

The silent tsunami: Addressing community college food insecurity in Texas

by

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B.S., University of Phoenix, 2017
M.B.A., University of Phoenix, 2019

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Department of Educational Leadership
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Abstract

This study explores the issue of food insecurity within community colleges in Texas and highlights administrator's responses toward best and most promising practices and challenges in addressing food insecurity. The research was guided by complex adaptive systems theory and cynefin.

Food insecurity among college students, especially community college students, continues to be a significant issue. Community colleges serve a diverse student population, including many low-income and underrepresented students who have a higher probability of experiencing food insecurity. However, community colleges receive less state funding and face challenges in addressing food insecurity among students. Food insecurity can negatively impact student success and completion rates. Providing appropriate resources to food insecure students will help community colleges close equity gaps and achieve their goals. However, identifying and assisting food insecure students remains challenging for community colleges.

The purpose of this study was to identify best and promising practices for addressing food insecurity at community colleges and the challenges that administrators face in implementing these practices. The theoretical framework was complex adaptive systems theory, which views institutions as systems made of interdependent agents that interact and adapt. The conceptual framework was the cynefin framework, which categorizes situations as obvious, complicated, complex, or chaotic to guide decision-making. The researcher conducted a multisite case study of four community colleges with successful food insecurity resources through interviews, observations, and document analysis. The study was limited to community colleges in Texas. The study intended to inform best practices and institutional policies to help students

facing food insecurity and contribute to the existing knowledge on community college food insecurity.

This study examined food insecurity resources at four Texas community colleges. The findings revealed best practices such as campus buy-in, college foundation support, data-informed decision-making, and partnerships. Promising practices included community support, external grants, and leadership support. Emergent practices included employee training, location, marketing, and fully staffed departments. However, administrators faced challenges in implementing resources, such as lack of awareness and communication, insufficient staffing, limited space, and stigma. The similarities in findings across institutions of different sizes and locations suggest community colleges experience common challenges. The study provides recommendations to improve awareness, communication, and college foundation support to address food insecurity better.

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Co-Major Professor
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Dedication

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Chapter 1 - Introduction

Food insecurity has been described as a silent tsunami; a wave that leaves millions of people hungry (Johnson & Walters, 2014). Students who struggle silently often perceive themselves as not struggling enough to seek resources (Lynn & Beaulieu, 2018).

Often, the stigma surrounding food insecurity presents a significant challenge in addressing it among college students. Colleges know that food insecurity is an issue; however, providing resources is challenging as the associated stigma sometimes silences those in need. A qualitative study of students at the University of North Texas revealed that study participants who identified as food insecure reported feelings of awkwardness and embarrassment when confronted with food insecurity at the social level. These students avoided activities such as eating with their food-secure friends. Generally, the topic of meals was avoided in conversations among food-secure and insecure friends, thus reinforcing silence. The researcher described the students as enduring a silent struggle (Henry, 2019).

Statement of the Problem

Food insecurity among college students continues to be an issue that often presents as a barrier to student persistence and completion (Dubick et al., 2016). Community colleges are often plagued with this issue as they serve a diverse population, including many students with low socioeconomic backgrounds (Maroto et al., 2015). Food insecurities exist to varying degrees at all colleges and universities; however, community colleges serve students with a higher rate of food insecurity and receive less state funding in general, limiting community colleges' ability to address food insecurity (McCoy et al., 2022).

Historically, community colleges have allowed underrepresented populations to pursue higher education (San Diego Foundation, 2022). However, community colleges are now

accountable for providing open access to higher education and improving student success rates, while simultaneously experiencing funding cuts (Mitchell et al., 2016). Food insecurity can be a barrier to student success. Expectations of community colleges include creating an environment cohesive to learning. This environment requires a comprehensive response to food insecurity; however, this remains a challenge for community colleges as they continue to experience decreases in funding.

Background of the Problem

Although there is no universal definition, the U.S. Department of Agriculture (USDA) defines food insecurity as a lack of consistent availability or access to nutritionally adequate and safe foods (Coleman-Jensen et al., 2020). Food insecurity is not the same as hunger. According to the USDA (2022), “Food insecurity is a household-level economic and social condition of limited or uncertain access to adequate food. Hunger is an individual-level physiological condition that may result from food insecurity” (para. 3). A 2019 study by the USDA revealed that 97% of households reporting food insecurity worried their food would run out before they had money to buy more (Coleman-Jensen et al., 2020). Additionally, 10.5% of U.S. households experienced hunger in 2020. Furthermore, Texas ranked eighth in the nation, with 13.3% of households in the state experiencing food insecurity (Friends Committee on National Legislation, 2021).

The #RealCollege Survey was established in 2015 by the Hope Center for College, Community, and Justice (Hope Center), originally the Wisconsin Hope Lab, as the nation’s most extensive annual assessment of students’ basic needs. The Hope Center’s mission aligns with research on food insecurity among community college students. According to The Hope Center (2022):

The Hope Center for College, Community, and Justice is an action research center transforming higher education into a more effective, equitable, and impactful sector using a powerful combination of applied scientific research, technical assistance to colleges and universities, policy advising with state and federal governments, and strategic communications. We believe that students are humans first and that their basic needs are central conditions for learning. We are redefining what it means to be a student-ready college with a national movement centering on students' basic needs. (S. Abelson, personal communication, September 13, 2022)

Since 2015, the #RealCollege survey has been fielded at more than 530 colleges and universities and taken by more than 550,000 students. The survey recently added questions regarding food insecurity, with results made available in 2022. The Hope Center created the #RealCollege Survey because no government agency reports on students' basic needs and insecurities. The 2020 #RealCollege Survey measured three primary types of basic needs insecurity: food insecurity, housing insecurity, and homelessness. The Fall 2020 #RealCollege survey revealed "38 percent of students in two-year colleges and 29 percent of students at four-year colleges reported experiencing food insecurity in the previous 30 days" (The Hope Center, 2021, p. 27).

Community college students tend to experience food insecurity at a higher rate than overall households and students at universities (McCoy et al., 2022). Students who experience food insecurity have inconsistent or intermittent access to meals marked by periods of uncertainty. When available, food may not be affordable, nutritionally adequate, or safe to eat (Rule & Jack, 2018).

According to College and University Food Bank Alliance (CUFBA, 2018), 30% of college students are food insecure, and 43% of food-insecure students have a meal plan. A meal plan is a prepaid account that gives college students access to dining service on campus. Meal plans vary from college to college. Meal plans range from \$3,000 to \$5,500, with some plans costing up to \$9,000 per academic year (Wood, 2022). Many college dining halls lack variety and serve repetitious meals. Repetitious meals can lead to nutritional deficiencies. Various fruits, vegetables, proteins, and whole grains are needed to ensure an individual gets proper macronutrients and vitamins for health (Landsverk, 2020). At many colleges, dining halls and other eateries typically covered by the meal plan close during holidays, summer, or other college breaks. The closing of dining services can leave students who cannot afford meals at local restaurants, groceries from local stores, or tickets to go home without reliable food sources (Rule & Jack, 2018). Other colleges may have restaurant-style services with gourmet options.

Food insecurity is not a new issue; however, until recently, food insecurity of college students has been an issue that has not been given much attention. The rise in prevalence is related to several changes in education. In the past, not everyone was able to attend college. However, a college degree is now key to a successful career and financial security (Hughes et al., 2011). The need to increase access to higher education and maximize enrollment began in the 1960s and 1970s (Gumport et al., 1997). This expectation of increased access has changed the demographic of students that community colleges serve from traditional to nontraditional, first-generation, low-income, and underrepresented students. These students have a higher probability of experiencing food insecurity during college (Weissman, 2022).

Decreased state funding for community colleges has been concurrent with college student demographic shifts. According to *The Texas Tribune*, “budgets for 24 of 50 community colleges

in the state were cut by about \$43 million overall in 2022. Houston Community College saw a 7% funding cut, and Central Texas College in Killeen had its budget drop by 11%” (McGee, 2021, p. 1).

Community colleges depend on local property tax and student tuition and fees to cover most of their costs. State funding offsets less than 25% and has not kept up with rapidly changing needs such as student basic needs (Olivares, 2022). Community colleges must seek external funds to address food insecurity. These funds are typically in the form of grants or emergency funding that are not always available and can be limited to a certain number of years (Hagedorn et al., 2021).

Food insecurity on college campuses disproportionately impacts students of color and low-income students (Lemus, 2019). Goldrick-Rab et al. (2018) stated that 47% of Black and 42% of Hispanic students at 4-year institutions experience food insecurity compared to 30% of their White peers. Their study also showed that 46% of Pell Grant recipients at 4-year institutions experienced food insecurity. According to recent studies, food insecurity will likely negatively impact student success and inhibit students from completing (American Dining Creations, 2022). It is essential to ensure student success to close equity gaps in the United States. Community colleges serve a diverse population and are charged indirectly with closing equity gaps across the country. The idea behind open access to community colleges is to provide an opportunity for individuals to obtain a degree and acquire a higher-paying job. Food insecurity can be a barrier to economic opportunity for disadvantaged students and will continue to limit these students and their communities. If students drop out due to food insecurity, equity gaps will continue. This study offered insight into how Texas community colleges can effectively provide food-insecure student resources.

The #RealCollege survey completed in the fall of 2020 revealed that approximately 38% of community college students surveyed experienced food insecurity in the previous 30 days (McCoy et al., 2022). It is essential to understand how to identify food insecurity to provide appropriate resources; however, this has proven to be challenging. Determining the challenges colleges have faced while addressing this issue will help colleges develop a more efficient approach to addressing food insecurity. Research is required to understand the best and promising practices and the challenges administrators face in implementing food security resources to help community colleges implement processes to provide resources.

Purpose of the Study

This study aimed to understand further the best and most promising practices for addressing food insecurity in Texas community colleges and challenges administrators experience in implementing successful methods to address community college students' food insecurity.

Research Questions

The two primary research questions that guided this study were:

RQ1. What are the best and most promising practices for addressing food insecurities on a community college campus?

RQ2. What challenges do administrators face in implementing best and promising practices for food insecurity on campus?

Theoretical and Conceptual Frameworks

A theoretical framework provides a perspective through which the research problem can be analyzed and understood (Roberts & Hyatt, 2019). Complex adaptive systems (CAS) theory

informed this study. CAS gives insight into the relationship between the environment, organization, and administration (Gumport & Sporn, 1999).

The history of CAS dates to the 1930s and has evolved significantly since the 1970s. CAS has become a meaningful way to describe how environments and organizations work (Rotmans & Loorbach, 2009). The theory was initially used in biology to describe environmental systems and climate change; however, recent modifications to CAS included business, social systems, software development, and, most recently, higher education (Martin, 2019). CAS is an open, multilayered, and interwoven system of interacting individual actors and agents (Holland, 1992).

CAS can offer a compelling theoretical framework for how leaders of higher education systems think about their roles in designing, participating, and sustaining scaling strategies for change (Martin, 2019). In this model, institutions of higher education are organizational systems made of diverse, active, interdependent agents (i.e., students, staff, faculty, and administrators) interacting and adapting based on “knowledge, experience, feedback from the environment, local values, and formal system rules” (Makleff et al., 2020, p. 995). Like living organisms, community colleges must constantly adapt and evolve to ensure survival in response to constantly changing system dynamics. Kevin Dooley defined CAS in 1997 as “a group of semiautonomous agents who interact in interdependent ways to produce system-wide patterns that influence the behavior of the agents” (Human Systems Dynamic Institute, 2016, p. 3).

A conceptual framework helps the researcher choose the appropriate action for the context needed to address complex issues. The interviews in this study were coded using the cynefin framework. The cynefin framework is a conceptual framework that was developed in the early 2000s and has continued to evolve through the work of David Snowden. The framework

has been described as a sense-making device and consists of four categories: obvious, complicated, complex, and chaotic. Developing the framework offered a context for decision makers to view their perceptions of a situation or problem (Snowden & Boone, 2007). Not all situations are equal; this framework helps decision-makers understand the required response.

Researchers have studied the applicability of the cynefin framework in higher education to identify opportunities for improvement. For example, 2022 study explored how engineering educators used sense-making frameworks to transition their courses to online delivery during the COVID-19 pandemic. The cynefin framework was used to conceptualize the educator's experiences and identify barriers and enablers to effective online teaching. The cynefin framework helped distinguish between pedagogical and organizational challenges and guided educators to appropriate problem-solving actions. The study recommends using the cynefin mapping method to evaluate online curriculum delivery going forward (Caldera et al., 2022).

The researcher developed a table to demonstrate the alignment of the purpose, research questions, and theoretical and conceptual frameworks. The alignment table expands on further configuration with interview questions (see Appendix E).

Methodology

A qualitative approach was chosen to understand further the best and most promising practices for addressing food insecurity at Texas community colleges and challenges administrators experience in implementing successful methods to address community college students' food insecurity. The researcher examined four community colleges with successful food pantries and other related food security resources through a multisite case study. The researcher considers a successful food pantry to have a consistent usage rate, effective data collection and analysis strategies, and a well-developed marketing plan.

Case studies are a type of qualitative research where a practitioner–scholar examines one or more specific cases in a defined system (Lochmiller & Lester, 2016). A multiple-site case study design allowed the researcher to investigate several cases to gain insight into a central phenomenon (Creswell, 2002). Semistructured interviews, observations, and documents provided data for the case study. The study used purposeful sampling, which required specific criteria for selecting research sites and participants.

Delimitations and Assumptions

This study occurred from January 2023 through May 2023. This study only included those institutions that matched the selection criteria. These criteria required the institution to be a community college in Texas. Texas has a substantial number of community colleges within the state’s border and the sample size was limited to four. Those interviewed in this study were college administrators. The researcher assumed that all participants answered interview questions openly and honestly.

Significance of the Study

This study focused on contributing to the existing knowledge on the best and most promising practices for addressing food insecurities. The study’s intention was to inform best practices and policies at institutions serving students facing food insecurity. This study also contributed to the existing body of knowledge regarding community college food insecurity.

Definitions of the Terms

Best practice- An intervention, program/service, strategy, or policy that has repeatedly demonstrated a positive impact on the desired objectives and is deemed the most suitable for a particular situation or context (Fazal et al., 2017).

Food insecurity- There is no universal definition of food insecurity. For this study, food insecurity was defined as a lack of consistent access to enough food for an active, healthy life, a lack of available financial resources for food at the level of the household (USDA, 2022), and the lack of reliable access to enough affordable, nutritious food (Dubick et al., 2016).

Hunger- An individual-level physiological condition that may result from food insecurity (USDA, 2022).

Meal plan- Students prepay meal plans at the start of the semester at a community college, and depending on the plan, students have several meals available to them in the dining hall; plans have fixed or unlimited dining hall meals per week or semester (van Woerden et al., 2019).

Promising practice- An intervention, program/service, strategy, or policy that shows potential (or promise) for developing into a best practice (Fazal et al., 2017).

Chapter Summary

Community college accountability is constantly under pressure from the societal expectation to offer open access, while expected to increase student success rates. These factors have led to community colleges serving a diverse population, including a high rate of students with a low socioeconomic background, which is a contributing indicator of food insecurity (Maroto et al., 2015). Meanwhile, government funding for community colleges continues to decline. Community colleges must adapt to meet the changing needs of student demographics, including implementing resources to address food insecurity.

This chapter included the statement and background of the problem, the purpose of the study, research questions, theoretical and conceptual frameworks, methodology, delimitations and assumptions, the significance of the study, and the definitions of terms.

Organization of the Study

Four chapters and appendices organize the remainder of the study. Chapter 2 presents an overview and synthesis of related literature regarding food insecurity among community college students and highlights a gap in existing literature. Chapter 3 describes the research design, study setting, study participants, instrumentation, data collection and sources, data analysis, study quality, ethical considerations, and limitations. Chapter 4 covers the research findings and analysis. Chapter 5 contains the study's summary, discussion of the findings, practical implications, implications related to the literature, unexpected results, recommendations, and conclusions of the study.

Chapter 2 - Literature Review

This study aimed to further understand the best and most promising practices for addressing food insecurity in Texas community colleges and challenges administrators experience in implementing successful methods to address college students' food insecurity. A well-designed literature review aims to obtain detailed, cutting-edge knowledge of a particular topic (Roberts & Hyatt, 2019). The researcher gathered information for the literature review from various historical and current sources. The researcher used library databases such as Education Resources Information Center and ProQuest to obtain education-related and noneducation studies for the literature review. These are comprehensive and searchable internet-based bibliographic and full-text databases of education and research information (Education Resources Information Center, n.d.). The researcher also used the Federal Depository Library Program Electronic Collection archive to retrieve information and data related to food insecurity. Specific literature sources include peer-reviewed journals, books, dissertations, textbooks, and data-informed websites. This chapter synthesizes information relevant to food insecurity among community college students by organized themes. The themes of the literature reviewed include (a) food as a basic need for students, (b) the prevalence of food insecurity, (c) factors associated with food insecurity, (d) consequences of food insecurity, (e) responses to food insecurity, (f) barriers to gaining access to assistance, and (g) theoretical and conceptual frameworks. These themes support the study by delving into what prior research and professional publications currently exist regarding the need to address food insecurity among community college students. The theoretical and conceptual frameworks are also described in this chapter. Finally, this chapter illustrates a gap in the knowledge that substantiates the selection of the study of this area.

Food as a Basic Need for Students

Maslow (1943) proposed a list of basic needs that must be met and formulated a theory of human motivation. He used observations to create known facts about these basic need propositions. His approach used a pyramid hierarchy format to list five sets of basic needs related to each other. These are physiological needs, safety, love and belonging, esteem, and self-actualization. According to the theory, once the greatest need is realized, the next higher need emerges and must be fulfilled before the next higher need can be met. Maslow defined a person's physiological needs as air, food, clothing, and shelter. These physiological needs are necessary for survival and meeting them is required before the individual can address the next set of needs. Basic physiological needs, including food, are primarily recognized as fundamental human rights (Chilton & Rose, 2009; Thiele, 2002). The level of importance of different physiological and psychological needs varies among students, and students are not always able to meet these needs during their course of study (Freitas & Leonard, 2011).

Founded in 2013, The Hope Center for College, Community, and Justice (Hope Center), previously the Wisconsin Hope Lab, is a research center focused on transforming higher education into a more effective, equitable, and impactful sector through applied scientific research, technical assistance for colleges, policy advising with state and federal government, and strategic communications (The Hope Center, 2022). In recent years, the Hope Center has evaluated low-income students' challenges in attaining a college degree (Goldrick-Rab et al., 2015). The Hope Center has structured a list of basic needs specific to students. The Hope Center categorized access to nutritious and sufficient food or food security as a student's basic need. Recent studies have affirmed this notion of food security as a basic need for college students

(Bruening et al., 2016; Chaparro et al., 2009; Gaines et al., 2014; Maroto et al., 2015; Morris et al., 2016; Patton-Lopez et al., 2014).

Prevalence of Food Insecurity

The Economic Research Service monitors food security annually through a national survey (USDA, 2022). The data collected from this survey is disaggregated further into geographical locations to represent each state in the nation.

The USDA (2022) has defined four ranges of food security. The first category is food security, which consists of two ranges: high food security and marginal food security. High food security is when an individual shows no indication of problems or limitations to food access. Marginal food security refers to an individual who typically has anxiety over sufficient food or a food shortage. Marginal food security consists of two ranges: low food security and very low food security. Low food security describes an individual with little or no indication of reduced food intake; however, they report reduced quality, variety, and desirability of diet. Very low food security, however, presents indicators of disruption of eating patterns and reduced food intake (USDA, 2022).

Food Insecurity in the United States

The prevalence of food insecurity among U.S. households varies yearly due to environmental, economic, and political factors (Owens et al., 2020; USDA, 2022). Trends have shown that food insecurity increased from 10.7% in 2001 to nearly 12% in 2004, decreased to 11% from 2005–2007, and then increased to 14.6% in 2008. Food insecurity peaked in 2011 as it reached 14.9%. Before the 2020 COVID-19 global pandemic, food insecurity rates steadily declined; however, the pandemic reversed the improvement. In 2020, 10.5% of U.S. households

experienced food insecurity at some point during the year, and a striking 3.9% of households experienced very low food security (USDA, 2022).

Food Insecurity in Texas

Texas has a higher food insecurity rate than the national average and has the eighth-highest food security rate in the United States (Friends Committee on National Legislation, 2021; USDA, 2022). In Texas, 4 million individuals suffer from food insecurity (USDA, 2022). A study by Northwestern University showed that 1 in 4 Texas households experienced food insecurity during the COVID-19 global pandemic's first 6 months when job loss was widespread (Schanzenbach & Tomeh, 2020).

Food Insecurity in Higher Education

There has been increasing evidence of alarming rates of food insecurity among students of higher education (Maroto et al., 2015; Owens et al., 2020; Patton-Lopez et al., 2014; Robbins et al., 2022). The full extent of college students' food insecurity has yet to be entirely understood, as research on food insecurity among this population has been limited (Bruening et al., 2016; Hagedorn & Olfert, 2018). Over the last 2 decades, studies have revealed varying food insecurity results among college students, with rates ranging from 20% to more than 50% (Freudenberg et al., 2019; Goldrick-Rab et al., 2019; Martinez et al., 2021).

Food insecurity does not affect students equally; underrepresented racial and ethnic groups, students associated with LGBTQ, students with disabilities, and community college students are often affected more than their peers (Adamovic et al., 2020; Cargas et al., 2020; Hagedorn et al., 2021; Payne-Sturges et al., 2018; Weaver et al., 2020).

Food Insecurity Among Community College Students

Research examining food insecurity among postsecondary students in Canada and the United States has mainly focused on those attending universities and less study on students attending community college (Maroto et al., 2015) until recently.

In 2015, the Hope Center released the report *Hungry to Learn*, which examined roughly 4,000 students in seven states and at 10 community colleges. This report indicated that 20% of students enrolled at community colleges were food insecure. Additional research was conducted in 2017 by the Hope Center, which included more than 33,000 students from 70 community colleges in 24 states. This study encompassed more diversity than prior samples and produced evidence to help address critical issues necessitating further research. The study revealed substantially higher rates of food insecurity among community college students than reported in previous studies. This study from 2017 facilitated by the Hope Center found that 2 in 3 students are food insecure. This study also suggested minimal geographic variation in hunger among community college students. The study further indicated no correlation between a college location or colleges that serve many Pell Grant recipients and food insecurity; instead, food insecurity was prevalent in all areas of the country and can affect any student (Goldrick-Rab et al., 2017).

The Hope Center conducted the #RealCollege Survey in the Fall of 2020. The Hope Center (2021) stated, “Over 195,000 students from 130 two-year colleges and 72 four-year colleges and universities participated in the Fall 2020 #RealCollege survey”(pg. 1). Of the total students from the 130 two-year colleges participating, 39% were affected by food insecurity. Among the participants were 10 colleges and universities in Texas, including six 2-year community colleges and four 4-year universities. Among 13,000 Texas students who participated

in the survey, more than 2 in 5, or 43%, were experiencing food insecurity. Compared to the national sample, students in Texas were 4% more likely to experience food insecurity (The Hope Center, 2021). As research continues, the reality of food insecurity becomes more alarming.

Although research examining the prevalence of food insecurity among community college students has motivated action, there are still insufficiencies in collecting data and properly implementing interventions. There needs to be an identified method to accurately measure food insecurity among college students due to inconsistent survey answers from students and stigma preventing students from speaking up at all about food insecurity (Williams, 2019). Furthermore, community college students are not stationary for long; therefore, data may change drastically from 1 year to the next.

Factors Associated With Food Insecurity

Food insecurity is not unique to college students. Often, if a student suffers from food insecurity before entering college, the individual will remain food insecure and may even face heightened food insecurity (Food Research and Action Center, 2018). Individuals may face certain factors before college that contribute to food insecurity, such as low income, disability and health, and ethnicity and race. An individual who experienced food insecurity before college has a higher probability of experiencing food insecurity in college; however, some individuals may experience food insecurity for the first time in college (Browning, 2017). College students face other unique circumstances that contribute to food insecurity, such as increasing costs of tuition and fees, family responsibilities, limited financial aid, and food accessibility.

The chances of experiencing food insecurity increase when money is limited or unavailable (Coleman-Jensen et al., 2013). When financial resources are limited, households tend to cut back on the budget by spending less on food, so they do not have to sacrifice other

expenses, such as medical care (Edin & Lein, 1997; Gundersen et al., 2011). Studies have revealed that income instability or dramatic changes in income increase the probability that an individual or household will experience food insecurity (Leete & Bania, 2010; Loopstra & Tarasuk, 2013; Ribar & Hamrick, 2003). However, regardless of income level, households with more significant financial and food management skills are less likely to be food insecure (Gundersen & Garasky, 2012; Olson et al., 2004).

Disability and Health

Disability, poor mental health, and chronic physical health conditions are linked to a higher risk of food insecurity and are associated with more severe levels of food insecurity among households (Coleman-Jensen et al., 2013). Households with a member who has a disability have a higher risk of food insecurity. Approximately 8% of households without a disabled adult experience food insecurity compared to 22% of households with a disabled adult (Coleman-Jensen, 2020). Disability or poor health can contribute to food insecurity; however, disability and poor health can result from food insecurity (Cahill & Samuel, 2021). Food insecurity can lead to disability through poor living conditions, malnutrition, and lack of access to health services (International Disability Alliance, 2018).

Ethnicity and Race

National data revealed that 22% of African Americans and 17% of Hispanics experience low to very low food security (USDA, 2022). A national survey conducted in 2020 among low-income adults in the United States revealed that 44% were food insecure and were more likely to be African American or Hispanic and have children in the home (Wolfson & Leung, 2020). Minorities have a higher chance of suffering from food insecurity during childhood and college.

African American students are twice as likely to experience food insecurity than their classmates (American Dining Creations, 2022).

College Student

The high prevalence of food insecurity among college students could be due to the continuously increasing costs of tuition and fees, family responsibilities, limited financial aid, and food accessibility (Freudenberg et al., 2011).

Tuition has increased more than 25% over the past decade due to inflation (Hess, 2019). Even though most students work part time or full time, the college expense is too great for students to pay for on their own (Thoelke, 2021). Although community colleges have experienced tuition increases, tuition and fees can be dramatically lower at community colleges than at 4-year universities (Sands, 2016). Students typically have a limited budget to cover housing, tuition, and other living expenses, leaving limited funds for adequate food.

Open access to college has shifted the community college student demographic. Nontraditional enrollment has increased substantially. Many nontraditional students have family obligations and work commitments. The average age of today's college students is 26.4 years old, and the average age of a community college student is 28 (Vuleta, 2022). One in five students cares for a child or parent (Thoelke, 2021). Caring for a loved one and paying for college can create financial hardships.

Research has shown an increased risk of food insecurity among financially independent students who receive financial assistance (Chaparro et al., 2009; Gaines et al., 2014; Morris et al., 2016). Financial aid assistance is beneficial to helping students decrease the costs of college and sometimes even covering all costs for some (Sands, 2016). However, limited financial resources contribute to food insecurity among the U.S. population. It has been a well-known

issue that students struggle to support their educational and personal needs, which stems from inadequacy of the financial aid system (Broton et al., 2016; Farahbaskhsh et al., 2015). Roughly 33% of 2-year college costs are not covered by financial aid packages, leaving students with little or no money to cover other expenses (The College Board, 2016). College expenses go beyond tuition and fees, including room and board, a meal plan, groceries, technology, transportation, and other expenses. Although using financial aid toward living expenses is permitted, studies have revealed that 35% of students at the University of California San Diego and 22% of 10 randomly selected community college students surveyed reported skipping meals because of their financial status (McKenna, 2016). To offset college costs, many students work part time or full time (Thoelke, 2021). However, income may impact financial aid status, making students wary of working (Sands, 2016).

Consequences of Food Insecurity

Researchers have studied food insecurity for over a century. Some of the effects of food insecurity are physical illness, mental health complications, and decreased cognitive ability. Food insecurities disproportionately affect college and university students more than the general population (Coakley et al., 2022; McCoy et al., 2022). An increasing body of research validates that those experiences of food insecurity and food deprivation during college are linked to poor academic performance and reduced chances of completion (Alaimo et al., 2005; Jyoti et al., 2005; Murphy et al., 1998). The relationship between food insecurity and poor physical and mental health can hinder students' ability to reach their full potential. Hunger or very low food security does not need to be present for complications of food insecurity to persist (Seligman et al., 2010).

Physical Health Implications

Direct and indirect links exist between food insecurity and higher body mass index and poorer health. Although students with food insecurity have equal access to dining halls, their diets are typically worse than those without food insecurity. These diets can lead to higher body mass index and poorer overall health (Martinez et al., 2019; McCoy et al., 2022). Poor diets contribute to obesity, which is linked to several physiological, psychological, and social consequences for children and adults, including high blood pressure (Daniels, 2009; Nguyen et al., 2008), heart disease (Guh et al., 2009), diabetes (Daniels, 2009; Nguyen, et al., 2008), asthma (McHugh et al., 2009; Papoutsakis et al., 2013), depression (Boutelle et al., 2010; Luppino et al., 2010), and stigmatization (Puhl & Heuer, 2010; van den Berg et al., 2008).

Food security status is more strongly predictive of chronic illness in some cases than income (Gregory & Coleman-Jensen, 2017; Innis et al., 2020). Lower food security is associated with a higher probability of developing chronic diseases such as diabetes (Beckles & Chou, 2016), heart disease, stroke (Franks et al., 2011; National Center for Health Statistics, 2017), obesity (Ogden et al., 2010), depression (Pratt & Brody, 2014), and premature mortality (Signorello et al., 2014). Individuals experiencing food insecurity may participate in coping strategies to stretch their budgets, including medication underuse to delay refilling a prescription (Afulani et al., 2015; D. Herman et al., 2015; Knight et al., 2016) and forgoing or postponing preventative care (Kushel et al., 2006; Mayer et al., 2016). These are health-compromising coping strategies that can exacerbate diseases.

Mental Health

Food insecurity has significant physical and mental health implications for college students. Food insecurity can manifest in many forms of mental health problems, and students

often self-blame for their inability to feed themselves (Meza et al., 2019). This form of self-blaming leads to interference with daily life, fear of disappointing family, resentment toward students who were not struggling with food insecurity, interference with building relationships, depression, feeling undeserving of help, and frustration that institutions did not provide more support (Klugesherz, 2017; Meza et al., 2019).

Food insecurity strongly predicts poor mental health (Tarasuk et al., 2018). Although there has been an insufficient amount of research regarding the relationship between food insecurity and mental health among young adults, food-insecure individuals may experience higher levels of stress, stigmatization, and obesity, which all lead to poor mental health outcomes (Nagata et al., 2019).

Furthermore, a growing body of literature links food insecurity to sleep problems. Mental health problems are closely related to poor sleep. Poor sleep is a risk factor for developing depression, anxiety, alcohol abuse, and psychosis (Hertenstein, 2019).

Postsecondary students with food insecurity reported poorer health (Hughes et al., 2011) and higher rates of anxiety and depression (Bruening et al., 2016) than students who reported being food secure. Access to fewer resources for adequate quantity and quality food may lead to malnutrition among college students and potentially increase the risk of mental problems like depression and anxiety, leading to lower retention rates (Cady, 2014).

Food and Learning

Researchers have made a connection between food insecurity and learning. Studies on children have shown that food insecurity is associated with lower scores on standardized tests and decreased learning throughout the school year (Jyoti et al., 2005; Winicki & Jemison, 2003); increased chances of being held back to repeat a grade (Alaimo et al., 2005); and behavioral,

attention, and emotional problems at school (Murphy et al., 1998). Furthermore, studies have shown that children 's standardized test scores increase when a family receives governmental food assistance or when households become food secure (Jyoti et al., 2005; Maroto et al., 2015).

Researchers have been looking for a connection between food insecurity and academic performance in postsecondary students. Chronic stress from worrying about one's next meal and lack of nutritional food can hinder cognition and academic success (Spencer et al., 2017). Students who experience food insecurity have less cognitive bandwidth to dedicate to educational success (Meza et al., 2018). However, not all students who suffer from food insecurity experience adverse educational effects (DeBate et al., 2021).

Food insecurity experienced by college students has been linked to decreased class attendance and inability to focus during class (Farahbakhsh et al., 2015; Hagedorn & Olfert, 2018) and lower grade point averages (Hagedorn & Olfert, 2018; Maroto et al., 2015; Martinez et al., 2019; Meza et al., 2018). According to a longitudinal study of community college students, students who experience very low food security in the 1st year of college are more than 4% less likely to graduate (El Zein et al., 2019).

Social Well-Being

Social well-being is the sharing, developing, and sustaining of meaningful relationships with others (Sinclair, 2021). These relationships make one feel authentic and valued and provide a sense of connectedness and belonging. Food insecurity represents a troubling social concern comprised of long-term, often intergenerational, exclusion from social and economic opportunities, including higher education, employment, and positive social and community-based relationships, which affects all domains of well-being (McLachlan et al., 2013; Seivwright et al., 2020). Social connection is on the opposite side of a continuum from social isolation. It

refers to one's subjective feelings regarding social connections, support networks, and sense of companionship. An individual experiences social connection when they feel emotionally close and attached to others. Social support plays a key role in how connected a person feels. Social isolation is characterized by distant or superficial relationships and the lack of feeling cared for, esteemed, and part of a group. The degree of social connection versus isolation someone experiences can impact aspects of both physical and mental health (Hawthorne, 2006). Social isolation is associated with higher food insecurity in Australia, the United Kingdom, and the United States (Alaimo et al., 2005; Foley et al., 2010; Micevski et al., 2014; Ramsey et al., 2012; Temple, 2008; Thornton et al., 2014) as consumption of food is typically done in a social context (Sobal & Nelson, 2003).

Responses to Food Insecurity

Food insecurity can negatively affect an individual's life and inhibit social well-being. The government and higher education institutions have responded to food insecurity by providing resources to access nutritional food.

Government Responses to Food Insecurity

The United States spends more than \$50 billion annually on nutrition assistance programs for the U.S. population. These include the Supplemental Nutrition Assistance Program (SNAP; formerly known as the Food Stamp Program); the National School Lunch Program; the Special Supplemental Nutrition Program for Women, Infants, and Children; and others (Chilton & Rose, 2009).

Federal policymakers proposed several bills to address college food insecurity in response to food insecurity at the 116th legislative session in 2019–2020 (Laska et al., 2020). The Basic Assistance for Students in College (BASIC) Act, which addressed basic needs of

college students by sharing data among federal agencies to help identify SNAP-eligible students and other programs that provide support for basic needs to help increase enrollment in these programs. The BASIC Act was introduced in 2021. Introduced in 2019, the Cost Assistance Made Possible for Undergraduate Students (CAMPUS) Act intended to amend the Higher Education Act of 1965 to establish an emergency grant aid program. The Closing the College Hunger Gap Act, introduced in 2021, amended the Food and Nutrition Act of 2008 to make colleges eligible to for community food projects assistance. Introduced in 2021, the Opportunity to Address College Hunger Act amended the Higher Education Act of 1965 to require colleges to provide notice of SNAP eligibility to students participating in work-study. Furthermore, the Supporting Transparency to Overcome Poverty (STOP) Campus Hunger Act, introduced in 2022, amended the Higher Education Act of 1965 to require annual disclosure of nutrition assistance program eligibility criteria on the U.S. Department of Education website. The proposal of these bills indicates that policymakers are aware of the food insecurity crisis among college students and are actively working toward providing proper responses.

The proposal of these bills indicates that policymakers are aware of the food insecurity crisis among college students and are actively working toward providing proper responses. These legislative efforts not only illustrate the commitment of policymakers to combat food insecurity but also highlight their dedication to facilitating access to resources. This proactive approach signals a promising shift towards a more inclusive higher education environment where all students can thrive, not stifled by basic needs insecurities. In essence, the national agenda is progressively aligning with the realities of today's college students, ensuring they are equipped with the necessary support to succeed academically.

SNAP

The U.S. Department of Agriculture's (USDA, 2011) SNAP was designed to provide food service assistance to help low-income families or individuals buy the food they need for good health. According to the 2019 report completed by the USDA, SNAP served an average of 35.7 million people per month or 10.9% of Americans. The percentage of residents receiving SNAP benefits ranged from 19.8% in New Mexico to 4.2% in Wyoming. In 2019, there were only 11 States besides Wyoming with 8% or less of their populations receiving SNAP benefits.

However, this program continues to receive a low participation rate from college students due to strict eligibility requirements for higher education students (Freudenburg et al., 2019).

National School Lunch Program

President Harry Truman signed the National School Lunch Program (NSLP) into law in 1946, established under the Richard B. Russell National School Lunch Act. The NSLP is a federally assisted meal program operating in public schools, nonprofit private schools, and residential childcare facilities that provide nutritionally balanced, low-cost, or free lunches to children each school day (USDA, 2022). Millions of children participate in the NSLP annually, and the latest data released in 2016 revealed 30.4 million children used the program.

Unfortunately, this program does not extend beyond prekindergarten–12; therefore, college students are not eligible (USDA, 2022).

Higher Education Responses to Food Insecurity

Hunger was once considered a regular part of the college experience (Bruening et al., 2016). However, the growing emphasis on research in this area has contributed to hunger no longer being an acceptable part of the college experience. Institutions of higher education have responded with efforts and programs to alleviate this occurrence of hunger.

Food Pantries

Food pantries were the only resource for many years to combat college student food insecurity. They served as an acknowledgment from the college that food insecurity is an issue students may face on campus. Food pantries collect and distribute surplus food to people who need it most before it becomes waste (Himmelgreen & Heuer, 2021).

The College and University Food Bank Alliance has more than 700 members nationwide, with active public and private food pantries at community colleges and universities (College and University Food Bank Alliance, 2018; Hoyt, 2015). This number of members has significantly increased since 2012; when there were only approximately 10 (College and University Food Bank Alliance, 2018). Food pantries provide emergency assistance to students; however, students are often unaware of this resource, or the pantries do not offer good choices. There may be fruits and vegetables occasionally, but more often, there are canned goods and shelf items (McCoy, 2022).

Food pantries serve as an excellent resource for students. However, they are ineffective at fighting food insecurity alone because of limited hours and lack of food variety (Bertmann et al., 2021). Food pantries on college campuses face unique internal and systematic challenges, including inventory, funding, and staffing. Inventory typically depends on obtaining donations; therefore, certain goods may only be available sometimes. Many food pantries must depend on grant funds to operate; however, these grants expire. Funding, or lack of, determines the type of inventory or equipment available for the food pantry. Unfortunately, inconsistent funding makes it difficult to maintain staff; therefore, many campus food pantries rely on student workers to operate food pantries.

Colleges have recently begun to move beyond food pantries. Higher education institutions have adopted several practices to combat food insecurity, such as meal donations and embracing government assistance.

Meal Donations

Many 2-year and 4-year higher education institutions have adopted meal cards for students to purchase meals from the cafeteria or food from other locations on campus. Several colleges have begun to operate a student-led program called Swipe Out Hunger. This program reallocates unused dollars on meal plans to students who need them (Raymundo, 2022). The program varies from campus to campus. Typically, students can donate during a meal swipe drive. Students in need can sign up to receive donated meals through student services, automatically transferring meals to their meal cards. Since 2010, Swipe Out Hunger has collected 4.8 million meal swipes for students (Raymundo, 2022). However, there is not enough data currently to determine the true impact of the meal swipe donation program.

Embracing Government Assistance

Single Stop (n.d.) is a one-stop-shop program used on campuses to help students connect and apply for available resources, such as SNAP. Single Stop partners with colleges and universities to offer technology, training, and technical assistance for locating state agencies, food pantries, shelters, and other resources to address students' basic needs. Furthermore, some colleges have begun to accept Electronic Benefit Transfer (EBT) on campus (Single Stop, n.d.). EBT allows students to use this resource on campus, thus eliminating the need to travel to a store off-campus.

The College SNAP Project is a guide that provides students with appropriate state information on applying for SNAP benefits. The focus is to help students navigate the

application process to ensure eligible applicants do not experience a barrier in the form of frustration (Congressional Hunger Center, 2020).

Barriers to Gaining Access to Assistance

Programs designed to provide resources to individuals who are food insecure are often underused due to procedures that present themselves as barriers (FitzSimons et al., 2004; Fong et al., 2016; Fram et al., 2011; Kissane, 2003; Tsang et al., 2011). These barriers include lack of awareness, stigma, and eligibility rules and application processes.

Lack of Awareness

Every year, millions of dollars of resources go unclaimed. Many eligible individuals do not know they would be eligible to participate in a program. A study conducted by Abt Associates on Food Stamp Program access revealed 48% of eligible but not participating individuals were unaware they were eligible to participate (Fitzsimons, 2016). Furthermore, a study conducted in Massachusetts revealed that a lack of awareness about SNAP exists. In fact, 79.8% of respondents experienced food insecurity in the preceding 12 months; however, 31.8% reported that they knew little or nothing about the program (Avila et al., 2021).

Stigma

Stigma prevents eligible individuals from accessing government assistance or food pantries (Fitzsimons et al., 2016; Lopez, 2021; Purdam et al., 2016; Sutton, 2022). Many people do not participate in food assistance programs simply because they do not want others to know about their food insecurity (Kissane, 2003). A study conducted by Project Bread 2021 revealed 38.6% of respondents reported being concerned about being judged negatively for using SNAP (Avila et al., 2021). The fear of judgment from others regarding their income status leads to internalized shame. Stigmatization can come from interactions with others, such as the person

enrolling the individual in a program, a cashier, a child's school, or friends and family (Sutton, 2022). Furthermore, the application process can be a degrading experience (Fitzsimons et al., 2016). Internalizing stigma can cause an individual to self-blame for their poverty and hunger.

Eligibility Rules and Application Process

The eligibility requirements for nutrition assistance programs are not always precise (Congressional Hunger Center, 2020). Among the barriers to entry are complicated eligibility criteria, which leave students unable to figure out if they qualify and information on how to apply for benefits. In 2016, the number of students estimated to be eligible for SNAP was approximately 3.3 million, but fewer than half participated (Congressional Hunger Center, 2020).

The process for applying for a nutrition assistance program varies from state to state. The process can be frustrating and time-consuming (Fitzsimons et al., 2016). Applications are, on average, 20 pages and require individuals to provide as many as 10 documents. A study by Project Bread 2021 revealed the application difficulty was a concern for 36.6% of applicants (Avila et al., 2021).

The underutilization of assistance programs by food-insecure individuals is largely due to barriers such as lack of awareness, stigma, and complex eligibility rules and application processes. Addressing these barriers could be the key to ensuring that these resources reach those who need them most. Improving awareness about these programs, creating an environment that reduces stigma, and simplifying the application process can help in increasing the participation of eligible individuals.

Theoretical and Conceptual Frameworks

This study on best and promising practices for addressing food insecurity on community college campuses in Texas used the theoretical framework of complex adaptive systems (CAS) to identify best and promising practices. CAS is one of many theories that have evolved from complexity science. The researcher reviewed complexity science theory to understand why CAS was selected. Using the cynefin conceptual framework helped the researcher to understand how college administrators classify the challenges experienced in implementing best and promising practices.

Complexity Science Theory

Complexity science is not a single theory but an emerging field that engages scholars and scientists in a new paradigm of interdisciplinary study (Turner & Baker, 2019). Several fields, including physics, mathematics, biology, economics, and the biological and social sciences describe complexity, complexity science, and CAS (Fidan, 2017). Diverse scholars and scientists across disciplines use complexity science to view phenomena of interest through a new lens. Over the last few decades, substantial literature has introduced different aspects of complexity science (Cowan & Gell-Mann, 1994; Holland, 1992; Kauffman, 1993; Lewin, 1992).

Complexity science is typically associated with natural sciences, specifically physics, mathematics, and biology. However, complexity science also can be applied to social sciences, including general management, of which leadership forms a vital part. Regarding leadership, the application of complexity science derives from the evolution of systems theory if the organization is an open, social system requiring management to be responsive to their internal and external environments. Responsiveness is essential for the organization to develop and achieve goals to ensure its performance leads to persistence (Nienaber & Svensson, 2013).

Researchers in disciplines working with natural systems developed complexity science. Complexity science includes three fundamental notions: chaos theory, dissipative structure theory, and CAS theory (McLeod & Childs, 2013). The understanding of these notions is not universal due to the variety of definitions of complexity science. Although there are various interpretations, there are common elements of complexity science. Complexity science offers leaders a way of reducing these limitations. Many authors have used the concepts of complexity theory to study organizations, claiming that organizations are complex, nonlinear, self-organizing systems (Burnes, 2005; Cruz, 2016).

CAS Theory

The formation of CAS began in the 1980s with the collaboration of the Santa Fe Institute and the Los Alamos National Laboratory to conceptualize a common theoretical framework for complexity. Ilya Prigogine had been studying self-organizing structures in nature since the 1960s, when he observed that exposing atoms and molecules to energy and material flowing in from the outside partially reverses the decay required by the second law of thermodynamics (Lansing, 2003). Consequently, systems can spontaneously organize themselves into a series of complex structures. This theory resonated with the founders of the Santa Fe Institute and symbolized some of the early thinking on the self-organization of systems. There have been many contributors along the way, including George Cowan, Murray Gell-Mann, John Holland, Kenneth Arrow, and Margaret Wheatley. These individuals have made valuable contributions to the CAS.

Several fields use the application for CAS, including management and leadership (Biggs et al., 2010; Hagstrom & Levin, 2017; Levin et al., 2013). Research regarding adoption of CAS in higher education has still been limited. However, research based explicitly on higher

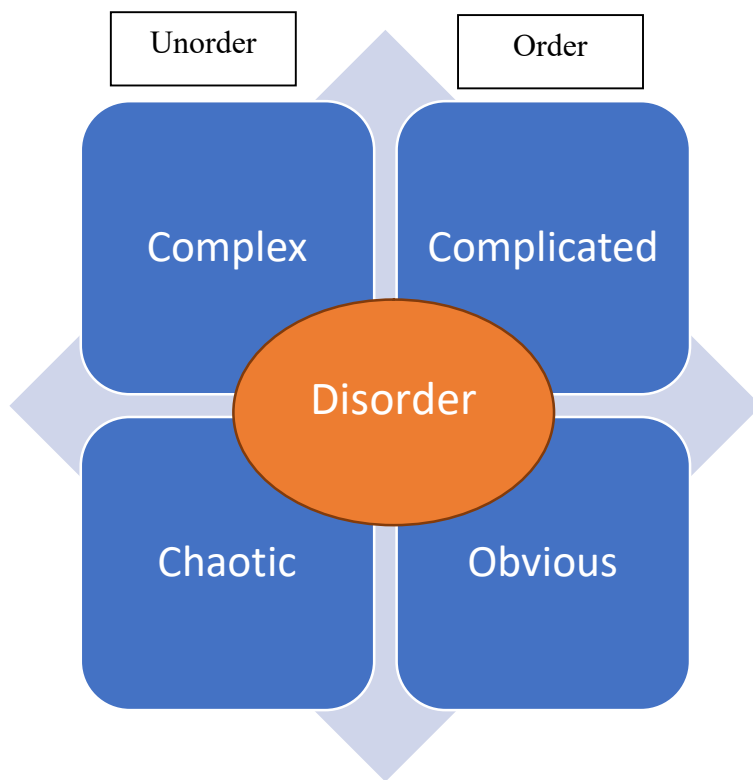
education institutions, such as CAS, has emerged recently. There are similarities between colleges and CAS. CAS differs from traditional systems in that they consist of components, subsystems, or subunits that can undergo changes and evolve in response to feedback from external stimuli (Priyadarshini & Abhilash, 2022). Higher education institutions are composed of several subsystems fundamental for effective functioning (Davis et al., 2015). Each of these subsystems, in turn, includes multiple variables (Ostrom, 2009). Careful analysis of the relationships between subcomponents and their strategic organization based on the characteristics of CAS can improve sustainability in institutions of higher education (Davis et al., 2015; Priyadarshini & Abhilash, 2022; Turner & Baker, 2019). Using CAS to understand the dynamics of public education issues can be identified, and appropriate government recommendations can be made for improvement (Fidan, 2017). The ability to evolve allows these systems to respond to the changing needs of society more efficiently.

Cynefin

Cynefin refers to habitat. When used in reference to people, cynefin can describe the elements of an individual's circumstances and history that impact their decision-making in a manner they may not fully comprehend (McLeod & Childs, 2013). The cynefin framework, created by David Snowden in 1999, originated from knowledge management and complexity science; it is a practical tool for how people perceive and make sense of situations to make decisions and take appropriate action (Snowden, 2010). The cynefin framework combined aspects of decision making, drawing on ideas from complexity science, particularly the concept of CAS. The cynefin framework features the metaphorical approach to applying complexity theory to organizations as a different lens to view sense-making and decision making (McLeod & Childs, 2013; Richardson, 2008).

As shown in Figure 1, the cynefin framework is a problem-solving tool that identifies three main categories: order, unordered, and disorder. The cynefin framework further divides these three categories into five situational domains: obvious, complicated, complex, chaotic, and disorder. Each domain has a unique decision-making approach that helps leaders understand a situation more fully and choose the most appropriate action related to the context (Snowden, 2010). See Figure 1 Cynefin Framework.

Figure 1 Cynefin Framework



Note: Adapted from A Leader's Framework for Decision Making, by D. Snowden & M. Boone, 2007, p. 1. Copyright 2023 by Harvard Business Review.

The characteristics of the domains are summarized and explained in detail based on relevant literature (Snowden, 2010). Order is the first category, which consists of two situational domains: simple and complicated. These domains have more obvious responses due to more evident cause and effect.

The obvious domain reflects situations with a clear cause and effect that has a best practice. Therefore, there is typically a correct answer. The response for this domain is to sense the situation, categorize it, and then respond based on a best practice in the form of a standard operating procedure (Snowden, 2010). Much like the obvious domain, the complicated domain has a cause and effect; instead of one correct answer, there could be multiple right answers. The decision model for the complicated domain is to sense, analyze, and respond. The decision model intends to help the decision-maker choose the most appropriate answer (Snowden, 2010).

Unorder is the second category comprising the situational domains complex and chaotic. Under this category, cause and effect are less clear (Snowden, 2010). Unpredictability and flux characterize the complex domain (Snowden, 2010). The decision model for this domain is to probe first to create sense and response practices unique to the situation. Only after an investigation produces answers can cause and effect be understood. The chaotic domain lacks any connection between cause and effect. Turbulence characterizes the chaotic domain. There are no correct answers in this domain; therefore, the decision model suggests that the decision-maker must act first and then sense and respond, which is closely related to crisis leadership. This domain leads to innovative practices to appropriately address the situation (Snowden, 2010).

Disorder is the third category and the fifth situational domain. The main goal of this domain is to gather more information to move the situation into another domain. Identifying and acknowledging that a situation is in disorder is extremely difficult. Disorder is the point where a situation does not fall into a different domain; therefore, leaders tend to choose familiar decision-making techniques (Snowden, 2010).

Summary

Research on food insecurity has been ongoing for over a century; however, only in recent years has the study of food insecurity among community college students begun to develop. Previous research has focused on the prevalence of food insecurity, factors associated with food insecurity, consequences of food insecurity, responses to food insecurity, and barriers to accessing resources for food insecurity. Furthermore, the literature highlighted a gap in research regarding understanding college administrators' perspectives on the challenges of addressing food insecurity on campus. Government and higher education institutions have responded to food insecurity with varying programs and resources; however, best and promising practices have yet to be identified, particularly among community colleges.

Chapter 3 - Methodology

This chapter provides an overview of the purpose of the study, the research questions addressed in the study, and the theoretical and conceptual frameworks that guided this study. Furthermore, this chapter discusses the research design used in this study and the rationale for selecting it, the study setting, participants, and instrumentation. Lastly, the researcher reviews the data collected and data sources, data analysis and credibility, ethical considerations for this study, and study limitations.

Purpose

The purpose of this study was to understand the best and most promising practices for addressing food insecurity in Texas community colleges and challenges administrators experience in implementing successful methods to address community college students' food insecurity.

Research Questions

The primary research questions addressed in this study were:

RQ1. What are the best and most promising practices for addressing food insecurities on a community college campus?

RQ2. What challenges do administrators face in implementing best and promising practices for food insecurity on campus?

Theoretical and Conceptual Frameworks

Like living organisms, community colleges must constantly adapt and evolve to ensure survival in response to constantly changing system dynamics. The complex adaptive systems (CAS) theory is the theoretical framework that guided this study. According to the Human Systems Dynamics Institute (2016), "As early as 1997, Kevin Dooley defined complex adaptive

system as a group of semiautonomous agents who interact in interdependent ways to produce system-wide patterns that influence the behavior of the agents” (p. 1). This model allows an organization to recognize the dominant patterns of the institution and the ways the agents in the system (e.g., students, faculty, administrators, community) interact-to create those patterns. Furthermore, the model allows the institution to consider how those patterns align with the landscape of the greater environment, such as the community’s values. It offers both the short view and the bigger picture for taking action (Human Systems Dynamics Institute, 2016). This theoretical framework was the most appropriate for this study because it focuses on how leaders of higher education systems think about their roles in designing, participating, and sustaining scaling strategies for change (Martin, 2019).

The conceptual framework used to code the data collection and analysis was the cynefin framework. The cynefin framework was developed with principles related to theories of how things are perceived. The five situational domains of the cynefin framework are obvious, complicated, complex, chaotic, and disorder. The domains apply to many different types of problems at different levels of an organization and in different contexts. The framework’s primary use is for effective decision making based on analysis of the context (Snowden, 2010). The researcher applied cynefin’s five situational domains to develop interview questions and code the college administrators’ interviews, documents, and observations.

Alignment ensures that research is well-designed and based on logical arguments (Ellis & Levy, 2008). Table 3.1, the alignment table, shows how the study’s research questions helped address the purpose of the study by linking the literature findings, research questions, theoretical frameworks, and interview questions.

Research Design and Rationale

This study used a qualitative multisite case study design. A qualitative approach focuses on people's experiences (Roberts & Hyatt, 2019) and places the problems in societal, organizational, cultural, or other settings (Lochmiller & Lester, 2016). Quantitative studies focus on describing patterns, trends, and relationships in numeric data. A quantitative approach was rejected for this study as statistical information would not contribute to the richness and depth of respondent information. In contrast, qualitative data provides detailed, thick, and robust experiences to capture perspectives and experiences (Creswell, 2002).

A case study is an empirical inquiry about a contemporary phenomenon set in its real-world context (Yin, 2009). This study used a qualitative multisite case study due to the emphasis on real-world context. This qualitative approach allows the researcher to explore a contemporary phenomenon, whereas historical research explores noncontemporary events that may not relate to the current context. Therefore, this study did not use a historical design.

Study Setting

Four sites were selected for this multisite case study to provide a more powerful analytic conclusion (Yin, 2012) and allow for data analysis from multiple perspectives. Specific criteria yielded the sites selected for this study.

The first criterion was that the institution must be a community college in Texas. The second criterion was that the community college must have one or more established resources dedicated to addressing food insecurity among its student population. To identify potential sites that met this criterion, the researcher conducted an online review of several community college websites to discover if information was provided about existing on-campus programs and

services aimed at alleviating students' lack of consistent access to adequate food. These resources may be long-established or recently established.

The third criterion was the college must be a #RealCollege Texas Coalition member. The #RealCollege Texas Coalition comprises 17 Texas institutions partnered with the Hope Center to scale best practices in addressing student basic needs (Hope Center, 2022). Unfortunately, the Hope Center changed its leadership, and the #RealCollege Texas Coalition was no longer available on the website, therefore eliminating this criterion. The researcher adopted a convenience sampling approach for the site participants. The final criterion was that there must be at least one small, one mid-size, and one large participating institution. The sample consisted of one small-sized college, one mid-sized college, and two large-sized colleges. Colleges were classified based on the Carnegie classification for 2-year colleges. A small college has between 500–1,999 students, a medium college has between 2,000–4,999 students, and a large college has 5,000–9,999 students (American Council on Education, 2022). This variety of college sample sizes allowed the researcher to identify patterns with potential transferability to different setting sizes and locations.

Study Participants

The identification of participants and collection of data for this study used purposeful sampling. Purposeful sampling involves the researcher selecting individuals or sites based on specific criteria (Lochmiller & Lester, 2016). The first criterion was that the participants had to be administrators. For this study, a college administrator was a coordinator or above. A coordinator typically oversees administrative operations. This multifaceted role involves tasks such as aggregating, organizing, and distributing information related to a given initiative (Indeed, 2023). Higher-level administrators possess greater decision-making authority and financial

insights. The diverse spectrum of participant roles provides understanding of both the hands-on efforts of front-line administrators and perspectives of decision-making leadership. The second criterion was the involvement of the participant in the implementation of food insecurity resources at their institution. The researcher interviewed 14 participants across the four community college sites. The researcher collaborated with the community college president or their designee to identify eligible participants. The institutional role of the 14 participants ranged from coordinator to president.

Instrumentation

This study used semistructured interviews, documents, and observations for data collection. Each instrument contributed to collecting appropriate data relevant to the research questions. The researcher collected and analyzed all data.

Semistructured interviews were chosen over structured interviews simply because structured interviews can limit the researcher's ability to obtain in-depth information on any given issue (Adler & Clark, 2014). In contrast, semistructured interviews provide the researcher with more flexibility (Lochmiller & Lester, 2016). This interview modality allows the researcher to address topics and inquire conversationally through open-ended, clarifying questions (Lochmiller & Lester, 2016). The protocol for the semistructured interviews addressed cynefin's five situational domains. The protocol used key topics to create the initial interview questions, and then additional exploratory open-ended, clarifying questions were asked to further the conversation. Community college administrators were presented with 10 prompting questions (see Appendix A). The researcher employed probing techniques, such as requesting further elaboration and seeking clarification, to extract distinctive information from each participant (Lochmiller & Lester, 2016).

The researcher used a site observation approach. The researcher used naturalistic observation and made discrete observations. Observations were made from site visits and included the campus sites, which are public spaces. Documents were used in triangulation to corroborate, elucidate, or expand on findings across other data sources (Frey, 2018).

Data Collection and Data Sources

The researcher collected data between March 2023 and May 2023. Research Questions 1 and 2 were addressed using all data sources. Interviews, researchers' observations, and documents comprised the data for the study. The researcher used Zoom, an online video platform to conduct semistructured interviews. All participants consented to recording their interviews, both in audio and video format. These recordings enabled the researcher to create accurate transcripts of the interviews, which were reviewed by each participant to ensure accuracy of the reported data. The researcher kept all recordings and other information in a secure location. The interviews were scheduled for 45 minutes and followed the interview protocol in Appendix A.

The researcher also conducted site visits to all four colleges. During these visits, the researcher took reflective field notes regarding observations during the visit. The observations followed the observation protocol in Appendix B. The researcher collected documents during the site visits, such as a memoranda of understanding with external partners, emails, marketing materials, meeting minutes, student surveys, and institutional policies. The researcher sent a list of requested documents to the representative at the college site to retrieve the documents.

All data collected were converted to a digital format and saved on a password-protected USB port to store all data for five years.

Data Analysis

Coding is the first step in the qualitative analysis process. A code is a text label that gives meaning to data. The researcher used inductive coding. Inductive coding is a ground-up approach where the codes are derived from the data (Kaluza, 2023). The interviews, documents, and observations were coded based on the framework developed by David Snowden in 1999, cynefin's five situational domains of obvious, complicated, complex, chaotic, and disorder. The coded data were then aligned with the research questions guiding the study. The researcher manually coded the data. The data analysis process followed the coding process.

The following table represents the data coding method relative to cynefin's (Snowden, 1999) five situational domains and the triangulation method of using multiple data lines to address the research questions. Triangulation is a credibility procedure wherein a researcher seeks to establish evidence across multiple data lines to reduce bias and enhance the validity and credibility of the research findings (Lochmiller & Lester, 2016).

Table 3.1. Example Coding Method

Cynefin's five situational domains	Semistructured interviews	Documents	Observations
Obvious (Best Practice)			
Complicated (Promising Practice)			
Complex (Emergent Practice)			
Chaotic (Novel)			
Disorder (Indeterminable)			

Study Quality

Credibility is a measure of the true value of qualitative research (Moran, 2021). The researcher used Tracy's eight "big tent" criteria to ensure quality in the qualitative study (Lochmiller & Lester, 2016). The researcher also used triangulation to establish the trustworthiness of the qualitative research.

Tracy's eight "big tent" criteria identify eight criteria for producing a quality qualitative study (Lochmiller & Lester, 2016). These criteria include a worthy topic, rich rigor, sincerity, credibility, resonance, significant contribution, ethics, and meaningful coherence. The research topic was worthy as it was relevant and timely as food insecurity in community colleges has become a heightened conversation among community college leaders after the COVID-19 global pandemic highlighted the need for resources specific to food insecurity (The Hope Center, 2022). A relevant theoretical construct supports the study and provides richness. It produced an appropriate sample to ensure abundant data were collected and led to rigorous data analysis and transferable findings. To exhibit credibility the researcher collected data through multiple instruments, including semistructured interviews, documents, and observations. The researcher then coded the data according to cynefin's five situational domains. The researcher expressed sincerity through a reflexivity statement in the ethical considerations. This reflexivity statement represents the researcher's transparency. The researcher used a triangulation validity procedure to ensure the study was credible.

Ethical Considerations

Ethics are foundational to research (Lochmiller & Lester, 2016). The researcher followed the ethical standards for educational researchers developed by the American Educational Research Association (AERA). The significance of respecting the rights, privacy, dignity, and

sensitivities of the research populations, as well as maintaining the integrity of the institutions involved in the research, is emphasized by AERA: Code of Ethics (2011). The AERA established five ethical principles to guide research: (a) professional competence; (b) integrity; (c) professional scientific and scholarly responsibility; (d) respect for people's rights, dignity, and diversity; and (e) social responsibility (J. Herman, 2002).

The researcher displayed professional competence throughout the study by recognizing the limitations of the researcher's expertise and the need for ongoing education to remain professionally competent. The researcher displayed integrity by conducting professional activities worthy of trust and confidence. The researcher accepted professional, scientific, and scholarly responsibility and consulted with colleagues to prevent or avoid unethical conduct (Lochmiller & Lester, 2016). To ensure the researcher respected people's rights, dignity, and diversity, the researcher sought approval from Kansas State University's Internal Review Board (IRB) before collecting any data for the research (see Appendix C). The researcher also invited consent from participants through an informed consent form (see Appendix D) and reiterated before the interviews that participation was voluntary, and participants may stop participating at any time during the study. The identity and place of employment have been kept anonymous by identifying each college by a number and each interviewee by a letter. All data has been kept confidential and will remain secured in a locked drawer on a password-protected USB drive for 5 years after completion of the research.

Reflexivity Statement

According to Berger (2013), a researcher's experience may shape the relationship between a researcher and the study or affect the use of language or the filtering lens in data collection. Reflexivity is intentionally accounts for the assumptions, biases, experiences, and

identities that may impact the research study (Lochmiller & Lester, 2016). I grew up in a house with a full fridge and pantry. However, my mother had a different childhood experience. Her home suffered from very low food security. Although it was not always apparent, experiencing food insecurity throughout her childhood led to several mental and physical health implications. In 2018, my mother was admitted to a rehabilitation facility to recover from an eating disorder. I spent six months with my mother while she was at the rehabilitation facility and sat in on numerous conferences with her doctor. During this experience, I learned terminology relevant to food insecurity and eating disorders, how to recognize an individual with a negative relationship with food, and methods to address this concerning issue. This experience and terminology knowledge could have influenced the interviews conducted for this study. On the other hand, this life experience may have allowed me to glean observations that someone without relevant experience would not.

Limitations

All studies have some limitations (Roberts & Hyatt, 2019). This study was limited to community colleges located in Texas; therefore, cultural differences and practices across state lines may limit the identified best practices for addressing food insecurity. The limited sample size may also constrain the study. This study utilized administrators solely from Texas community colleges. There were 14 participants from four community colleges who participated in the study. Due to the small sample size, the study may not be generalizable; however, the results could potentially be transferable.

Summary

This qualitative study aimed to understand further the best and most promising practices for addressing food insecurity in Texas community colleges and the challenges administrators

experience in implementing successful methods to address college students' food insecurity. This chapter reviewed the purpose of the study, theoretical and conceptual frameworks, research design, study setting and participants, instrumentation, data collection and analysis, study quality, ethical considerations, and limitations.

Chapter 4 - Findings and Analysis

This chapter presents an analysis of the data collected and the research findings. The chapter begins with findings organized by research questions. Finally, the chapter concludes with a summary.

Research Findings

This study was designed to understand the best and most promising practices for addressing food insecurity in Texas community colleges and challenges administrators experience in implementing successful methods to address community college students' food insecurity. The primary research questions guiding this study were:

RQ1. What are the best and most promising practices for addressing food insecurities on a community college campus?

RQ2. What challenges do administrators face in implementing best and promising practices for food insecurity on campus?

Participant Demographics

The researcher studied four community colleges with food insecurity resources for students. The participating sites included one small, one mid-size, and two large institutions (see Table 4.1). This variety of college sizes allowed the researcher to identify patterns that could be transferable.

Table 4.1 Participating Institution Sizes

Institution	Enrollment
Institution 1	8,200
Institution 2	1,700
Institution 3	4,600
Institution 4	61,000

The researcher conducted 14 one-on-one semistructured interviews with individuals across the four community colleges. To maintain participant confidentiality, the researcher designated the schools with numerical identifiers ranging from 1 to 4 and identified the participants using alphabetic identifiers from A to N (see Table 4.2). Interviews consisted of 10 female and four male participants.

Table 4.2. Participant Demographics

Institution	Number of participants	Females	Males
Institution 1	3	2	1
Institution 2	3	1	2
Institution 3	4	4	0
Institution 4	4	3	1
Total	14	10	4

Among the 14 participants, the majority were entry-level administrators such as coordinators and directors, followed by upper-level administrators such as executive directors, vice presidents, and executive vice presidents. While three mid-level administrators and two presidents also participated in the study (see Table 4.3).

Table 4.3. Number of Participants by Role

Institution	Lower level coordinator/director	Middle level dean/AVP	Upper level executive director/VP/EVP	President/CEO	Total number of participants
Institution 1	1	0	1	1	3
Institution 2	0	1	1	1	3
Institution 3	1	1	2	0	4
Institution 4	3	1	0	0	4
Total	5	3	4	2	14

Research Question 1 Findings

This section contains an analysis and summary of the research data for Research Question 1. The researcher presents data thematically across all four institutions including quotes from participant interviews, quotes are represented by quotation marks or indented if they are 40 words or longer. Tables illustrate the coding process.

Research Question 1 asked, “What are the best and most promising practices for addressing food insecurities on a community college campus?” The researcher asked the following seven interview questions to examine participants’ outlook on the best and most promising practices for addressing food insecurity on a community college campus:

IQ 1- Tell me about your role at (applicable research site).

IQ 2- What food insecurity resources does your college provide students?

IQ 3- How do you think this college has been able to approach food insecurity in a new way?

IQ 5- Tell me about some factors that made this change possible.

IQ 6- What external support did you receive to enable this change?

IQ 8- How did your team overcome these barriers?

IQ 9- Are there any other contributing factors that led to the scaling implementation of food insecurity resources at your college that we have not discussed?

Institution 1: RQ 1 Findings

Institution 1 food insecurity resources include food pantries, mini food pantries, and an emergency aid fund. The institution had one or more large food pantries on one or multiple campuses. The institution also had several mini food pantries throughout the campuses. Mini food pantries are small box structures holding nonperishable items individuals can grab from the

box any time. The institution also established an emergency aid fund providing emergency support for basic needs, including food insecurity.

Table 4.4 outlines the triangulation of data by delineating topics identified by participants during the semi-structured interviews as well as documents collected, and the source of collecting observations. These findings will be discussed in the following section.

Table 4.4. RQ1: Institution 1 Findings

Semistructured interviews	Documents	Observations
Campus Buy-in/Teamwork • (Participant A, B) College Philanthropic Foundation Support • (Participant A, C) Community Support • (All Participants) Data Informed Decision-making • (All Participants) External grants • (Participant A, C) Location Forward-facing • (All Participants) Leadership Support • (All Participants) Partnerships • (All Participants)	• Findings of survey conducted by institution • MOUs • Meeting minutes • Grant proposals	Site Visit

Institution 1 participant interviews, document analysis, and observations revealed eight themes, including (a) campus buy-in and teamwork, (b) college philanthropic foundation support, (c) community support, (d) data, (e) grants, (f) location and space, (g) leadership support, and (h) partnerships. Campus buy-in and teamwork led to uncovering student food insecurities, with an emergency aid team created to address student needs holistically. The college foundation was key in funding food resources and wraparound services through philanthropic support. Community support in the form of donations and food drives helped expand resources. Data was a major driving force, with surveys revealing the extent of food

insecurity among students. Grants enabled the expansion of resources, including hiring a counselor. Leadership support from the college president and board of trustees prioritized space for the food pantry. An accessible and visible location for the pantry helped reduce stigma. External partnerships strengthened resources, such as the local food bank and a neighboring university.

Campus Buy-in/Teamwork

Institution 1 participants focused on teamwork in the college, which led to uncovering student food insecurities. Participant A explained:

We created an emergency aid team and had to learn what food insecurities meant. The more we heard this from our students, the more we researched and realized that this is an issue for many people. The team helps streamline the process. We must look at financial aid and consult with counseling and other departments. Instead of working separately, we all get in the same room to look through applications; otherwise, serving one student would take me days.

Participant B explained:

The number one thing that made this (implementing food insecurity resources) possible is that we had tremendous buy-in from the campus community. It would have been something that would not have come to fruition, but it did because of everyone's support.

College Philanthropic Foundation Support

Institution 1's participants discussed the college foundation's key role in supporting food insecurity resources. Participant C commented, "The foundation is a huge piece in enabling these changes. Our foundation makes much of this possible, not just in purchasing food but with the wraparound services." Participant A mentioned:

We have an emergency aid for students. We have an emergency team that starts with the foundation. A lot of students start with a need for food, and that is what they asked for, but when we looked at the bigger picture, which is what the emergency aid team does, we look holistically at the students' records to see how else we can help beyond food.

Community Support

All participants from Institution 1 identified community support. Participants all agreed that the community heavily supported the initiative to address food insecurity. Participant B discussed the donation support from community organizations. Participant B explained: "Over the years, we have received over \$10,000 worth of donations from community organizations who have learned about our food pantry and other efforts to address food insecurity. Community organizations have also conducted food drives for us." Participant C commented:

We tell the story of our students. Our typical student is a Hispanic female. We have a picture of this one student. We talk about her kids; we talk about her struggle to move out of generational poverty, how she struggles to keep food on the table, and we tell them about how with help from them, she will be able to finish college and get a job with a sustaining wage. For the last 2 years, the people in this community have been falling over in their chairs when they hear the story, and we have gained community support to move this initiative forward.

Data Informed Decision-making

All participants at Institution 1 noted data as a major driving force behind the success of food insecurity resources at the institution. Participant A commented:

We have had to look at things differently regarding measurable outcomes. We were not sure how to measure those at first. Now, we have a triage station right outside the food

pantry with an iPad. The students can sign in with their student ID number. We cannot tell how many students are utilizing the pantry. When we apply for grants, we have the data to back it up.

Participant C further described the importance of data, saying:

When I started working at Institution 1, there were already some wraparound services. We launched a bunch of surveys and focus groups. We found that these were struggles that our students had before COVID-19; however, COVID-19 shined a light on them and exposed the equity gaps that have existed for years. When I arrived, it was time to start a new strategic plan. We made sure that we took our time and talked to all stakeholders. We found that 75% of our students are part-time, which has increased over time. Half of our students that are part time are working one or more jobs and struggling to put food on the table. We must use data to identify the problem and to determine the best approach for our students.

The researcher collected data sources during document analysis to further support the theme of “data informed decision-making,” including a strategic plan, an economic overview and a program gap analysis, and economic impact study. The institution outlined the data used to create the strategic plan, which was designed to holistically address student success and encompass basic needs, including food insecurity.

External Grants

Participants focused on the opportunities that grants have provided to expand food insecurity resources at the institution. Participant A mentioned:

We have been able to expand our emergency aid fund because of a few different grants. We did receive an emergency aid grant, and a portion of that was used to enhance the

food pantry. With that, we purchased a fridge to store cold goods, which are regulated, but now we have cold and frozen goods for students.

Participant C explained:

We applied for a Title V grant which was a 3.5-million-dollar grant that allowed us to hire a full-time employee who is a counselor and social worker. Her office is tied to the food pantry, and when students come in, she is not just giving them food; she is talking to them and finding out what their issues are so that she can give them resources and connect them to the community resources. They may go in for a bag of mac n cheese, but they are leaving enrolled in other programs.

Leadership Support

Participants acknowledged that the support of the college president and the board of trustees contributed to the successful implementation of food insecurity resources. Participant C mentioned, “The board of trustees are supportive. They believe in our vision and mission and us aligning everything seamlessly. Our resources are aligning with our goals.” Participant A described the impact of a supportive college president, saying, “Our president thought it was important enough to make it not taboo for students to feel uncomfortable asking for help. The college president fought for a prime location for the pantry.”

Location

According to interviews with Institution 1’s participants, having a visible and accessible area is crucial in effectively implementing resources for addressing food insecurity. Participant C explained, “We created a food pantry that looks like a store. It is small but has a window and is up front where everyone can see it.” Participant A further discussed:

Space is a hot commodity. Leadership thought this initiative was important enough to give it the space needed and not make it taboo for students. We do not want them to feel like they cannot go to the food pantry. We wanted it to be out front and not hidden.

During the site visit, the researcher located the food pantry quickly and concluded the pantry was visible and accessible.

Partnerships

Institution 1's participants strongly emphasized the importance of external partnerships regarding campus food insecurity resources. Participant A stated, "We partnered with the food bank instead of trying to get donations all the time. They are thrilled to partner with us. We order the food once a week, and they come in and make the delivery." Participant B discussed a unique partnership, saying:

We have partnered with the university that we share a campus with. We agreed that we would allow students from either institution to go to either food pantry. The university students will come over to our campus if they run low on supplies, and our students will go to the university food pantry if we run low.

During the document analysis, the researcher identified resources from the institution's website to support the results of the semistructured interviews. The institution identified the partnership with the neighboring university and the local food pantry, which indicated active partnerships.

Institution 2: RQ 1 Findings

Institution 2 food insecurity resources comprised food pantries, grocery store gift cards, and an emergency aid fund. The institution had large food pantries on one or multiple campuses. The institution distributed grocery store gift cards to students to supplement the student's grocery

bills. The institution also had an emergency aid fund providing emergency support for students' basic needs, including food insecurity.

Table 4.5 outlines the triangulation of data by delineating topics identified by Institution 2 participants during the semi-structured interviews as well as documents collected, and the source of collecting observations. These findings will be discussed in the following section.

Table 4.5. RQ1: Institution 2 Findings

Semistructured interviews	Documents	Observations
Campus Buy-in/Teamwork	• Grant proposals	Site Visit
• (All Participants)	• Emails	
College Philanthropic Foundation Support	• MOUs	
• (Participant E, F)	• Meeting minutes	
Data	• Findings of survey conducted by institution	
• (Participant F)		
Grants		
• (All Participants)		
Partnerships		
• (All Participants)		

Institution 2 participant interviews, document analysis, and observations revealed five themes (a) campus buy-in and teamwork, (b) college philanthropic foundation support, (c) data, (d) grants, and (e) partnerships. Participants emphasized the importance of campus-wide collaboration to effectively implement food insecurity resources. The college foundation provided financial support for the emergency aid fund. Data were used to identify food insecurity as an issue. Grants were the primary funding source for Institution 2's food insecurity efforts. While partnerships were difficult to establish, they were heavily relied upon.

Campus Buy-In/Teamwork

Institution 2's participants discussed the importance of campus buy-in and teamwork to create an environment conducive to change. Participant D stated:

I think the main factor contributing to successful implementation is to have everyone onboard, including faculty, staff, administrators, and our board coming together to realize that there is a need for food insecurity resources. I was then working together to formulate the best plan possible.

Participant E mentioned, “The employees have helped reach out and try to help students. After employees hear the student’s stories have been inclined to participate and help.”

College Philanthropic Foundation Support

Participant interviews from Institution 2 revealed college philanthropic foundation support as a theme. Participant F explained, “We have received financial support from the foundation to help with the emergency aid fund that allows us to provide students with gift cards for groceries.” Participant E mentioned, “I believe the foundation helps with community outreach and getting funds to help support our college-wide program that is centered on wraparound services.”

During the document analysis, the researcher identified resources through meeting minutes and emails outlining discussions regarding the foundation supporting the emergency aid fund.

Data Informed Decision-making

Participant F indicated data were used to determine that food insecurity was an issue at the institution. Participant F stated:

We have looked at the data to determine that food insecurity is an issue at the college, and it does not exist on just one campus. Food insecurity is an issue that is college wide. When students are not eating properly and getting proper nutrition, they are not learning

properly. If they are not learning properly, there is a domino effect, negatively impacting everything else.

During the document analysis, the researcher identified resources in the form of previously conducted student surveys and further identified discussions of the data in meeting minutes.

External Grants

All participants at Institution 2 mentioned grants during the one-on-one semistructured interviews. Participants discussed that they would not be making progress as quickly without grants. Participant F said, “Grants have been the main funding source for these efforts, and our progress would be stagnant without these grants.” Participant D discussed, “Through grants, we have been able to start a new program on the main campus to address food insecurity. It hasn’t gotten up to speed yet but is in progress.”

Document analysis further supported grants as a theme. The researcher identified several resources in the form of grant proposals and meeting minutes discussing using grant funds to develop and improve wraparound services at Institution 2.

Partnerships

Institution 2’s participants discussed that partnerships have been challenging to create; however, they heavily relied on them when addressing campus food insecurity. Participant D mentioned, “We have partnerships with different local food pantries and organizations in the community that we can refer students to if we do not have sufficient resources.” Participant E stated, “Partnerships are the foundation to creating strong support for our students.”

To further support the theme of partnerships, the document analysis revealed data sources in the form of meeting minutes, revealing that Institution 2 included partners in the standing committee meetings to ensure good collaboration.

Institution 3: RQ 1 Findings

Institution 3's food insecurity resources included food pantries, grocery gift cards, a mentor program, and an emergency aid fund. The institution has one or more large food pantries at one or more campus locations. The institution provided grocery gift cards to provide relief from grocery bills. The institution has an established mentorship program with mentors knowledgeable of food insecurity resources. Lastly, the institution has an established emergency aid fund to support students' basic needs in an emergency. See Table 4.5 RQ1: Institution 3 Findings.

Table 4.6 outlines the triangulation of data by delineating topics identified by Institution 3 participants during the semi-structured interviews as well as documents collected, and the source of collecting observations. These findings will be discussed in the following section.

Table 4.6. RQ1: Institution 3 Findings

Semistructured interviews	Documents	Observations
Campus Buy-in/Teamwork	• Syllabi	Site Visit
• (All Participants)	• Social Media	
College Philanthropic Foundation Support	• Website	
• (All Participants)	• Flyers	
Community Support	• Digital Ads	
• (All Participants)		
Data		
• (Participant G, I, J)		
Employee training		

Semistructured interviews	Documents	Observations
• (Participant G, J)		
Leadership Support		
• (Participant I, J)		
Marketing/Communication		
• (Participant G, I, J)		
Partnerships		
• (All Participants)		

Institution 3 participant interviews, document analysis, and observations revealed eight themes a) campus buy-in/teamwork, b) college philanthropic foundation support, c) community support, d) data, e) employee training, f) leadership support, g) marketing and communication, and h) partnerships. Campus buy-in and teamwork underscores the importance of collaboration across the campus, contributing to successful implementation of food insecurity initiatives. College philanthropic foundation support highlights the crucial role of the college foundation in implementing and supporting food insecurity resources at Institution 3. The strong support from the community, whether through donations or other means, aids in the successful implementation and improvement of food insecurity resources on campus. Participants emphasized the use of data to understand student demographics to tailor services that meet their specific needs. Participants stressed the impact of employee training in addressing food insecurity. Leadership support from executive-level administration was instrumental in implementing the current food insecurity resources at Institution 3.

Campus Buy-In/Teamwork

Participant interviews revealed that campus buy-in and teamwork contributed to successfully implementing food insecurity resources at Institution 3. Participant G commented, “I think having everyone all in and realizing we must jump and do something is a contributing factor. Having multiple people onboard was a cascade effect where everyone realized we need to

do this, so it is happening now.” Participant H further reiterated teamwork at the institution and stated:

We have hit roadblocks along the way, but we have continued to work together, always remembering that it is for the students. It is for the betterment of the college, and we are making a difference. We can tell our staff, ‘Hey, we have someone in need.’ They will come together and make it happen.

Participant I explained, “The college culture supports it, so it has become integrated. People feel it is important, so it gets the attention it needs to flourish.”

College Philanthropic Foundation Support

All of Institution 3’s participants identified the college philanthropic foundation support as a critical factor in implementing and supporting food insecurity resources. Participant J commented, “The emergency aid funds go through our foundation. It goes through our foundation board and not our general board of trustees. Everything is reported through those meetings, leading to the initiative’s greater focus.” Participant G explained, “We have the foundation, which has donated money that we can use for this as well. Realizing scholarships for the classroom is not all that money is needed for.” Participant I mentioned, “There are donations from our local grocery store chain, and the foundation works on that issue as well. We may receive monetary donations in the form of success funds.”

Community Support

All participants at Institution 3 discussed the strong community support received to help implement and continue improving food insecurity resources on campus. Participant H commented, “We have a very giving community, and it is nice to see. It makes a huge difference.” Participant H further stated:

The community will step in, even if they do not have it. They may not have money to donate, but they can probably donate some clothes, food, or something, and they will do it. You see it in the community.

Participant J mentioned, “I know we have had some outside donors from the community. Not just food but also shelves and furniture for the pantry.”

Data

Institution 3’s participants discussed data in several participant interviews. Participants discussed the importance of understanding the student demographics to provide services that meet their needs. Participant I discussed, “We have very different student populations at each campus location. We have housing on one campus, whereas another is a commuter campus. All those things must be considered when designing services.” Participant G explained, “You must consider that at community colleges, you will have many more people working full-time, and the demographics of the student population will be different. You must look at the data to understand who you are providing services for.”

Employee Training

Institution 3’s participants discussed the positive impact of employee training regarding addressing students’ basic needs, including food insecurity. Participant J commented:

We have sent numerous people to receive training. I take them to different conferences at other colleges. That has helped us a lot. We get to see some of the things that other colleges are doing. I think providing that opportunity for people to learn more about how to implement the services for students has been a big thing.

Participant G discussed, “Our advising staff went to another community college for a conference, and they came back and shared the information with other staff members. Educating our employees has been critical to this initiative.”

Leadership Support

While several participants mentioned leadership support during their interviews, comments regarding the topic were brief. Participants felt that leadership support from executive-level administration contributed to successfully implementing the current food insecurity resources. Participant I commented, “There has been robust support from the CEO level. This is something that is near and dear to the college president’s heart and all the Cabinet members.” Participant J also mentioned that the college president was very supportive of the initiative.

Marketing/Communication

Participant interviews revealed that improving their marketing and communication efforts has enhanced the student usage of food insecurity resources. Participants felt as though communication was a challenge. Therefore, they began to focus on marketing differently. Participant J mentioned, “We have now included a statement on all our syllabi.” Participant G commented, “We talk about it during student orientation. Any new student is now required to go to the orientation, where we physically talk to them. We also have rolling screens in every building, with advertisements there.”

The researcher located data sources during document analysis in the form of the institution’s website and social media posts. The website advertised food insecurity resources. The researcher also noted several marketing pieces during the site visit, including a flyer and an advertisement on the campus community television screens.

Partnerships

Participants from Institution 3 discussed partnerships as a vital component to implementing food insecurity resources. Participant H said:

I think working with local grocery stores to meet students' needs is important since our food pantry is not always manned. Instead, we can give students a gift card, and then they can go to the store and get what they need when needed.

During document analysis, the researcher identified resources in the form of the institution's website. The website listed several partnerships in the community that were able to help students with food insecurity.

Institution 4: RQ 1 Findings

Institution 4's food insecurity resources included food pantries, mobile pantries, and workshops. The institution has one or more large food pantries on multiple campuses. The institution offered a mobile food pantry service. Lastly, the institution provided resources and educational workshops on topics such as the Supplemental Nutritional Assistance Program (SNAP) and nutrition.

Table 4.7 outlines the triangulation of data by delineating topics identified by Institution 4's participants during the semi-structured interviews as well as documents collected, and the source of collecting observations. These findings will be discussed in the following section.

Table 4.7. RQ1: Institution 4 Findings

Semistructured interviews	Documents	Observations
Campus Buy-in/Teamwork	• Website	Site Visit
• (Participant L, N)	• Social media	
College Philanthropic Foundation Support	• News article	
• (Participant K, L, N)		
Community Support		
• (All Participants)		
Data Informed Decision-making		
• (Participant K, M, N)		
Employee Training		
• (Participant K, M)		
External Grants		
• (Participant M)		
Leadership Support		
• (Participant K, N)		
Marketing/Communication		
• (Participant L, M, N)		
Staffed Department		
• (Participant K, M)		
Partnerships		
• (All Participants)		

Institution 4's participant interviews, document analysis, and observations revealed 10 themes (a) campus buy-in and teamwork, (b) college philanthropic foundation support, (c) community support, (d) data, (e) employee training, (f) grants, (g) leadership support, (h) marketing and communication, (i) staffed department, and (j) partnerships. Campus buy-in and teamwork was vital for getting everyone onboard. The college foundation helps support efforts by funneling funding into the initiative. Community support through donations and external collaborations allows the institution to sustain these resources. Data serves as the backbone of supporting proposals to reallocate resources and identify gaps. Employee training ensures that faculty and staff are equipped to assist struggling students. Grants enable the institution to overcome financial barriers. Leadership support lends credibility and pushes these initiatives forward. Marketing and communication efforts spread awareness about the resources available to

students. A fully staffed department ensures a comprehensive and holistic approach towards addressing food insecurity, and partnerships with organizations like local food banks provide additional support.

Campus Buy-In/Teamwork

Institution 4's participants identified campus buy-in and teamwork as a theme. Participants discussed that campus buy-in and teamwork were essential to successfully implementing food insecurity resources. Participant N stated, "A factor that made change possible was getting the chancellor and the presidents onboard." Then further stated, "We have everyone onboard, the whole campus: the instructors and the staff. Everyone is on board with the food pantries. They appreciate that the food pantries are there, and many faculty tell the students about the resources." Participant L stated, "This is a collaborative effort internally." Furthermore, Participant K commented, "Having the buy-in and support from administration and the community is the key to making any of this possible."

College Philanthropic Foundation Support

While several participants mentioned college philanthropic foundation support during the interview protocol, comments were brief. Participants seemed to know the foundation was involved but did not know details of the involvement. Participants discussed how the college foundation supported the college's efforts to implement and sustain food insecurity resources. Participant K commented, "The college foundation is one of our biggest supporters, and they have funneled a lot of the funding for our pantries and addressing food insecurity."

The researcher located a data source in the form of a news article covering a financial contribution from the college's foundation to expand the food pantries and other wraparound services. This data further supported the theme of college philanthropic foundation support.

Community Support

All of Institution 4's participant interviews discussed community support as a contributing factor to successfully implementing food insecurity resources on campus.

Participant L said, "Donations from the community have allowed us to implement and sustain the resources we provide." Participant L also mentioned, "We are always intentional and let them know about the community resources." Participant M stated, "We have received external support through collaboration and partnership with our community members." While all participants indicated that community support was vital to implementing and sustaining food insecurity resources, comments were brief suggesting that participants may not have been involved in the community relations: however, participants were aware of the support provided by the community.

Data Informed Decision-making

Participants from Institution 4 identified data as a theme. Participant K said:

Higher education is becoming more data-driven, and the data is unique to higher education. I think that factors such as the HOPE Center and other research institutions collecting data on housing, food insecurity, and other basic needs among college students paint a picture that we must do something about it. We must collect our own data to ensure our resources are equitable across the board and create a baseline so that those gaps between campuses are no longer there.

Participant N discussed the role of data in gaining buy-in from leadership, "We were able to get the chancellor and president onboard; data played a big part in that." Participant M mentioned:

I think data is at the heart of everything we do, and we crunch our numbers. That is what we had to produce to leadership and the college in the sense of why we need the pantries

and funding. I think that data is the big part of it because what we needed to do better before we were able to get to this point was tracking our students that are coming in. How many people need this and so making sure that we are using documents and processes that make sense that help us portray and project the needs that we have as staff and to be able to serve students. Again, these numbers are helping us with our justification. The sense of how many coordinators we need. What is the budget for? What do our departments look like for marketing, programming, and different things like that? I think it boils down to data. The data helps us the most and probably is our biggest contributing factor.

Employee Training

Participants focused on training employees so that if a student needs help, employees, at a minimum, know where to send the student. Participant M discussed, “Educating faculty and staff who may be working with students and are hearing that students are struggling so that they have a well-based knowledge and some educational factors.” Participant K mentioned, “All of our staff are trained on SNAP and know enough about how to navigate the application. We just know how complicated the application can be.”

The researcher found a data source from the institution’s website. The website discussed training employees to help students complete the SNAP and Temporary Assistance for Needy Families applications.

External Grants

Institution 4’s participants focused on the role of grants in overcoming financial barriers to addressing food insecurities on campus. Participant M commented, “Our department depends

on grants we write to keep the funding going. We recently were awarded a grant to help with some financial barriers.”

The researcher located a data source in the form of a news article discussing the expansion of current food pantries at Institution 4 due to receiving a grant. The news article supported the claim that grants are crucial to implementing and sustaining food insecurity resources at Institution 4.

Leadership Support

Participants from Institution 4 identified leadership support as a theme. While several participants mentioned leadership support during the interview process, comments were minimal. Participant N stated, “A factor that made change possible was getting the chancellor and the president onboard.” Participant L mentioned, “Occasionally, during our mobile pantry drives, the chancellor and board members will come out and take pictures. They are very supportive from what I have experienced.” Participant K commented, “Having buy-in and the support from administration and from the community, is the key to making any of this possible.”

Marketing/Communication

Participants from Institution 4 discussed the importance of marketing and communication to implement food insecurity resources successfully. Participants focused on holistic communication and broader communication. Participant N discussed the role of faculty and staff in communicating resources to students, saying, “Our faculty and staff play a huge part in getting the word out to assist students with food insecurity.” Participant L discussed that the college approached food insecurity in a new way by marketing several ways to reach students. Participant L mentioned, “We ran a commercial and have been on the news for the resources.”

The researcher located data sources through social media posts and the institutional website. The social media posts were inviting, insinuating the services were for everyone and attempted to eliminate stigma. The website was very informational and user-friendly. The researcher concluded from observation that there were marketing efforts beyond social media posts and the institution's website including directional signage for the food pantry on campus. This data supported the theme of marketing and communication.

Partnerships

All participants referenced partnerships during the individual semistructured interviews conducted at Institution 4. Some participant remarks were concise, while others were able to expand upon their answers, suggesting that certain participants were more actively engaged with partnerships whereas others were aware partnerships existed but had less familiarity. Participants discussed the critical role partnerships play in implementing and sustaining food insecurity resources on campus. Participant N commented, "The partnership with the local food bank is a factor that made these changes possible." Participant K mentioned:

The local food bank is our largest supporter and funny enough when COVID-19 hit, everywhere was closed. Hundreds of people did not have food, so the local food bank was pleading with people to do these mobile pantries. We had all been remote for months and were happy to do them. We already had that partnership, but it watered the seeds and developed a new approach to food insecurity.

The researcher located a data source from the institution's website and news articles during document analysis. Both data sources acknowledged the college's partnerships with different organizations.

Fully Staffed Department

Institution 4's participant interviews focused on the positive impact of having a fully staffed department focused on addressing food insecurity and other basic needs. Participant K stated, "We fought for the pantries and basic needs to become a fully staffed and fully functioning department to provide resources to students comprehensively and holistically." Participant M explained, "We have created a network encompassing multiple offices that offer a collaborative and holistic approach to serving students. The network has a senior care coordinator, some basic need coordinators, licensed counselors, nurses, and health professionals' staff."

During the document analysis, the researcher was able to locate a data source in the form of the institution's website, which outlined the department's services for wraparound services. During the site visit, the researcher concluded that staff were present at food pantries and they could assist students with other resources when needed.

RQ1 Findings Summary

Research Question 1 asked, "What are the best and most promising practices for addressing food insecurities on a community college campus?"

The researcher identified common themes across all four community colleges by analyzing the data gathered from interviews, documents, and observations. There were four major themes that all community college participants identified (a) campus buy-in and teamwork, (b) college philanthropic foundation support, (c) data, and (d) partnerships. Themes identified by at least three of the four community colleges comprised (a) community support, (b) employee training, (c) grants, and (d) leadership support. Lastly, themes identified by two or

fewer of the community colleges included (a) employee training, (b) location, and space, (c) marketing and communication, and (d) staffed department.

Table 4.8 RQ1: Summary of Findings

Themes	Obvious (best practice)	Complicated (promising practice)	Complex (emergent practice)
Campus Buy-in/Teamwork	4	—	—
College Philanthropic Foundation Support	4	—	—
Community Support	—	3	—
Data	4	—	—
Employee Training	—	—	2
Grants	—	3	—
Leadership Support	—	3	—
Location	—	—	1
Marketing/Communication	—	—	2
Partnerships	4	—	—
Staffed Department	—	—	1

Participants identified several best and promising practices for addressing food

insecurities on campus. The categorization of themes is included in the above Table 4.8 RQ1:

Summary of Findings. Themes were categorized as best practices if each institution recognized the theme. Themes categorized as best practices included campus buy-in/teamwork, college philanthropic foundation support, partnerships, and data. Themes were categorized as a promising practice if the theme was recognized by at least three of the four institutions.

Promising practices were community support, employee training, grants, and leadership support.

Lastly, the theme was categorized as an emergent practice if two or fewer institutions recognized the theme. An emergent practice is a practice that could be a best or promising practice in the future. Emergent practices were employee training, location, marketing and communication, and a fully staffed department.

Research Question 2 Findings

This segment contains an analysis of the research data for Research Question 2. The researcher presents data thematically across all four institutions including quotes from participant

interviews, quotes are represented by quotation marks or indented if they are 40 words or longer. The tables illustrate the coding process.

Research Question 2 asked, “What challenges do administrators face in implementing best and promising practices for food insecurity on campus?” The researcher asked the following four interview questions to examine what participants felt were challenges to implementing food insecurity resources on a community college campus:

IQ 1- Tell me about your role at (applicable research site).

IQ 4- What aspects of the educational system did you have to consider making these changes?

IQ 7- What were some of the barriers to change?

IQ 10- Is there anything you would do differently to make the program more successful?

Institution 1: RQ 2 Findings

Institution 1’s food insecurity resources included food pantries, mini food pantries, and an emergency aid fund. Institution 1’s participant interviews, document analysis, and observations revealed four themes: (a) awareness and communication, (b) location and space, (c) mindset and stigma, and (d) staffing and employee time. The table outlines the triangulation of data by identifying participants during the semi-structured interviews as well as documents collected, and the source of the observations made (see Table 4.9).

Table 4.9 RQ2: Institution 1 Findings

Semistructured interviews	Documents	Observations
Awareness/Communication	• Website page	Site Visit
• (Participant C)	• Bond info sheet	
Location/Space	• Bond presentation	
• (Participants A, B)		
Employee Time/Staffing		
• (Participants A, B)		
Mindset/Stigma		
• (Participants A, C)		
Awareness and Communication		

Participant C mentioned awareness or communication twice during the one-on-one semistructured interview, indicating that awareness and communication may be a challenge administrators face while implementing food insecurity resources on campus. Participant C commented, “I would love to know that 100% of our students know about our food insecurity resources and understand that it is for them. Many students do not think the resources are for them because someone else might need them more.”

The researcher located several data sources to support the theme of awareness and communication during document analysis. One data source was an information link on the institution’s website. The informational link supports the theme of awareness and communication; however, the wording on the website may unintentionally suggest the services are for some and not all. Through observation, the researcher also noted the location was easily identifiable, which could increase awareness.

Employee Time and Staffing

Institution 1’s participants discussed the desire for more staff to support the food insecurity resources on campus. Participant A stated:

It would be nice to have a student worker or an entry-level position just for the food pantry. So that there is always somebody there. Currently, students must wait for someone from across the hall to come to help them. The wait of even a few minutes could be long enough for a student to get scared and leave.

Furthermore, Participant B stated, “I would hire someone to oversee all support services that we offer. A dedicated full-time person to assist with the shopping but also engage the student to figure out what other support the student may need.”

Participant A mentioned employee time during the one-on-one semistructured interview. Participant A commented, “It is difficult to take time away and other team members’ time away from their current position to implement this in a way that will be sustainable and not interfere with other services due to the additional duties.”

The researcher concluded from an observation to support employee time and staffing as a theme. One participant from Institution 1 was difficult to schedule and was late to the semistructured interview due to covering additional duties in the food pantry.

Location and Space

Two participants from Institution 1 discussed location. The location of the food pantry has changed over the years. Although participants were content with the current location, there are plans to build new facilities and improve the space and location of the food pantry.

Participant B explained:

Leadership has been adamant about the food pantry’s location. We had to ensure it was in an easily accessible location. We were able to identify a space that we would later realize that someone was using as an office space.

Participant A expressed, “Our biggest hurdle was the location.”

Mindset and Stigma

Participants from Institution 1 spoke about changing the mindset of faculty and staff to understand the issue and changing the mindset of those who need access to the resources.

Participant A mentioned:

Informing and educating staff and faculty that food insecurity is an issue in our community and that the necessary resources are needed. Not many people thought it was an issue, and those who knew it was an issue did not think we, as a college, could solve it.

Participant C commented, ‘I think getting the word out compellingly by crafting a narrative that tells the story. If you are not careful, some people may say it is the student’s fault.’ Participant C also discussed the need to change the mindset of students who may be affected by food insecurity but are hindered by the stigma or the mindset that the resources are meant for people with a greater need. Participant C explained:

We want to take the stigma out of food insecurity, and our message to our students is, “It is fine to access food from the food pantry because as soon as you finish your education, you will not need it anymore, and you will be able to pay it forward to others. They think the resources are not for them because someone else might need them more than them.”

Institution 2: RQ 2 Findings

Institution 2’s food insecurity resources comprised food pantries, grocery store gift cards, and an emergency aid fund. Institution 2’s participant interviews, document analysis, and observations revealed six themes: (a) accessibility, (b) awareness and communication, (c) employee training, (d) lack of resources, (e) location and space, and (f) mindset and stigma (see Table 4.10).

Table 4.10 RQ2: Institution 2 Findings

Semistructured interviews	Documents	Observations
Accessibility • (Participant D, E, F)	• No Marketing Materials	Site Visit
Awareness/Communication • (Participant D)	• No Website page • No MOUs	
Employee Time/Staffing • (Participant D, F)	• Word of mouth • Syllabi	
Lack of Resources • (Participant E, F)		
Location/Space • (Participant D, F)		
Mindset/Stigma • (Participant D, F)		

Accessibility

Institution 2's participants focused on the time constraints because of the staffing.

Students can only access the food pantry when a staff member is available. External sources provide other resources, meaning the student must travel to another organization or wait until the organization has a representative on campus. Participant E stated, "If you are hungry, you cannot wait until next week or until the food pantry is open."

The researcher could not locate any data sources listing specific hours of operation or specific dates external partners visited campus. Also, there was no page on the website communicating the available resources. The researcher concluded from observation that hours for the food pantry were not listed. These observations supported the theme of accessibility.

Awareness/Communication

Participant D focused on awareness among faculty and staff regarding the issue of food insecurity. Participant D explained:

Being transparent and open with the rest of the college about the purpose because I think some people do not understand the mission and the purpose of implementing food

insecurity resources such as a food pantry. I think this is why we have so many roadblocks.

All syllabi at Institution 2 included a basic needs insecurity statement listing a point of contact for students. The researcher could not locate any data sources for marketing the food insecurity resources. Also, the website did not communicate available resources. During the site visit, the researcher concluded from observations that the method of communicating the available resources was through word of mouth. These observations supported the theme of awareness and communication as a challenge.

Employee Time and Staffing

Institution 2's participants focused on the challenge of limited staffing for implementing and sustaining food insecurity resources. Participant D commented, "The biggest barrier I see is coming up with staffing for a food pantry." Participant F stated, "Supervising the wraparound services has been problematic. We know it is needed, but we do not have the human resources."

Lack of Resources

Institution 2's participants discussed the need for more resources due to the college's rural location and limited community partnerships in the area. Participant E explained, "We are rural; therefore, we have a small community outreach, and other organizations have already tapped into some of those resources. The lack of community partnerships is one of the main barriers to implementing food insecurity resources."

Location and Space

Institution 2's participants implied finding a location with enough space to house the food pantry has been difficult. Participant F mentioned, "We are still trying to find a constant location which may require constructing a new building." Participant D mentioned, "I think trying to

figure out the staffing of the food pantry and at the same time providing a space and a time when students can go, and they will not be reluctant to show up.”

Mindset and Stigma

Participants focused on the mindset of faculty and staff and the stigma affecting students’ use of the resources. Participant D stated:

Being transparent and open with the rest of the college about the purpose because I think some people do not understand the mission and the purpose of implementing food insecurity resources such as a food pantry. I think this is why we have so many roadblocks.

Participant F discussed the stigma attached to food insecurity by stating:

How do we help people that are not afraid of being helped but afraid of the sting of being helped? People have pride and do not want to be known as the individual needing help. We have tried to identify ways to identify students that need help, but that is still a work in progress.

Institution 3: RQ2 Findings

Institution 3’s food insecurity resources included food pantries, grocery gift cards, a mentor program, and an emergency aid fund. Institution 3’s participant interviews, document analysis, and observations revealed five themes: (a) accessibility, (b) awareness and communication, (c) employee time and staffing, (d) location and space, and (e) mindset and stigma (see Table 4.11).

Table 4.11 RQ2: Institution 3 Findings

Semistructured interviews	Documents	Observations
Accessibility (Participant G, J, H)	- Syllabi statement - Marketing on screens - Website	Site Visit
Awareness/Communication (Participant G, J)		
Employee Time/Staffing (Participant H, I, J)		
Location/Space (Participant G, H, I, J)		
Mindset/Stigma (Participant G, J)		

Accessibility

Participants conveyed unease regarding the food pantry's location and the hours of operation. Participant H suggested, "Find a centralized location that is easier for the students to access, such as the building where most students spend their time." Participant G commented:

I would say accessibility was probably one of the biggest challenges at the beginning because our food pantry used to be a closet for clothing, and then we morphed it, and it was in a different building. We had to think about where would be a place that would be more accessible to students. So, we moved it over to a centralized building.

Awareness or Communication

Participants discussed the need for more communication to increase awareness of the food insecurity resources provided by the institution. Participant G mentioned:

We do a good job with advertising, but I think we need to have more intentional conversations with students because the more you talk with students, the more you pick up on things or, the more likely they are to trust you and let you know what they need so, you can let them know what resources are available.

Participant J expressed a similar concern, saying:

We need to communicate better. I know we have the statement on our syllabi and marketing the resources in other ways, but even if the students see it, they still must take the next step and use the services. We are communicating in a way that does not make it the least bit embarrassing for students.

Employee Time and Staffing

Participants made several comments regarding increasing the staff to assist with food insecurity resources. Participant I stated, “If we had more human resources, it would be helpful. I would suggest a full-time person who could oversee programs for basic needs in general.” Participant J commented, “Manpower is an issue. Ideally, we should have a full-time person that could be out speaking to and meeting with groups to communicate the services and keeping the food pantry stocked.” Participant I commented, “Everyone already wears many hats within their jobs. The biggest barrier was having enough time to begin a project and get it moving.”

Location and Space

All participants expressed the obstacle of locating a space that is central and consistent in the location as they have previously moved the pantry. Participant J stated, “It has been a challenge to find space, and it has been different on each campus.” Participant H expressed concern with the pantry’s location because it was not centralized, “Location has been the biggest barrier. I would suggest finding a centralized location that is easier for the students to find and access.”

The researcher concluded from observations that the food pantry was difficult to find and students must request an employee unlock it. However, it was in an office where employees could guide students to other available resources if needed.

Mindset and Stigma

Institution 3's participants focused on student mindset stemming from the stigma associated with food insecurity. Participant G explained, "It is almost taboo to talk about food insecurities because students do not want to talk about that kind of stuff." Participant J commented:

The mindset of students is a challenge; I would love to talk openly to the students who really need these services to find out how best to meet their needs and get them to take advantage of the services. I think it is a challenge because of their mindset.

Institution 4: RQ 2 Findings

Institution 4's participant interviews, document analysis, and observations revealed four themes: (a) awareness and communication, (b) employee time and staffing, (c) location and space, and (d) mindset and stigma (see Table 4.12). Institution 4's food insecurity resources included food pantries, mobile pantries, and workshops.

Table 4.12. RQ2: Institution 4 Findings

Semistructured interviews	Documents	Observations
Awareness/Communication • (Participant K, L, M, N)	• Website	Site Visit
Employee Time/Staffing • (Participant K)		
Location/Space • (Participant K, M)		
Mindset/Stigma • (Participant K, M, N)		

Awareness and Communication

Participants discussed the need to make students aware of available resources and communicate that the resources are for them. Participant L discussed:

Getting the word out to the students is a barrier; often, students come to college not realizing that there is another side to things; it is not just academics. Make them aware that we have resources available and that it is easy to use them because if they feel it will be difficult, they will not use them.

Furthermore, Participant N commented:

One barrier is making sure that the students know about the food pantry and other resources and that they know that it is there for them to come in and use it. We are there for them to ensure they get what they need to succeed in school. I think that is the biggest barrier right now.

Employee Time and Staffing

Participants discussed the complication of adding an initiative to current employees' workload. Participant K explained, "When I started with Institution 4 a few years ago, we had a food pantry; however, it was probably the seventh job for one person. The initiative was not moving forward as quickly as it should have."

Location and Space

Participants focused on the need for additional space to house the food pantries. Participant K discussed, "If I could snap my fingers and it is tomorrow, I would have more buildings with more space to house the food pantry and other food insecurity resources together."

During the site visit, the researcher concluded the food pantry space was small, and each campus space was different in size. These observations supported the theme of location and space.

Mindset and Stigma

Participants discussed students' shame that has been disclosed during interactions.

Participant N discussed the following: "There is a shame factor that some students or many students have from utilizing the pantry. They do not want people to know they have food insecurity." Participant K stated:

Oh, stigma! I did not talk about stigma, but I think the stigma would be addressed if our students were not afraid or felt less than for needing assistance. I hear all too often from students that they do not need food. What do you mean you do not need food? You are telling me that you cannot pay your car payment, you are behind on your bills, your financial aid was just suspended, or you just lost your job. Where in this scenario do you have money for food? Furthermore, they will say, 'Well, someone else may need that more than me.' A lot of conversation is around stigma among students. They do not want to be the one that needs help.

RQ 2 Overall Summary

Research Question 2 asked, "What challenges do administrators face in implementing best and promising practices for food insecurity on campus?"

Table 4.12 summarizes the findings of what Texas community college administrators expressed as challenges faced when implementing best and promising practices for food insecurity on the community college campuses included in this study. Responses from the colleges were remarkably similar, indicating accessibility, awareness and communication, employee time and staffing, lack of resources, location and space, and mindset and stigma as recurring themes for Research Question 2. The major themes for Research Question 2 include:

(a) awareness and communication, (b) employee time and staffing, (c) location and space, and (d) mindset and stigma (see Table 4.13).

Table 4.13 RQ2: Summary of Findings

Challenge	Number of participants who identified theme	Number of institutions that identified the theme
Accessibility	6	2
Awareness/communication	10	4
Employee time/staffing	8	4
Lack of resources	2	1
Location/space	10	4
Mindset/stigma	9	4

Participants identified several challenges to addressing food insecurities on campus. The categorization of themes is included above in Table 4.13 RQ2: Summary of Findings. Topics were identified as challenges if the topic was mentioned in more than one participant interview. Topics were categorized as a major theme if the topic was mentioned by one or more participants at each institution.

Summary

This chapter began with a review of the research questions for this study, followed by participant demographics. The researcher then presented the data thematically from multiple community college sites that have established student food insecurity resources on campus. The researcher organized the findings by themes found at each community college for Research Questions 1 and 2. The researcher then identified overarching themes. Chapter 5 provides further analysis of the data relative to the research questions, implications of the findings, and recommendations for future research, followed by a summary.

Chapter 5 - Conclusions and Recommendations

This chapter provides an overview of the problem, the study's purpose, research questions, and theoretical and conceptual frameworks that guide the study. A review of the methodology and the data collection and analysis follow. The chapter concludes with a discussion of the study findings and related literature by research question, practical implications, unexpected results, recommendations for future research, and the conclusions drawn by the researcher.

Problem Overview

Food insecurity among college students continues to be an issue that often presents as a barrier to student persistence and completion (Dubick et al., 2016). Community colleges frequently face challenges addressing food insecurity as they serve highly diverse student populations, including many from low socioeconomic backgrounds (Maroto et al., 2015). While food insecurity exists among students across all institutions of higher education, community colleges particularly struggle with this issue, given that their student bodies experience higher rates of food insecurity yet receive comparatively less public funding than four-year institutions. This constraint negatively impacts community colleges' capacity to implement programs and services that can alleviate the problem of students lacking reliable access to nutritious food (McCoy et al., 2022).

Historically, community colleges have enabled underrepresented populations to pursue higher education (San Diego Foundation, 2022). However, community colleges are now accountable for providing access to higher education and improving student success rates while simultaneously experiencing funding cuts (Mitchell et al., 2016).

Food insecurity can be a barrier to student success. There is an expectation that community colleges create an environment cohesive to learning, which requires a comprehensive response to food insecurity; however, this remains a challenge for community colleges as they continue to experience decreases in funding.

Purpose of the Study

The purpose of this study was to understand further the best and most promising practices for addressing food insecurity in Texas community colleges and the challenges administrators experience in implementing successful methods to address community college students' food insecurity.

Research Questions

The two primary research questions that guided this study were:

RQ1. What are the best and most promising practices addressing food insecurities on a Texas community college campus?

RQ2. What challenges do administrators face in implementing best and promising practices for food insecurity on campus?

Theoretical and Conceptual Frameworks

The theoretical framework used to guide this study was the complex adaptive systems (CAS) theory, defined as “a group of semiautonomous agents who interact in interdependent ways to produce system-wide patterns that influence the behavior of the agents” (Human Systems Dynamics Institute, 2016, p. 1). This model allows an organization to recognize the dominant patterns of the institution and the ways the agents in the system (e.g., students, faculty, administrators, and community) interact to create those patterns. Furthermore, the model allows the institution to consider how those patterns align with the landscape of the greater

environment, such as the community's values. It offers both the short view and the bigger picture for action (Human Systems Dynamics Institute, 2016).

The conceptual framework for this study, developed by David Snowden in 1999 was the cynefin framework. The cynefin framework includes principles related to theories of how humans perceive things. The five situational domains of the cynefin framework are obvious, complicated, complex, chaotic, and disorder. The domains apply to many different types of problems at different levels of an organization and in different contexts. The framework's primary use is for effective decision making based on the analysis of the context (Snowden, 2010).

Methodology

This qualitative study used a multisite case design exploring the best and most promising practices for addressing food insecurity in Texas community colleges and challenges administrators experience in implementing successful methods to address community college students' food insecurity in Texas. This multisite case study design allowed the researcher to identify patterns and themes (Yin, 2018) across four community colleges.

Data Collection and Analysis

The researcher collected data for this study through semistructured interviews. The researcher used the online video conferencing system Zoom to conduct each interview. This platform allowed for video and audio recordings with permission from the participants. All interviews were one-on-one, which allowed participants to answer the open-ended questions honestly and for the researcher to ask follow-up questions specific to the individual interview. Appendix A includes the interview protocol. The researcher also used a naturalistic observation approach, in which the researcher took reflective field notes during the site visits. Appendix B

includes the observation protocol. The researcher also collected documents for review. The researcher sent a list of requested documents to each site's point of contact. The documents were converted to digital copies, uploaded to a password-protected USB drive and stored in a safe location for five years.

The researcher used an inductive approach to code the college administrators' interviews, documents, and observations. The coding process produced several themes related to Research Question 1 and Research Question 2.

Discussion of Findings and Related Literature

The study's findings on food insecurity in Texas community colleges revealed several best and promising practices and challenges identified by the administrators. These findings shed light on the complex nature of addressing food insecurity on college campuses and supports the notion that the cynefin can effectively be used as a tool for categorizing the issue of food insecurity. The researcher categorized the findings based on cynefin's five situational domains: obvious, complicated, complex, chaotic, and disorder.

Discussion of Findings for Research Question 1

Interview questions for Research Question 1 asked administrators open-ended questions regarding food insecurity resources on campus, how their college approached food insecurity in a new way, factors that made implementation possible, external support received, and views on how the teams overcame barriers. The themes identified for Research Question 1 by participants will be discussed in this section. The "obvious" domain represents best practices, and the "complicated" domain covers promising practices. The "complex" domain consists of emergent practices. The themes identified across the four institutions were categorized accordingly. Themes identified are described below:

Best Practices include:

- campus buy-in and teamwork
- college philanthropic foundation support
- data informed decision-making, and
- partnerships

Promising Practices include:

- community support
- external grants, and
- leadership support

Emergent Practices include:

- employee training
- location and space
- marketing and communication, and
- staffed department

Best Practices

Campus Buy-in and Teamwork

Campus buy-in and teamwork were found to be essential in successfully implementing food insecurity resources at all four institutions. At Institution 1, college staff had to learn about food insecurities and work together as an emergency aid team to streamline the process of serving students in need. Institution 2's participants also highlighted the importance of having everyone (i.e., faculty, staff, administrators, and the board) onboard and working together to realize the need and formulate a plan. Institution 3's success came from having multiple people and departments realize they needed to act and continue working together through challenges.

Finally, at Institution 4, participants noted campus-wide buy-in from the chancellor, president, instructors, and staff was vital, as was having a collaborative effort internally. In summary, the study emphasized that having support, buy-in, and teamwork from all levels of the institutions was crucial for implementing adequate food insecurity resources.

College Philanthropic Foundation Support

The college philanthropic foundation played an essential role in supporting resources for food-insecure students across all four institutions. At Institution 1, the foundation provided funding not just for food but also for wraparound services. Institution 2's foundation supported an emergency aid fund to provide students with grocery gift cards and helped fund community outreach programs. Institution 3's participants noted the foundation's emergency aid funds helped provide greater focus on the food insecurity initiative. The foundation also provided donations from local grocery stores. Finally, at Institution 4, the college foundation was identified as one of the biggest supporters, funneling funding for their food pantries and addressing food insecurity. A news article mentioned the foundation's contribution to expanding the institutions' food pantries and wraparound services. In summary, the college foundations at all four institutions played a critical role in implementing and sustaining resources to help food-insecure students by providing funding, donations, and financial support.

Data Informed Decision-making

Across all four institutions, participants highlighted the importance of data informing their food insecurity resources. At Institution 1, participants noted data on student usage of the food pantry allowed them to secure grants and measure outcomes. Institution 1 conducted surveys and focus groups that revealed key insights, such as 75% of students being part time due to work and financial struggles. These data helped Institution 1 develop a compelling student

story to create community buy-in. Institution 3's participants discussed using student demographic data to tailor services to different campuses. At Institution 4, participants mentioned data helped convince leadership of the need for resources and create a baseline to measure equity gaps. Participants expressed data was at the heart of justifying resources, staffing, and budgets for their food insecurity programs. Data on student needs, usage, and demographics were critical to developing effective programs and securing necessary funding and support.

Partnerships

All four institutions emphasized the importance of external partnerships in addressing campus food insecurity. These institutions noted partnerships with local food banks, grocery stores, and neighboring universities were vital in supplementing their on-campus food pantries. Participants at all institutions discussed how partnerships have allowed them to refer students to other organizations when their on-campus resources are limited. Partnerships were also said to have helped make possible changes and expansions to their food insecurity programs, and the institutions' documents, websites, and meeting minutes provided further evidence of these external partnerships and collaborations. Participants agreed partnerships are the foundation for successfully implementing and sustaining programs to combat campus food insecurity.

Promising Practices

Community Support

The research identified community support as a crucial factor in implementing and sustaining food insecurity resources on campus for the institutions mentioned. Participants from Institution 1 noted they received over \$10,000 worth of donations from community organizations who learned about their food pantry. Participants from Institution 3 also discussed the strong community support they received, which made a huge difference in helping implement and

improve their food resources. Participants from Institution 4 similarly mentioned donations from the community allowed them to implement and sustain their programs. They also received external support through partnerships with community members. In summary, all campuses identified community support through donations, food drives, and partnerships as an important factor for addressing food insecurity.

Grants

Grants have played an essential role in helping institutions expand their food insecurity resources and services. Participants from Institution 1 mentioned grants had provided the flexibility needed to develop new programs like hiring staff members and purchasing equipment for their food pantries. At Institution 2, participants said grants have allowed them to progress quickly and start new programs to address food insecurity. Document analysis also showed grant proposals and meeting minutes discussed using grant funds to improve wraparound services. Similarly, at Institution 4, grants were crucial to keep funding programs and services. In summary, grants have enabled these institutions to develop and improve their food insecurity resources, hire staff, and expand their food pantries to serve students better.

Leadership Support

The participants indicated leadership support from college presidents, board trustees, and executive administration was a critical factor in successfully implementing food insecurity resources at their institutions. Participants acknowledged having a supportive college president who prioritized addressing student food insecurity helped make the initiatives possible. The leadership support fought for prime locations for food pantries and showed up during mobile pantry drives to demonstrate their commitment. College presidents and chancellors getting on board with the initiatives enabled change by participants. According to participants, robust

support from the highest levels of administration, with addressing food insecurity being near and dear to college presidents' hearts, contributed to the successful implementation of current food insecurity programs. Overall, leadership buy-in and support were a complicated but essential domain that helped institutions launch and maintain food insecurity resources for students.

Emergent Practices

Employee Training

Participants cited employee training as necessary in addressing students' basic needs at the participating institutions. Training staff allowed employees to learn more about implementing services to help students with food insecurity and other needs. Advising staff at Institution 3 attended a conference and shared what they learned with other employees, which participants saw as critical. Institution 4 trained employees so that if a student needed help employees would at least know where to direct the student. This training for employees included helping students apply for programs like SNAP and Temporary Assistance for Needy Families. Overall, providing training opportunities for employees and educating them on students' basic needs and available resources was seen as having a positive impact.

Location (Forward Facing)

Having a visible, outward-facing space for food insecurity resources contributes to their successful implementation, according to Institution 3. The institution created a store-like food pantry with a window at the front entrance so everyone could see it. Leadership prioritized giving the food pantry an up-front location rather than hiding it. The researcher observed the food pantry was easy to find and access during the site visit, indicating the visible location was effective. In summary, participants at Institution 3 believed making food assistance resources visible and accessible to all students improves the usage of the resources.

Marketing and Communication

The interviews with participants revealed improving marketing and communication efforts helped increase student usage of food insecurity resources. Previously, communication was a challenge, but they started focusing their marketing differently. Participants mentioned channels such as statements on syllabi, discussing resources during orientations, and using digital screens to advertise.

Staffed Department

Participants at Institution 4 discussed the importance of staffed departments in institutions that aim to provide students with comprehensive and holistic resources and services. One participant stated they fought for the food pantries and basic needs programs to become a fully staffed department that can provide resources to students in a holistic manner. Another participant explained they had created a network encompassing multiple offices that offer a collaborative and holistic approach, with staff like care coordinators, basic needs coordinators, counselors, nurses, and health professionals. The institution's website outlined the department's wraparound services. During a site visit, the researcher found staffing at the food pantries and the staff could assist students with other resources as needed. The study focused on how institutions have created staffed departments to offer holistic and comprehensive services to support students' needs.

Discussion of Findings for Research Question 2

Research Question 2 asked, "What challenges do administrators face in implementing best and promising practices for food insecurity on campus?" Participants described prior educational system barriers and other barriers to change while implementing food insecurity resources on community college campuses. The major themes for Research Question 2 were:

- awareness and communication
- employee time and staffing
- location and space, and
- mindset and stigma

Major Themes

The research identified four challenges that participants indicated most: awareness and communication, employee time and staffing, location and space, and mindset and stigma. The researcher observed these challenges across the four community colleges. These significant themes underscored the complexity of the issue and the need for comprehensive approaches. By understanding these challenges, colleges can work toward implementing effective strategies to support students facing food insecurity.

Awareness and Communication

The study highlighted the challenge of creating awareness and effective communication about available resources. Administrators acknowledged the need to educate faculty and staff so they can guide students to appropriate assistance. It also highlighted the importance of using communication channels (e.g., websites, campus-wide emails) to inform students about the resources available to them.

All four institutions identified awareness and communication as key themes to address the issue of food insecurity among students. Participants discussed the need for better communication to increase awareness of available food resources and make students aware that the resources are for them. Many students were unaware of food assistance programs or did not think the resources were for them. This lack of awareness supported the notion that students who

struggle silently often perceive themselves as not struggling enough to seek resources (Lynn & Beaulieu, 2018).

The institutions communicated resources through syllabus statements, websites, and marketing efforts. However, participants felt more intentional communication strategies were needed to increase student use of food resources. Better communication is crucial to overcoming barriers to students accessing food assistance.

Employee Time and Staffing

Across all four institutions, participants identified staffing and employee time as significant challenges for implementing food pantry and resource programs for students. At Institution 1, participants said they needed either a dedicated student worker or a full-time staff member to manage the food pantry because current employees had to take time away from their regular duties. Institution 2's participants also mentioned difficulty finding staff to run a food pantry. Institution 3's participants commented that having more human resources, ideally a full-time person, would help oversee basic needs programs and keep the food pantry stocked. At Institution 4, participants discussed how adding new initiatives to current employees' workloads was problematic and caused existing programs not to move forward as quickly as they should. Overall, a lack of dedicated staffing and employee time constraints were major hurdles across all four institutions in providing food insecurity resources for students.

Location and Space

All four institutions identified location and space as a challenge in providing food insecurity resources for students. Participants at Institution 1 indicated a visible and accessible food pantry upfront contributes to success. They created a small store-like pantry with a window. However, Institution 1 planned to improve the space and location of its food pantry in future

facilities. For Institutions 2 and 3, finding enough space to house the food pantry has been difficult, and Institution 3 had to move the pantry multiple times. Institution 4 needed additional space to expand its food pantry and resources. In general, the institutions struggled with ensuring their food pantries are in centralized, convenient locations with enough space for students. Having the proper space and location is important for reducing the stigma around using these resources.

Mindset and Stigma

The theme of “mindset and stigma” surrounding food insecurity highlighted the need to address the emotional and psychological barriers students may face when seeking help and change employee mindsets to better understand and address the issue of food insecurity. Administrators recognized there is often a sense of shame associated with discussing food insecurity, which can prevent students from accessing available resources. Participants discussed the stigma attached to food insecurity that hinders students from accessing resources. They said students do not feel the resources are meant for them and that others may need them more. Participants focused on the mindset of students stemming from the stigma associated with needing assistance. They mentioned students feel ashamed to use food pantries and reject being seen as needing help.

Participants across the institutions also spoke about the need to change the mindset of faculty, staff, and students to understand and address the issue of food insecurity. They mentioned that many people did not think food insecurity was an issue or that the college could solve the issue. Overall, the findings highlight how mindset and stigma surrounding food insecurity are barriers that must be addressed among the institutions’ students, faculty, and staff.

Additional Themes

There were additional themes identified during the research process. These themes were identified by at least one institution; however, they were not identified by all participating institutions. These themes represent challenges that are less common.

Accessibility

The analysis of the participants' interviews, documents, and observations revealed the administrators recognized the importance of making food insecurity resources easily accessible to students. Accessibility overlapped with the theme of "location". Participants stressed that location and hours of operation were barriers to access. They emphasized the need to collect data to ensure equitable distribution of resources across campuses and eliminate gaps in access.

Lack of Community Resources

Participants from Institution 2 discussed the lack of resources available due to the college's rural location and limited community partnerships. Being rural, the institution has a small community outreach, and recognizes the limited resources of many potential community partners. Participant E specifically mentioned that "the lack of community partnerships is one of the main barriers to implementing food insecurity resources." The researcher also observed during a site visit that the institution is in a rural area with minimal businesses.

Additional Findings

There were additional findings identified during the research process regarding differences in participant knowledge, financial sustainability of food insecurity resources, and

Participant Knowledge

The researcher's interviews with 14 community college administrators provided valuable insights into the knowledge base among different levels of administration. Most participants

were entry-level administrators such as coordinators and directors. Upper-level administrators such as executive directors and vice presidents also participated, along with mid-level administrators and community college presidents.

An important finding was the varying expertise seen across roles. Based on the interviews it was evident that there are differences in knowledge regarding the implementation of food insecurity resources on campus. Entry-level administrators tended to have more hands-on familiarity with food insecurity issues among students and the operational details of existing programs.

Mid-level administrators exhibited a broader knowledge of the entire college. They understood how different departments interconnected and how college-wide policies impacted the implementation of food insecurity resources. Their expertise balanced both strategic and tactical perspectives. This level of administrator was knowledgeable of the staffing issues. However, this level was not fully aware of the financial component.

Upper-level administrators including vice presidents and presidents possessed the most holistic view. They were knowledgeable about the connection between food insecurity resources and the college's strategic plan, mission, and vision. This group was able to see the "big picture" and make decisions based on knowledge of facilities, budget, and other resources.

The varying levels of knowledge among administrators stems from differences in roles and responsibilities. Entry-level staff manage the day-to-day operations of programs while upper-level focus on aligning with the strategic plan and resource allocation. College presidents set institutional priorities and policies. While all administrators recognize the value of addressing food insecurity, those directly involved with implementation have the most actionable knowledge of what works well and where challenges lie. This suggests that effective solutions

require collaboration across administrative levels to leverage strategic vision, operational expertise, and institutional support. With a unified, holistic approach informed by the knowledge base at all levels, community colleges can best meet the food security needs of their students.

Practical Implications

Through this qualitative multi-case study, the researcher aimed to understand the best and most promising practices for addressing food insecurity on community college campuses and the challenges administrators faced while implementing food insecurity resources on campus. The study and its findings have implications for community colleges implementing or planning to implement resources to address food insecurity. These practical implications can guide community colleges in addressing food insecurity on their campuses. By implementing these recommendations, colleges can create a supportive environment and provide necessary resources to help students overcome food insecurity challenges.

Campus Buy-in and Teamwork

The study emphasized the importance of campus-wide buy-in and teamwork in successfully implementing food insecurity resources. Colleges should engage faculty, staff, administrators, and the board of trustees to work together and collaborate to address the issue effectively.

College Philanthropic Foundation Support

The involvement of the college foundation was crucial in supporting resources for students experiencing food insecurity. The study highlighted the role of funding provided by the foundation in addressing the issue and recommends colleges seek support from their foundations in implementing food insecurity initiatives.

Data Informed Decision-making

The study underscored the significance of using data to inform decision making and measure the outcomes of food insecurity programs. It is advisable for community colleges to collect and analyze food insecurity data to better understand their students' needs and evaluate their interventions' effectiveness.

Improving Awareness and Communication

The research emphasized improving awareness and communication about available resources for food-insecure students. Community colleges should develop strategies that include intentional and holistic communication channels to raise awareness among students and ensure effective communication channels to ensure students are aware of the support available.

Unexpected Results

The researcher was surprised by the similarity of findings across all four institutions. The institutions were each located in different regions in Texas and were of different sizes. Despite their diverse locations and sizes, each institution identified campus buy-in and teamwork, college philanthropic foundation support, data, and partnerships as contributing factors to successfully implementing food insecurity resources on campus. Ten of the 11 themes for best and promising practices were identified by more than one participating institution.

Furthermore, all institutions identified they were or are currently facing challenges, including awareness and communication, employee time and staffing, location and space, and mindset and stigma while implementing food insecurity resources on campus. Beyond the challenges all institutions identified, three or fewer institutions mentioned an additional two themes of accessibility and lack of resources. Although community colleges vary by location, size, and funding, they experience similar challenges.

Several themes discussed financial support from external stakeholders or grants; however, financial sustainability was not identified as a challenge. Financial sustainability is an important factor when considering implementing resources to address food insecurity on a community college campus.

Providing resources to address food insecurity among students is critical for community college campuses. However, financial sustainability of these programs poses an ongoing challenge. Community colleges often serve lower-income students who have a higher probability of experiencing food insecurity.

Food pantries and meal donations are common supports, but they require consistent funding. Grant money can help launch programs but is not a permanent solution. Partnerships with local food banks and grocery stores can expand resources through food donations. Fundraising events and donor campaigns can supplement costs but require staff and student volunteer time.

Long-term sustainability will likely require multiple strategies. To ensure long-term viability, community colleges must develop sustainable funding models that combine multiple sources of revenue. A mix of state funding, designated student fees, grants, donations, and partnerships can provide stable base funding while also accessing variable sources that adapt to changing needs and budgets. With a diversified approach, community colleges can build food insecurity programs that serve students effectively.

Recommendations for Future Research

This study provided a baseline for understanding the best, most promising, and emergent practices and challenges administrators face when implementing food insecurity resources on a community college campus. There are many opportunities for additional research focused on the

long-term impact of food insecurity resources on students' academic performance, a student perspective, the role of campus-wide collaboration, financial sustainability of food insecurity resources, and best practice dissemination. These recommendations aim to enhance further the understanding and effectiveness of addressing food insecurity at community colleges.

The long-term impact of food insecurity resources on students' academic performance, retention rates, and overall well-being are areas that can be studied further. This research could evaluate the effectiveness of current interventions and identify improvement areas.

This qualitative study comprised administrators' perspectives. A future quantitative or qualitative study regarding students' use of food insecurity resources may gather their perspectives and experiences. This potential study could provide valuable insight into the effectiveness, accessibility, and stigma associated with food insecurity resources.

This study set the groundwork for several follow-up studies to understand further the best and most promising practices for implementing food insecurity on a community college campus. Potential studies include investigating the role of campus-wide collaboration in addressing food insecurity. Future research could include exploring the involvement of various departments and student organizations in implementing and sustaining food insecurity resources. A second follow-up study could examine the financial sustainability of food insecurity initiatives at community colleges. Research could focus on identifying alternative funding sources, evaluating the impact of grants, and developing strategies to ensure long-term financial stability for these programs.

Lastly, this study could be extended further by exploring strategies for disseminating best practices and replicating successful food insecurity interventions across different community

college campuses. This research could help create a network of knowledge-sharing and collaboration among institutions.

Researcher's Conclusions

Based on the findings of this study, the researcher drew several conclusions. Revisiting the purpose of the study, the researcher found several best and promising practices used by community college administrators to implement food insecurity resources.

The best practices for addressing food insecurity include campus buy-in and teamwork, college philanthropic foundation support, data use, and partnerships. The researcher recommends these practices for community colleges to effectively tackle food insecurity among students.

This study also highlighted promising practices such as community support, grants, and leadership support as well as emergent practices including employee training, visible location, improved marketing and communication, and a fully staffed department. The researcher further concluded these practices have shown potential to expand food insecurity resources and provide holistic support to students.

Together, these best, promising, and emergent practices demonstrate that a holistic and collaborative approach involving the entire campus community and external stakeholders can help institutions successfully combat food insecurity among students. The findings provide a framework that other colleges seeking to address food insecurity can reference and adapt to their own contexts.

Findings from this study also provided insight into administrators' challenges when implementing food insecurity resources on a community college campus. The study identified various challenges administrators face: awareness and communication, employee time and staffing, location and space, and mindset and stigma. The researcher concluded that recognizing

these challenges is essential for colleges to develop strategies and overcome barriers in addressing food insecurity.

Summary

Chapter 5 reviewed the problem of food insecurity among community college students and the purpose of the study. The researcher conducted a multisite case study of four Texas community colleges to understand the best and most promising practices for addressing food insecurity and the challenges faced. Key findings included best practices of campus buy-in, college philanthropic foundation support, data use, and partnerships; most promising practices of community support, grants, and leadership support; and emergent practices of employee training, location and space, marketing and communication, and staffing. Challenges identified in this study were awareness and communication, employee time, location, and stigma. The study provided implications and recommendations for community colleges to support food-insecure students effectively. The researcher was astonished by the similarity of results across institutions and recommends future research on the impact of resources, a student perspective, and financial sustainability. The researcher concludes that the study offers valuable insights to guide community colleges in addressing this issue.

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Appendix A - Semistructured Interview Protocol

Thank you for taking the time to speak with me today regarding your work with implementing the food security resources at your college. As you are aware from previous correspondence, I am conducting research on the best and most promising practices for addressing food insecurity in Texas community colleges and the challenges administrators experience in implementing successful methods to address college students' food insecurity.

Before we begin, I would like to make you aware that this interview is voluntary, and you may stop the interview at any time. Furthermore, you may withdraw as a participant at any time. You have the right to request to review any information from this interview that might be used in this study.

I would like to video and audio record this interview with your permission. All recordings will be kept confidential and in a secure location. I will be the only individual with access to this material. Do you provide your permission to record this interview?

During this interview, you will be asked questions regarding your involvement in implementing food security resources at your college. All answers will be confidential and stored and recorded as anonymous during this study. Do you have any questions for me before we begin the interview?

Interview Questions

1. Tell me about your role at (applicable research site).

2. What food insecurity resources does your college provide for students?
3. How do you think this college has been able to approach food insecurity in a new way?
4. What aspects of the educational system did you have to consider to make these changes?
5. Tell me about some factors that made this change possible.
6. What external support did you receive to enable this change?
7. What were some of the barriers to change?
8. How did your team overcome these barriers?
9. Are there any other contributing factors that led to the successful implementation of food insecurity resources at your college that we have not discussed?
10. Would you do anything differently to make the program more successful?

Appendix B - Observation Protocol

Reflective Field Notes

The researcher will use naturalistic observation. The observations will be made discreetly.

Observations will be gathered from site visits and will include the campus sites, which are public spaces.

Date:

Setting:

Context:

Descriptive Notes

Reflective Notes

Physical What do you see, hear, and smell? What are the details of the setting and interactions?	
Non-physical What are the implied rules, roles, norms, and beliefs? What is the culture?	
What are your general impressions?	
Other comments:	

Appendix C - IRB Approval



University Research
Compliance Office

TO: [REDACTED]
Educational Leadership
Manhattan, KS 66506

Proposal Number: IRB-11410

FROM: [REDACTED]
Committee on Research Involving Human Subjects

DATE: 11/18/2022

RE: Proposal Entitled, "The silent tsunami: Addressing community college food insecurity in Texas."

The Committee on Research Involving Human Subjects / Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is EXEMPT from further IRB review. This exemption applies only to the proposal - as written - and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Based upon information provided to the IRB, this activity is exempt under the criteria set forth in the Federal Policy for the Protection of Human Subjects, **45 CFR §104(d), category:Exempt Category 2 Subsection ii.**

Certain research is exempt from the requirements of HHS/OHRP regulations. A determination that research is exempt does not imply that investigators have no ethical responsibilities to subjects in such research; it means only that the regulatory requirements related to IRB review, informed consent, and assurance of compliance do not apply to the research.

Any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

Electronically signed by [REDACTED] on 11/27/2022 2:04 PM ET
On Behalf of IRB Chair

Appendix D - Informed Consent

PROJECT TITLE:

The silent tsunami: Addressing community college food insecurity in Texas

PROJECT APPROVAL DATE:

November 4,
2022

PROJECT EXPIRATION DATE:

November 4,
2027

LENGTH OF STUDY:

60-
minute
interview

PRINCIPAL INVESTIGATOR:

Lindy Matthews

CO-INVESTIGATOR(S):

CONTACT DETAILS FOR PROBLEMS/QUESTIONS:

Email Lindy Matthews @

IRB CHAIR CONTACT INFORMATION:

Chair, Committee on Research Involving Human Subjects, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506, Associate Vice President for Research Compliance, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506,

PURPOSE OF THE RESEARCH:

The purpose of this study is to understand further the best and most promising practices for addressing food insecurity in Texas community colleges and the challenges administrators experience in implementing successful methods to address community college students' food insecurity.

PROCEDURES OR METHODS TO BE USED:

The proposed methodology for this study is a qualitative multisite case study design comprised of interviews with administrators from five community college campuses in Texas in addition to document reviews and observations. The primary data source for this study will be collected from semistructured participant interviews consisting of open-ended clarifying questions followed by probes from the researcher to gather relevant data from each participant.

RISKS OR DISCOMFORTS ANTICIPATED:

There are no known risks or discomforts to the participants.

BENEFITS ANTICIPATED:

The focus of this study is designed to contribute to the existing body of knowledge on best and promising practices in addressing food insecurities. The study is designed with the intention of informing best practices and policies at institutions that serve students that face food insecurity. This study will also contribute to the existing body of knowledge regarding community college food insecurity.

EXTENT OF CONFIDENTIALITY:

Participants' and institutions' identities will be kept confidential. They will be identified using letters and numbers. All interviews and recordings will be stored on an external hard drive that will be password protected and kept in a secure location for five years. The subject's information or biospecimens collected as part of the research, even if identifiers are removed, will not be used or distributed for future research studies.

Terms of participation: I understand this project is research, and my participation is voluntary. I also understand that if I decide to participate in this study, I may withdraw my consent at any time and stop participating at any time without explanation, penalty, or loss of benefits or academic standing to which I may otherwise be entitled.

I verify that my signature below indicates that I have read and understand this consent form and willingly agree to participate in this study under the terms described. My signature acknowledges receiving a signed and dated copy of this consent form.

PARTICIPANT NAME:

--

**PARTICIPANT
SIGNATURE:**

--

DATE:

--

**WITNESS TO
SIGNATURE:
(PROJECT STAFF)**

--

DATE:

--

Appendix E - Alignment Table

Literature findings	Research questions	Conceptual framework	Interview questions
Responses to food insecurity (Adamovic et al., 2020; Cady & Broton, 2020; Congressional Hunger Center, 2020)	RQ1: What are the best and most promising practices for addressing food insecurities on a community college campus?	Cynefin framework	IQ 1- Tell me about your role at (applicable research site). IQ 2- What food insecurity resources does your college provide students? IQ 3- How do you think this college has been able to approach food insecurity in a new way? IQ 5- Tell me about some factors that made this change possible. IQ 6- What external support did you receive to enable this change? IQ 8- How did your team overcome these barriers? IQ 9- Are there any other contributing factors that led to the scaling implementation of food insecurity resources at your college that we have not discussed?

Literature findings	Research questions	Conceptual framework	Interview questions
Barriers to gaining access to assistance. (FitzSimons et al., 2004; Fong et al., 2016; Fram et al., 2011; Kissane, 2003; Tsang et al., 2011)	RQ2: What challenges do administrators face in implementing best and promising practices for food insecurity on a community college campus?	Cynefin framework	IQ 1- Tell me about your role at (applicable research site). IQ 4-What aspects of the educational system did you have to consider making these changes? IQ 7- What were some of the barriers to change? IQ 10- Is there anything you would do differently to make the program more successful?