. Many students did report that the food pantry helped, with personal experiences shared during interviews and other observations acting as support.

Recommendations

Research will be further disseminated through peer review articles to journals however; the findings of this study will not only be for academic advancement. As additional school food pantries continue to start up in high school settings, results should be utilized for public health professionals and school personnel to develop evidence-based approaches for food-security based interventions. The following recommendations should be kept in mind while planning such an intervention.

1. Students should be included in all decision making; whether by offering volunteer hours, offering it as a class project, or making it part of a school club. Realistically, an adult does need to be in charge of the food pantry while at a school but students are still instrumental. They can provide ideas on what foods should be offered, how the pantry should be set up, and can help run the pantry. In return, students can practice inventory management, problem solving and organizational skills- all of which can be listed on a resume.
2. The food pantry should be integrated into the school's culture. A school's food pantry should not be hidden. Ideally, it would have a dedicated space in the school, which is easily accessible and warm and welcoming to all. Including pantry information on the school's announcements and allowing adult staff to also participate in the distribution of food are simple examples that could help with this goal.

3. The school's food pantry should follow a client choice model. Although "healthy items" such as produce and lean meats should be encouraged when possible, students should be allowed to choose what groceries they take home based on their diet, culture, and ability to cook. The amount of food items allowed can be restricted, based on the discretion of the food pantry coordinator.
4. Other basic necessities should be available at the food pantry. If a family is having a hard time affording food it can be assumed that they are struggling with other purchases. Offering other toiletries such as deodorant, menstrual pads, toilet paper, toothbrushes, and toothpaste at a food pantry can be very beneficial.

Some suggestions on how to operationalize these recommendations would be offer volunteering opportunities to the student body, whether for volunteer hours, as part of the student government association (SGA), or as a separate student club. School staff should ask for these students' opinion on how to market the food pantry, how to set it up, what foods should be offered, etc. and in return students should actively participate in the logistics and operationalization of the food pantry. A mentorship program could also be developed where upperclassmen that have been actively participating at the food pantry throughout the years could train the lowerclassmen, in an effort to prepare them to take over the responsibilities once they graduate. As for offering other basic necessities in the food pantry asking for donations or hosting a "personal care" drive instead of a food drive around holiday times and from organizational partners would be a unique way to gather these supplies and they can be stored for longer periods of time than food due to longer or lack of expiration dates.

Like most food security programs, sustainability for these food pantries is a concern. Having a food pantry on a school's campus is beneficial because it meets students where they

are, taking away transportation and accessibility barriers. Having a local non-profit hospital as a partner, like these two food pantries have, can be helpful because it makes the program eligible for certain grants and provides a larger net of potential volunteers and donors to help. Although, as a children's hospital there is a focus on providing funding to programs that help ill children, as a non-profit organization that is viewed as a pillar in the community, there is also a focus on providing primary prevention to the surrounding community. Local food banks provide much needed food in the community but having a food pantry in the school provides food to high school students specifically, which tend to be a forgotten demographic. The food contributes to a healthy lifestyle, physically but also mentally and emotionally, as this dissertation has attempted to demonstrate, making it a needed program. It would be advantageous for the high school food pantries to expand their partnerships with other organizations in order to ensure sustainability for their programs. Stores such as Publix, Wal-Mart, and Target often are willing to donate products and sometimes offer grants for food relief. Alumni from these schools could also be approached to see if they would be interested in giving back to the schools they attended in the past and these donations could be food, non-food items such as toiletries, or funds.

Concluding Thoughts

Students spend the majority of their time at schools, many calories are consumed at the school's lunchroom, and as one interviewee mentioned schools often act as the center of the community. This idea is not new and many child hunger programs exist thanks to charitable food organizations. However, many of these programs are located in elementary schools or boys and girls clubs. Facing food insecurity in high school brings its own set of unique problems but by providing food high schools are investing in students' futures. Whether that's by helping them with their academic success- because a person can simply not learn with an empty stomach,

helping with their growth and development, or providing them with the knowledge and skills to start a similar program later on in their lives.

There is a sign above my desk that states. “If we can conquer space, we can conquer childhood hunger.” -Buzz Aldrin. I have mixed feelings about that sign because after reviewing so much literature on the topic and after so many years working in this field, I believe that we will never truly get rid of hunger. As Clealand (2018) states, there are over 700 years of history showing us that food insecurity is not an issue leaving us anytime soon. But I do believe we can lessen its effects, I think that schools are an ideal place to start but not the end all be all. That being said, I do believe that providing food to students is important and that it does address hunger, just in the short term. This is beneficial and for some students, all that is needed, because after that short period of time whatever situation caused them to need food can get resolved. But structural solutions to address poverty and inequality are needed to address long-term food insecurity. The occurrence that more than half of Pinellas County Schools are located in a food desert, for example, is a large structural problem. The fact that students get so stressed out before a school holiday that they start hoarding food from the school’s food pantry, is concerning. As one of the food bank staff members mentioned, it was great that so much support was given to emergency food programs when the beginning effects of COVID-19 were felt, but where was that support before? Where is it now, two years into the pandemic?

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APPENDIX A:

IRB APPROVAL LETTER

UNIVERSITY of SOUTH FLORIDA

APPROVAL

May 21, 2021

Karen Serrano Arce

Dear Mrs. Karen Serrano Arce:

On 5/20/2021, the IRB reviewed and approved the following protocol:

Application Type:	Initial Study
IRB ID:	STUDY002525
Review Type:	Expedited 6,7
Title:	Entanglements of Teenage Food Security Within High School Pantries in Pinellas County, Florida
Funding:	None
IND, IDE, or HDE:	None
Approved Protocol and Consent(s)/Assent(s):	• CLEAN Protocol • Adult Verbal Consent Clean • Child Interview Verbal Assent Clean • Signed Parental Permission for Interviews Clean • Signed Parental Permission for Survey Clean • Student >18 Signed Consent Clean Approved study documents can be found under the 'Documents' tab in the main study workspace. Use the stamped consent found under the 'Last Finalized' column under the 'Documents' tab.

Within 30 days of the anniversary date of study approval, confirm your research is ongoing by clicking Confirm Ongoing Research in BullsIRB, or if your research is complete, submit a study closure request in BullsIRB by clicking Create Modification/CR.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Your study qualifies for a waiver of the requirements for the documentation of informed consent for the interview as outlined in the federal regulations at 45 CFR 46.117(c).

This research involving children as participants was approved under 45 CFR 46.404/21 CFR 50.51: Research not involving greater than minimal risk to children is presented.

Requirements for Assent and/or Permission by Parents or Guardians: 45 CFR 46.408/21 CFR 50.55 Permission of one parent is sufficient. Verbal assent is required of all children.

Sincerely,

Katrina Johnson
IRB Research Compliance Administrator

APPENDIX B:

SURVEY INSTRUMENT

1. What is your first name?

2. What is your last name?

3. How do you describe your gender?
   [ ] Female
   [ ] Male
   [ ] Different identity: (please state) _____
   [ ] Decline to answer

4. What school do you attend?
   [ ] School A
   [ ] School B

5. What is your current grade level?
   [ ] Freshman
   [ ] Sophomore
   [ ] Junior
   [ ] Senior

6. What is your age?
   [ ] 13
   [ ] 14
   [ ] 15
   [ ] 16
   [ ] 17
   [ ] 18

7. How did you find out about school food pantry?
   [ ] I walked by
   [ ] Friend
   [ ] Teacher
   [ ] Social Worker
   [ ] Other, please explain _____

8. How often do you visit the school food pantry, throughout the school year?
   [ ] This is my first time
   [ ] Once a week
   [ ] Every other week
   [ ] A few times a month
   [ ] Once a month
   [ ] A few times during the school year

9. During your time as a student in this school, long have you been using the school food pantry?
   [ ] This is my first time
   [ ] This is my first school year visiting the school's food pantry
   [ ] I've been visiting the school's food pantry since last school year
   [ ] I've been visiting the school's food pantry for the last two school years
   [ ] I've been visiting the school's food pantry for the last three school years
   [ ] I've been visiting the school's food pantry for the last four school years

10. Has the school food pantry helped manage your stress around food?
    [ ] Yes
    [ ] No

11. Has the school food pantry helped manage your anxiety around food?
    [ ] Yes
    [ ] No

12. In the last month, did you worry that food at home would run out before your family got money to buy more?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

13. In the last month, did the food that your family bought run out, and you didn't have money to get more?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

14. In the last month, did your meals only include a few kinds of cheap foods because your family was running out of money to buy food?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

15. In the last month, how often were you not able to eat a balanced meal because your family didn't have enough money?
    [ ] A lot

[ ] Sometimes
[ ] Never

16. In the last month, did you have to eat less because your family didn't have enough money to buy food?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

17. In the last month, has the size of your meals been cut because your family didn't have enough money for food?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

18. In the last month, did you have to skip a meal because your family didn't have enough money for food?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

19. In the last month, were you hungry but didn't eat because your family didn't have enough food?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

20. In the last month, did you not eat for a whole day because your family didn't have enough money for food?
    [ ] A lot
    [ ] Sometimes
    [ ] Never

21. During the past 30 days, how often did you feel nervous?
    [ ] All of the time
    [ ] Most of the time
    [ ] Some of the time
    [ ] A little of the time
    [ ] None of the time

22. During the past 30 days, how often did you feel hopeless?
    [ ] All of the time
    [ ] Most of the time
    [ ] Some of the time
    [ ] A little of the time

[ ] None of the time

23. During the past 30 days, how often did you feel restless or fidgety?
    [ ] All of the time
    [ ] Most of the time
    [ ] Some of the time
    [ ] A little of the time
    [ ] None of the time

24. During the past 30 days, how often did you feel so depressed that nothing could cheer you up?
    [ ] All of the time
    [ ] Most of the time
    [ ] Some of the time
    [ ] A little of the time
    [ ] None of the time

25. During the past 30 days, how often did you feel that everything was an effort?
    [ ] All of the time
    [ ] Most of the time
    [ ] Some of the time
    [ ] A little of the time
    [ ] None of the time

26. During the past 30 days, how often did you feel worthless?
    [ ] All of the time
    [ ] Most of the time
    [ ] Some of the time
    [ ] A little of the time
    [ ] None of the time

27. The last six questions asked about feelings that might have occurred during the past 30 days. Taking them altogether, did these feelings occur: More often in the past 30 days than is usual for you, about the same as usual, or less often than usual?

More often than usual			About the same as usual	Less often than usual		
A lot	Some	A little		A lot	Some	A little
1	2	3	4	5	6	7

If "None of the time" was answered for questions 22-27 than these questions will automatically be skipped.

1. During the past 30 days, how many days out of 30 were you totally unable to work or carry out your normal activities because of these feelings?
   _____ (Number of times)

2. Not counting the days you reported in response to Q3, how many days in the past 30 were you able to do only half or less of what you would normally have been able to do, because of these feelings?
   _____ (Number of times)

3. During the past 30 days, how many times did you see a doctor or other health professional about these feelings?
   _____ (Number of times)
4. During the past 30 days, how often have physical health problems been ***the main cause of these feelings?***
   [ ] All of the time
   [ ] Most of the time
   [ ] Some of the time
   [ ] A little of the time
   [ ] None of the time

1. Would you be interested in participating in an interview regarding your experience at the school's food pantry?
   [ ] Yes
   [ ] No

Thank you for your willingness to participate in this survey!

The following is a list of local food assistance resources available at the food pantry. Please feel free to print this list of information and share it with your family, friends, and neighbors. A physical copy of this list will also be available at the food pantry.

Also, if you have any questions about this survey you can call Karen Diaz Serrano at 813-846-7313. If you have questions about your rights as a research participant you can also call the USF IRB at (813) 974-5638 or contact the IRB by email at RSCH-IRB@usf.edu.

APPENDIX C:

OBSERVATION CHECKLIST

- Are students coming in alone?
    - Are they coming in with friends/peers/classmates?
- How is the interaction between the adults and the students like?
- How are students choosing the food they are taking?
- Is there any teasing happening among the students at the pantry?
    - Outside of the pantry?
- How does a student navigate a pantry their first time there?

APPENDIX D:

STUDENT INTERVIEW GUIDE

- How do students find out about the food pantry?
- Do students normally come by themselves or with someone else when they shop at the food pantry?
- What's it like using the food pantry?
    - *Probe*: Describe the last time you were at the pantry.
- Do the teachers or volunteers ever help you shop for food?
- What are the types of food that you normally pick up from the pantry?
- Are these types of food you would normally eat at home?
- Are there other types of food you wish the pantry had?
- If you weren't getting food from the food pantry, where would you be getting food?
- Does the pantry have any rules or policies students need to follow?
- What do you think other people in the school think about the food pantry?
    - *Probe*: How about other students?
    - *Probe*: How about other teachers/adults?
- Have you ever seen anyone being teased or bullied for using the food pantry?
    - *Probe*: Do you think that's a common problem in school food pantries?
- Has food ever been a source of stress for you?
    - *Probe*: Does the food pantry help with this stress?
- Did shutting down the school because of COVID-19 affect you or your family from getting food?
    - *Probe*: How so?
- Do you think anyone else could use help with food?
    - *Probe*: Anyone you know outside of the school?
    - *Probe:* Can you think of anything that could be done to help?

APPENDIX E:

STAFF/VOLUNTEERS INTERVIEW GUIDE

- How's it like volunteering at the food pantry?
    - *Probe*: Describe the last time you were at the pantry.

- What are the types of food that someone can pick up from the pantry?
    - Who chooses what foods the pantry is stocked with?
        - *Probe:* Why are these the types of foods that are chosen?

- Are there other types of food you wish the pantry had?
    - Do you think there are other types of foods you think the students wished the pantry had?

- What do you think the experience of shopping at the pantry is like for the students?

- Have you ever seen any student being teased or bullied for using the food pantry?
    - Do you think bullying is a common problem in school food pantries?

- Do you think that food is a source of stress for these students?
    - Does the food pantry help with this stress?

- Does the pantry have any rules or policies students need to follow?

- Are there any rules or policies the pantry needs to follow for the school?

- What do you think other people in the school think about the food pantry?
    - *Probe*: How about other students?
    - *Probe*: How about other teachers/adults?

- Did shutting down the school because of COVID-19 affect students and their families from getting food?
    - *Probe*: How so?

- Do you think anyone else could use help with food?
    - *Probe*: Anyone you know outside of the school?
    - Can you think of anything that could be done to help?

APPENDIX F:

FOOD BANK INTERVIEW GUIDE

- What are the types of food that get delivered to the school pantries?
    - Who chooses what foods that these pantries get stocked with?
        - *Probe:* Why are these the types of foods that are chosen?

- Are there other types of food you wish that the food bank could provide?
    - Do you think there are other types of foods you think the students wished the pantry had?
    - Do you think there are other types of foods you think the school staff wished the pantry had?

- What do you think the experience of shopping at the pantry is like for the students?

- Do you think that food is a source of stress for these students?
    - Does the food pantry help with this stress?

- Are there any rules or policies that the school needs to follow, according to the food bank?

- What do you think other people in the school think about the food pantry?
    - *Probe*: How about other students?
    - *Probe*: How about other teachers/adults?

- Did shutting down the school because of COVID-19 affect students and their families from getting food?
    - *Probe*: How so?

- Besides the students, do you think anyone else could use help with food?
    - *Probe*: Anyone you know outside of the school?
    - Can you think of anything that could be done to help?

APPENDIX G:

QUALITATIVE CODEBOOK

What social <u>factors</u> act as barriers and facilitators for food pantry use for a high school student population?

1. Barriers: Anything that seemed to keep the students from visiting the school's food pantry or discouraged them from returning.
    a. Student food preference: An example of a type of food that the student wanted but was not available at the food pantry for whatever reason.
    b. COVID-19: Any mention of COVID-19 being a contributing factor to the students not visiting the school's food pantry.
2. Facilitators: Anything that encouraged the students to visit the food pantry.
    a. Autonomy: The capacity of students to choose for themselves.
        i. Food preference: Students choosing foods that they liked.
        ii. No parents: Students choosing food, in the absence of their parents.
        iii. Diet: Students choosing food based on their diet restrictions.
        iv. Culture: Students choosing or not choosing foods based on their culture.
    b. Lack of barriers: Mention of the lack of barriers restricting the use of the food pantry.
        i. Lack of red tape: Volunteers or pantry coordinators mention not having to deal with hurdles to operate the food pantry
        ii. Location: Food pantry being easily accessible because of the location
        iii. Administration support: Examples or mentions of the administrative teams being supportive of the food pantry.
    c. Atmosphere of school: How the food pantry is portrayed in the school.
        i. Welcoming space: The look and feel of the pantry being positive and inviting.
        ii. Majority need: Mention of how the majority of the people attending the school are in need of food.
        iii. Social network: The relationships between those who visit the food pantry.
        iv. Student input: Suggestions given by the students on how to run the pantry.
    d. Including other necessities: Mention of other items (toiletries, clothes, hygiene items) that were not food, which were being offered at the pantry.

What is the <u>impact</u> of having access to food on campus on student's stress and anxiety

1. Dependence: Mention of how individuals depend on the food pantry.
2. Meets basic needs: Impact that the food had on meeting student's basic needs.
3. Effect on mental health: How the food pantry helped a student's mental health.
    a. Stress: Mention of increased or decreased stress levels.
    b. Anxiety: Mention of increased or decreased anxiety levels.
    c. Happiness/gratitude: Mention of happiness or gratitude regarding the food offered.
    d. Worried: Mention of how lack of food caused worry or how an abundance of food decreased worries.
4. Effect on academics: Mention on how food has an effect on students' mental health