

2023

## Food Insecure Single Mothers' Perceptions in Accessing School Nutrition Programs during COVID-19

Deshona Williams Liburd Audain  
*Walden University*

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# Walden University

College of Psychology and Community Services

This is to certify that the doctoral dissertation by

Deshona Williams Liburd Audain

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Walden University  
2023

Abstract

Food Insecure Single Mothers' Perceptions in Accessing School Nutrition Programs  
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by

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MSc, Walden University, 2017

BA, University of the Virgin Islands, 2013

Dissertation Submitted in Partial Fulfillment  
of the Requirements for the Degree of  
Doctor of Philosophy  
Health Psychology

Walden University

August 2023

## Abstract

Global pandemics and natural disasters can cause basic human needs hardships. Being able to access adequate nutritious food is a fundamental basic human need. Food insecurity remains a dominant concern in underdeveloped countries prior to natural disaster and global pandemic. During the COVID-19 pandemic of 2020 low-income United States Virgin Islands single mothers' dilemma was accessing available nutritious foods for their school-aged children through nutrition assistance programs. An interpretative phenomenological qualitative study was conducted to explore the types of lived experiences these single mothers faced. The social ecological model (SEM) was used as the conceptual framework for the study. The research questions of the study were based on the individual, interpersonal, community, organizational, and policy levels of the SEM. Eligible participants were recruited using purposeful chain sampling. Data were collected from eight participants through semistructured interviews and were analyzed and categorized to the corresponding research questions and SEM levels. Findings indicated seven group-level subthemes: (a) eligibility for nutrition services, (b) challenges, barriers, and supports to accessing nutrition services, (c) survival and strategizing just to get by, (d) pride, (e) social capital and social networking for resources, (f) financial relief from out-of-pocket spending, and (g) advocacy and agency. Positive social change from this study may be that health researchers can use the findings to understand and address policy that reduces access to available nutrition assistance programs during a pandemic, and other events, that can displace vulnerable families making access to nutritious food difficult.

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## Dedication

I dedicate this research to my mother, Patricia. I have watched her, every day of my upbringing, be resilient and resourceful as single-mother. I watched her raise four children and work a full-time job. During the most catastrophic hurricanes of my childhood, I watched my mother be brave in the face of disaster. Mother, thank you for setting the example of what resourcefulness and resiliency against dire challenges!

I also dedicate this study to my uncle, Ricardo, who has the most encouraging and supportive father-figure I could have gotten. With all my love and gratefulness, Uncle, thank you for everything! Lewis and Daisy, my loving grandparents who always say the best in me, I could not have done this without you. Ovid, my father, who would have been so proud to read this work, I will continue to make you proud.

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I dedicate this study to my participants, and all the single mothers who get up each day and be resilient and resourceful.

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## Chapter 1: Introduction to the Study

### Introduction

The United States Virgin Islands (USVI) relies heavily on tourism as an alternate sustainable revenue source because limited funding is received from the mainland United States of America (Borgen Magazine, 2020). With the received funding, food and nutrition services can function and offer food relief programs to the residents. Many residents who would like to take part in these programs find the eligibility requirements an impossible obstacle; however, all USVI children between the ages of 2 and 18 have been designated eligible to receive free federally supported School Breakfast and School Lunch Program meals in public schools and participating private schools, regardless of family socioeconomic status. The cost of living in the USVI is exorbitant and being able to benefit from any government aid is a great comfort. While the *where* and *who* are food insecure exist in limited quantity, factors such as the community and family relationships influencing food insecurity risks (Denney et al., 2017), as well as the institution and policy areas are ever improving. A more intimate knowledge of single mothers' experiences in accessing nutritious foods is needed if positive social change is to be made regarding pandemic and disaster-related food insecurity. Organizations and public policy food insecurity protocols will need to be restructured to better assist food insecure families during these events.

A zoonotic respiratory epidemic is the causative agent of the corona virus disease 2019 (COVID-19) that began December 2019 and spread globally between then and March 2020 has caused a worldwide pandemic which increased food insecurity in the

USVI. COVID-19 is new and ongoing, therefore studies that focus on USVI single-mothers' and their experiences accessing food and nutrition during the pandemic do not exist. Religious and nonprofit organizations created makeshift foodbanks to combat the sudden loss of food access faced by low-income families.

In Chapter 1, I provide an extensive overview of the United States Virgin Islands' background on access to school nutrition assistance programs and food insecurity. I also explained the social problem, the research problem that I explored by this study, the purpose of the study, and the research question. The framework of the study was the social ecological model (SEM). In this Chapter, I also describe the assumptions, the scope, delimitations, definitions of operational terms, and the limitations. Lastly, I summarize the significance of the study, positive social change contribution, and conclude the Chapter.

### **Background**

Across the globe food insecurity is a continuous phenomenon, food access and availability interventions have been set up to combat this insecurity (Hendriks, 2015). In the USVI cost of living is high and is listed among the highest in the nation with levels of poverty being higher than indicated and reported incomes of over a quarter of families with children were below the federal poverty level (U.S. Department of Health and Human Services, 2020) . As of 2014, the cost of living in the USVI was 30% higher than its standard comparable state, Washington, D.C. and the poverty threshold adjusted for family size for a family of four was \$24,008 in annual income (U.S. Department of Health and Human Services, 2020). Most two income families are living below the



federal poverty level. Single parent households in which the parent is a woman have similar statistics; 47% of households headed by single mothers are living in poverty (U.S. Department of Health and Human Services, 2020).

Although food insecurity estimates prevail among child inclusive households are underestimates due to the reluctance of parents' true admission (Denney et al., 2017), it may be far worse for single parent families in the USVI. The USVI territory has an approximate population of 87,146 (United States Census Bureau, 2022) with 20% represented by children under 18 (Baecher-Brown & Dudley, 2019). Globally, food insecurity is heavily influenced by the socioeconomic status of the household. In the USVI, households that receive government food and nutrition assistance are representatives of those whose annual incomes fall close to or below the federal poverty guidelines (U.S. Department of Health and Human Services, 2021). As of 4 June 2021, the total Pandemic-electronic benefits transfer issued in the USVI were 30,349 (U.S. Department of Health and Human Services, 2021). The electronic benefits transfer was a one-time deal and single mothers are searching for steady assistance in providing nutritious food for their children.

During the beginning of the COVID-19 pandemic, the world came to an abrupt halt. Work, school, and all other aspects that were once known as everyday life, changed. The COVID-19 outbreak caused panic and fear, worsened racism, and momentarily ceased in-person aid. Low-income families with children faced particular hardships getting nutritious food; single mothers' experiences accessing nutritious food through assistance programs were especially difficult. In the 2015 Kids Count study, findings

revealed 58% of children in the territory resided with only the mother compared with 23% of children living with married parents (Baecher-Brown & Dudley, 2019). Food security is impacted by the socioeconomic status of single mothers.

I addressed this gap in research by focusing on the types of experiences of low-income single mothers in USVI with school-aged children with accessing available school nutrition assistance programs during COVID-19. This study was necessary to understand and to learn of nonexistent or overlooked areas in organizations and public policy that affect food security in time of crisis.

### **Problem Statement**

The COVID-19 pandemic triggered a global public health and economic crisis. Within the first six months of the pandemic, systems, policies, and environments have been altered to accommodate social distancing, working from home, virtual learning and, unfortunately, business closures. These changes, albeit difficult, were bearable and achievable by the socioeconomically advantaged but heightened the ongoing disparities among low-income individuals, the unemployed, single mothers, and people of color (Niles et al., 2020; Shanks et al., 2020). The United Nations World Food Program stated that food interruptions caused by the pandemic might double the number of persons across the globe facing food insecurity (World Food Programme, 2020). The U.S. Department of Agriculture (USDA) defined food insecurity as a household's inability to access nutritious food to sustain members of the household due to lack of financial resources (USDA Economic Research Service, 2020).

In 2019, 42.5% of single-mother households were affected by food insecurity (Coleman-Jensen et al., 2020), and food insecurity affects 1 in 7 households with children in the United States (Denney et al., 2020). Despite the USVI governor's efforts to keep households afloat with assistance programs, the stay-at-home orders or lockdowns resulting from the COVID-19 pandemic exposed the deficiencies in the food systems (viconsortium, 2020). During the early stages of the pandemic, school districts in many states and territories kept the school systems open to support the school meals that were given to low-income students to ensure that they get one or two nutritious meals each day (Dunn et al., 2020).

Children exposed to food insecurity can experience emotional and health concerns such as increased anxiety and stress levels, social isolation, anemia, delayed fine motor skills, and decreased cognitive function (Gundersen & Seligman, 2017). According to Baecher-Brown and Dudley (2019) USVI families with children headed by a single woman are especially vulnerable to factors related to living in poverty. Eighty percent of all children living in poverty live with a single woman (Baecher-Brown & Dudley, 2019). The median income of families in the USVI in 2015 was \$43,731 compared to the U.S. family median income of \$56,516 (Baecher-Brown & Dudley, 2019). Kinsey et al. (2020) stated that despite the innovative strategies used to combat the impact of COVID-19 and food insecurities, COVID-19 will continue to have a significant effect on food security for many living in the United States for years to come.

There was little literature regarding barriers that inhibit single mothers in underdeveloped countries encounter when accessing nutrition assistance programs. I

conducted this study to address a gap in the literature by drawing attention to the types of experiences faced in accessing available school nutrition assistance programs during COVID-19 by food insecure USVI low-income single mothers with school-aged children.

### **Purpose of the Study**

The purpose of this qualitative study was to focus specifically on the types of experiences of food insecure USVI low-income single mothers with school-aged children when accessing available school nutrition assistance programs during COVID-19. I explored how food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children perceive their individual, interpersonal, community, organizational, and policy experiences in accessing available school nutrition assistance programs during the COVID-19 pandemic. The increase in unemployment brought on by the pandemic caused an increase in persons, particularly single mothers, to seek nutrition assistance (Frohlich, 2020); however, Fang, Thomsen, Nayga, and Yang (2021) indicated that pandemic job loss has a weak association with food assistance programs but has association with the highest level of food insecurity.

### **Research Question**

Research Question 1 (RQ1): How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their individual and interpersonal experiences in accessing available school nutrition assistance programs during the COVID-19 pandemic?

Research Question 2 (RQ2): How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with community and organizational structure in accessing available school nutrition assistance programs during the COVID-19 pandemic?

Research Question 3 (RQ3): How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with policy in accessing available school nutrition assistance programs during the COVID-19 pandemic?

### **Conceptual Framework**

I used the SEM as my conceptual framework to better understand how individual, interpersonal, organizational and community factors and public policies affect a food insecure mother's decision to seek assistance from available nutrition programs during the COVID-19 pandemic in the United States Virgin Islands. I modeled the research questions on the SEM's spheres of influence on human behavior and addressed the role they played in participants' decision to seek nutrition assistance. The social ecological model has been around for more than a half century. The model was first introduced by Urie Bronfenbrenner in the 1970s and later formalized as a theory in the 1980s (Kilanowski, 2017). Bronfenbrenner's initial theory was illustrated by nesting circles that placed the individual in the center surrounded by various systems, (see Figure 1). His model explained how environment and a person's development are connected and the influence of this connection lasts throughout their lifespan (Bronfenbrenner, 1977). The SEM has been used widely in health research and has been used to focus on the major

contributors that might affect health. The SEM posits that health is affected by the interaction between the characteristics of the individual, the community, and the environment that includes the physical, social, and political aspects (Kilanowski, 2017). The SEM has been used in the health field to identify and understand general and specific interventions. Previous researchers have examined areas such as adult health promotion efforts, policy and environmental change, and protecting children from agricultural diseases and injuries (Golden et al., 2015; Lee et al., 2017). The SEM has also been used to address food insecurity in times of natural disasters such as hurricanes (Clay & Ross, 2020).

I used my research questions to understand all levels in the SEM related to food insecurity in the USVI. I used the SEM to distinguish, address, and explain to healthcare professionals how each level of the model is impacted by food insecurity. I used the SEM framework for my study to provide USVI health educators, health officials, and health practitioners with developmental guides for addressing food insecurity through positive interventions. A more detailed explanation of the SEM is offered in Chapter 2; included are the relationships between and across the SEM with single mothers and food insecurity.

**Figure 1**

*Social Ecological Model: A Framework for Prevention, Centers for Disease Control*



*Note.* Available through <http://www.cdc.gov/violenceprevention/overview/social-ecologicalmodel.html>

### **Nature of the Study**

I used an interpretive phenomenological approach to address the research questions. I used this approach to understand the phenomenon on a more intimate level by providing data that was descriptive and robust through individual interviews. Interpretive phenomenological analysis (IPA) is used to explore what meaning people make of the events in their lives and is an examination of human lived experience (Smith & Osborn, 2008). Exploring the event as it is lived rather than as it is conceptualized is a key activity in phenomenological research (van Manen, 2016). When employing IPA, researchers attempt to make sense of participants making sense of their lived experience (Smith et al.,

2009). Participation in IPA studies require homogeneity among the participants (Smith et al., 2009). Through thorough and in-depth interviews with the families, and by exploring their descriptions, I obtained insight as to how they handled these types of experiences. Ideally, researchers use IPA to investigate and interpret the participants' lived experiences (Alase, 2017). I analyzed the data through cyclical reviewing in which data were coded to uncover commonalities between the lived experience of the participants (Alase, 2016).

I collected data through semistructured one-on-one interviews with low-income single mothers living in the USVI. These mothers experienced food insecurity for themselves and their families during the COVID-19 pandemic and sought assistance from federal and local programs. First time researchers conducting IPA studies typically sample three to five participants for first time undergraduate and master's level researchers (Smith et al, 2022). This small sample size is recommended and ideal for IPA studies because of the minutiae of experience recollected by the participant. Smith et al. (2009) suggested this sample size because a detailed look at the psychological similarities and differences within the defined sample is possible at this small size.

For this study, I selected eight participants through purposeful sampling. Purposeful sampling is widely used in qualitative research for the identification and selection of information-rich cases associated with the phenomenon being studied (Palinkas et al., 2015). I used the chain sampling strategy of purposeful sampling which initially begins with one or a few information-rich interviewees (see Carl & Ravitch, 2016). In order for a qualitative interview to be successful, the researcher must have a



vested interest in the stories of the participants (Wimpenny & Gass, 2000). The researcher has to identify broad philosophical assumptions of phenomenology (Creswell, 2007). Chronicling lived experiences should include elements of objective reality and individual experiences. Therefore, to fully address how participants view the phenomenon, the researcher should document their own experiences as much as possible (Creswell, 2007). Participants were recruited by posting flyers and announcements on local social media groups such as What's Going on St. Thomas, as well as on community boards of health clinics, churches, beauty salons, barbershops, and grocery stores. I conducted interviews with participants using video-conferencing or telephone calls and I recorded the sessions.

### **Definitions**

*COVID-19/SARS CoV2:* a zoonotic respiratory epidemic is the causative agent of the Corona Virus Disease 2019 (World Health Organization, 2021).

*Food access:* access by individuals to adequate resources for acquiring appropriate foods for a nutritious diet (FAO, 2006).

*Food availability:* the availability of sufficient quantities of food of appropriate quality, supplied through domestic production or imports (FAO, 1996).

*Food insecurity:* a household's inability to access nutritious food to sustain members of the household due to lack of financial resources (USDA Economic Research Service, 2020).

*Food security:* no reported indications of food-access problems or limitations (USDA Economic Research Service, 2020).

*Single-mother*: any biological mother who is the primary caretaker of a child and who is divorced, widowed, or never married.

*Stability*: individual or household must have access to adequate food at all times without risk of losing food access as a consequence of crisis (FAO, 2006).

### **Assumptions**

I assumed that the research participants would disclose honestly, that they would share their experience without withholding what they might have considered embarrassing, and that they would be genuinely interested in participating. I assumed each participant shared her experience openly and honestly with me. I assumed each participant went through a school meals shortage due to the COVID-19 pandemic and that all participants were single mothers.

I assumed that the participants chose to engage with the study out of genuine interest. Finally, I assumed that single mothers were able to access knowledge about accessible and available nutrition assistance programs from their immediate social circle or from their community social network.

### **Scope and Delimitations**

In this qualitative study, I focused on gaining an understanding of single mothers' types of experiences of the availability and accessibility of nutritious food through school meals programs. I included participants who were single mothers of school-aged children in the USVI, who responded to recruitment advertisement. There was no race exclusion and potential participants who held a fifth-grade reading level were eligible. Only adults

who were able to consent were interviewed. A \$20 e-gift-card was the incentive that I offered to participants and there were no punitive consequences for those who chose not to participate. Participation was voluntary. In the tradition of transferability via preserving richness that is context specific (Ravitch & Carl, 2016) and remaining focused on the individual experiences of the participants (Connelly, 2016) were my intentions for this study. My intention was not to generalize because there are no parallels with states on the mainland or other Caribbean islands.

### **Limitations**

The sample size was eight single mothers through which I reached saturation. However, because it was a small sample size, it might not represent the experiences of all single mothers of school-aged children within the USVI community. Conversely, in phenomenological studies, small sizes are not considered limitations due to generalizability not being the primary objective (Frechette et al., 2020). My goal was to illuminate with as much depth as possible the context of the lived experience (Frechette et al., 2020). As such, generalization was a limitation of my study. This is true of phenomenological studies, in which researchers focus on the lived experience of a person without the goal of generalization. Other limitations I anticipated were researcher bias and social desirability. I eliminated my researcher bias by keeping a journal in which I jotted down my thoughts and preconceived notions. As the researcher, I attempted to remember my position throughout the extent of my study. Although the interviews were conducted one-on-one via Zoom, I remained aware of my body language and facial

expressions so as not to prompt my participants to share their experiences in a way they believed I found more attractive.

### **Significance**

I attempted to fill a gap in the literature with this study by focusing on the types of experience in accessing available school nutrition in families headed by USVI low-income single mothers with school-aged children who faced food insecurity during the COVID-19 pandemic in the US Virgin Islands. This study also sought to inform Virgin Islands health administrators of the experience single mothers have in accessing adequate nutrition for themselves and their children during a pandemic. Health Administrators can develop interventions and policies that help to curb food insecurities and promote positive social change.

Feedback from this study can assist local and federal agencies in enacted policies aim to curb food insecurity especially during the pandemic. Health administrators can develop appropriate interventions to address food insecurity based upon participants' experience in accessing available nutrition assistance programs. Potential positive social change implications from this study included assisting health researchers in understanding and addressing policy that negatively impacts access to available nutrition assistance programs during a pandemic, and other events, that can displace vulnerable families making access to nutritious food difficult. The findings can be used to help health professionals create interventions to address identified barriers that deter research participants from accessing available nutrition assistance programs. These potential

interventions may aid vulnerable, food insecure families with gaining access to high quality and increased quantity of foods.

### **Summary**

I have introduced the nucleus of my research in Chapter 1. It has offered baseline explanations of food insecurity and single mothers' access to nutritious food. Moreover, in this Chapter, I presented a broad glimpse into my research; The idea to study single mothers' types of experiences in accessing available food through school nutrition programs developed during the COVID-19 pandemic after hearing parents who I work with talk about the difficulties they have been facing. School meals programs are provided as a way to alleviate food insecurity and bring nutritious food to all school children enrolled in the programs, whether or not they are enrolled.

In Chapter 2, descriptions of previous research on single mothers with school-aged children, food insecurity and the social ecological model are detailed. The literature review of these studies' present strengths, limitations, and areas for future research. Here I have documented a detailed account of what is known on this area of research. I also presented an argument why gathering type of experiences of the single mothers who experienced pandemic-related food insecurity and the absence of school meals assistance programs was necessary for the development of avenues that will have positive impact on food insecurity.

## Chapter 2: Literature Review

### Introduction

Food insecurity is defined as the inability of a household to access nutritious food to sustain members of the household due to lack of financial resources (USDA Economic Research Service, 2020). Hendricks (2015) noted that the terms *food security*, *food security and nutrition*, *food and nutrition security*, and *nutrition security* are used interchangeably; I have not used these terms in that way. Food insecurity remains a dominant concern in underdeveloped countries prior to natural disasters and global pandemic.

The purpose of my research study was to provide insight into the reasons USVI low-income single mothers chose to access available school nutrition assistance during the COVID-19 pandemic and possible supports and barriers they encountered in their attempt to diminish food insecurity in their homes. Niles et al. (2020) stated the plethora of disruption to everyday life threatened by the COVID-19 pandemic, specifically access to public transit, shortages to certain products, changes in food assistance distribution, and to food costs and infrastructure. These supports and barriers single mothers encountered might be on the individual, interpersonal, community, organization, and policy levels of the SEM.

Éliás and Jám bor (2021) conducted a systematic review of the first-year experience of COVID-19 and food security and concluded that their empirical study was consistent with earlier literature claims of those most vulnerable to food insecurity are those lacking access. They go on to specify economic access, elaborating that financial

instability of large low-income populations experienced the COVID-19 pandemic the hardest due to partial or total loss of income as well as food price increases. Éliás and Jámbor reported that their sample is not representative of income range, but they conclude low-income to be the deepest structural problem of food security, both on a global scale and during the COVID-19 pandemic.

A rapid review on global food security during the COVID-19 pandemic experienced by African, Caribbean, and Black populations done by Dabone et al. (2021) revealed that the challenge of food security has been ongoing for these populations long before the pandemic. Dabone et al. too confirmed that food access has become more difficult because of lack of available food. Unlike their higher-income counterparts, these populations have to venture out to the grocery store and buy food, thus putting them at risk for contracting COVID-19, as opposed to bulk buying and storing food (Dabone et al., 2021). They also concluded the COVID-19 pandemic has caused an increase in food insecurity within the African, Caribbean, and Black communities.

In this review of the literature, I will present my exploration of the body of knowledge about food security, which includes the effects of food insecurity on single mothers and school aged children during the COVID-19 pandemic of 2020, coping with food insecurity, access to nutrition programs, and viable interventions. The conceptual framework of the social ecological model is presented in the section following the literature search strategy. In the theoretical foundation section, I explain the relevance of the social ecological model used in research and justification is given why this theory is chosen. Additionally, in this Chapter I discuss the history of the social ecological model,

an in-depth review of the literature related to food insecurity and its effects on health, and COVID-19 effects on food insecurity.

### **Literature Search Strategy**

Research articles which provide evidence for this review on food insecurity, low-income single mothers, and COVID-19 were accessed using databases EBSCO, Google Scholar, Linguamatics, JSTOR, Medline Plus, Mendeley, PLoS ONE, ProQuest, PsycINFO, Psychology's Feminist Voice, PubMed, SAGE, ScienceDirect, and Semantic Scholar. I searched Walden University Online Library databases ProQuest and Thoreau. I also searched the University of the Virgin Islands electronic databases Academic Search Complete and Caribbean Search. Phrases, terms, and words used in the literature search included *food insecurity, food security, food access, food availability, Caribbean food shortage, disaster aid, disaster management, emergency food assistance, emergency food relief, single- mothers, single parent, low-income, vulnerable families, nutrition, school meals, school nutrition, school breakfast, school lunch, food shortage, COVID-19, coronavirus, pandemic, natural disaster, Social ecological model, qualitative research, food price inflation, increasing food prices, food insecurity in the Caribbean, childhood food security, access to nutrition assistance programs, food pantry, food deserts, food insecurity and childhood nutrition, health and food insecurity, mental health and food insecure mothers, physical well-being and food insecurity, health effects of being food insecure, cognitive effects of being food insecure, socioeconomic inequalities and food insecurity, starvation and childhood education, starving families, starving single mothers, starvation and food shortage, malnutrition, malnourished children, mothers*



*skipping meals to feed their children, poverty and food insecurity, Caribbean poverty, poor single mothers, COVID-19 related unemployment, job loss and food insecurity, unemployment and nutrition assistance, food waste, and pandemic food hoarding.*

I was unable to locate scholarly studies on my research specifically reporting on the USVI. However, I found studies on areas of similar geographic and socioeconomic status that provided robust information.

## **Conceptual Framework**

### **Social Ecological Model**

Ecological models focus on interactions between the sociocultural and physical environments and human beings (Stokols, 1992). In the 1970s Urie Bronfenbrenner presented the Socio-Ecological Model (SEM) to aid in human development understanding (Kilanowski, 2017) and to observe how human development was impacted by their changing environments (Rosa & Tudge, 2013). Bronfenbrenner's ecological model later evolved into several ecological models that either explain behavior or to guide behavioral interventions (Sallis & Owen, 2015). This model that was initially conceptual but over time became theoretical (Kilanowski, 2017). Ashiabi and O'Neal (2015) suggested specifying clearly whether Bronfenbrenner's new bioecological model or his older ecological model was being used during an investigation and which areas of either model were used. The socio-ecological model by Bronfenbrenner encapsulates four interrelated environmental influences or nested systems: *microsystem*, *mesosystem*, *exosystem*, and *macrosystem* (Bronfenbrenner, 1977; Sallis & Owen, 2015). The microsystem is the first level of Bronfenbrenner's ecological model which encompasses

immediate and intimate contact with the individual. The mesosystem is the direct interaction between the individual's microsystem. The exosystem is the interaction between the individual and the environment. The macrosystem serves as an information network for the first three levels (Bronfenbrenner, 1977).

Bronfenbrenner's ecological model was closely mirrored by an ecological model of health behavior of Kenneth McLeroy (1988), who adapted his version to include another source of influence: public policy. The ecological model designed by McLeroy categorizes five influences on health behavior as intrapersonal or individual factors, interpersonal processes and primary groups, institutional factors, community factors, and public policy (McLeroy et al., 1988), which can be interpreted as counterparts to Bronfenbrenner's ecological model. The intrapersonal or individual refer to attitudes, behavior, knowledge, skills, and self-concept that are characteristics of the individual, as well as developmental history (McLeroy et al., 1988). The interpersonal processes and primary groups refer to social groups such as family, work, and friendship networks that provide support systems of formal and informal nature (McLeroy et al., 1988). The institutional factors refer to institutions of a social nature that has organizational structures and characteristics, and operate under formal and informal rules and regulations (McLeroy et al., 1988). The community factors refer to face-to-face primary groups or mediating structures, relationships among organizations with defined boundaries, and a coterminous population of political entity (McLeroy et al., 1988 p.363). For this research, community factors are neighborhoods and social networks. Public policy regulates laws, procedures, and policies to protect public health rather than

individual health (McLeroy et al., 1988) on a local, state, national, and global level. The research questions were modeled from SEM's spheres of influence on human behavior and sought to address the role they play in participants' decision to seek nutrition assistance (Lee et al., 2017).

### ***Individual Level of SEM***

Biological and personal aspects are identifiable factors in the individual level of SEM that can influence being food insecure. Seeking first-hand knowledge on where to apply for aid, applying shopping strategies such as stretching money by buying bulk (Gorman et al., 2017), shopping at several stores (Gorman et al, 2017), and shopping for sales (Edin et al., 2013) were effective ways mothers can minimize food insecurity. Children rely on their parent to supply them with the most basic of needs; food and shelter, both at some time or other being an obstacle. However, the former, that already on its own can present as herculean, has become even more gargantuan with the help of COVID-19.

Parenting can be influenced indirectly by food insecurity (Arlinghaus & Laska, 2021). Parents' attitudes about parenting are shaped by the parents' negative psychological response to food insecurity (Gee & Asim, 2019). Food being unaffordable relative to income leads to food choices being poor as well as the quality of the meal being poor (Pollard & Booth, 2019). Mothers might feel that their lack of income and ways to provide nutritious food for their children cause their children to be disappointed. Both of these aspects can be potential barriers. Food literacy skills employed by single mothers might not always be used to their best ability due to financial constraints;

therefore food insecurity is primarily deterred by limited financial resources (Kleve et al., 2018).

Attitudes and behaviors such as diet, food, and food preferences are established in early years and can carry over to adulthood. These practices can either inhibit or exacerbate food insecurity. However, mothers might be willing to move away from their dietary preferences and traditions if it means their children will eat and eat healthily. They can learn these skills by participating in food and nutrition education programs which will teach how to select and prepare healthy meals. By doing so single mothers also decrease food insecurity levels in their homes.

### ***Interpersonal Level of SEM***

At the interpersonal level of the SEM, the interaction between the individual and immediate surroundings are the focus. Family, peers and the social circle have significant influence over the individual's life experience. Familial support is an essential safety net against food insecurity (McCarthy et al., 2018) yet accepting external help can be difficult (Pollard & Booth, 2019). A worthwhile digression into the impact of the social circle's knowledge of food access is supplemental to this research.

Protective factors through social support lend to aiding against food insecurity (King, 2017) and is sometimes a necessary lifeline to parents who might be otherwise ill-informed. Casual conversation, word-of-mouth, and genuine concern all contribute to the parent's wealth of knowledge through daily interactions with their social circle. Residents make certain to spread the word of outreach events and which food pantries were stocked with items (Gonzalez Guittar, 2017). The inside knowledge at this juncture meant

resources to food access and food availability are greater, and food insecurity can be better maintained (King, 2017). Granted increased social interaction provided better food access and food availability (Balistreri, 2018) evident when news of a food distributions will take place is shared with others in the social circle. Parents who blended their respective families have experienced greater food insecurity (Balistreri, 2018) which might come from the children being possessive of food that their biological parent bought thus giving them ownership (Balistreri, 2018). Still, keeping lines of communication open with other parent created another avenue of food and nutrition assistance for the child and therefore built and supported the nutritional health of the family (DeLorme et al., 2018).

Fiese et al. (2016) noted that a resource for food insecurity is mealtime planning. Planning meals is a one area of strategy used to improve skills such as financial management that will stretch the food budget. Family support and nutritional packages will lessen food insecure families' food insecurity (Yeganeh et al., 2018).

### ***Community Level of SEM***

The exosystem of Bronfenbrenner's model or the community level of SEM which observes interaction between the individual and the environment is the focus here. This level has no direct impact on the individual; however, community and social networks can have positive and negative interactions on the individual (Kilanowski, 2017). Within the community level, mediating structures such neighborhoods, workplaces, and other areas that serve as a source of information through social networks offer another avenue of support (Balistreri, 2018); namely sources of information to food access, availability, and even possibly delivery of food to their homes. Meanwhile, food can be acquired and

secured through shared resources that are the result of social networks (Denney et al., 2020), especially because families at different levels of disadvantage might have their wellbeing impacted differently by community characteristics (Denney et al., 2017). As much as turning to the community as a means of coping with food insecurity (Gundersen & Ziliak, 2015), shame might result in hunger being hidden which can cause food vulnerability to increase (Wasserman et al., 2020).

Alternately, these community factors can act as potential barriers to the access and availability of food; however, these avenues might be limited if the single mother lacks transportation for the commute, cannot monetarily pay for delivered food, or if nearby farmer's market farmers do not accept P-EBT. Transportation and education are additional factors that influence the ability to purchase nutritious and adequate food (Gorman et al., 2017). Carter et al. (2014) reiterated that the research on the relationship between food insecurity, household characteristics, and neighborhood resources need additional studies. Food access has become limited in some neighborhoods as grocery retailers vacated inner city for exurban and suburban locations (Crowe et al., 2018).

### ***Organization Level of SEM***

This level of the SEM has a focus on institutions of a social nature as well as organizations and how food insecurity is influenced by them. Programs such as National School Lunch Program (NSLP), School Breakfast Program (SBP), Supplemental Nutrition Assistance Program (SNAP), and Women, Infants, and Children (WIC) are bridges that aid in food insecurity. Mothers have reported they participate in these assistance programs so they can provide food for their families (Gorman et al., 2017) and

decrease their food insecurity. Furthermore these assistances help supply mothers with healthy food choices for their children (Arlinghaus & Laska, 2021). Local nonprofits in Florida would do Friday outreach in which they would fill reusable bags with groceries and then deliver the bags of food (Gonzalez Guittar, 2017). These deliveries provided food assistance that helped families through the weekend.

Pérez-Escamilla et al. (2017) suggested governments create a food-labelling legislation and enforce it, which in turn allows for consumer labels that are transparent and concise to be developed (Pérez-Escamilla et al., 2020). Food labels that contain proper, clear listing of ingredients will help mothers make better food choices for their children. Food nutrition education and mentoring programs are ways to help reduce food related problems by providing an important stop gap (Crouch & Dickes, 2017).

Pollard and Booth (2019) reviewed 26 studies that addressed food and nutrition security in developed countries on people who are living with food insecurity lived experience and their coping strategies. They found that traditional food aid models were inadequate and further stigmatized recipients.

### ***Policy Level of SEM***

How health behavior is affected by national, state, and local laws and regulations are the area of foci by researchers and health professionals at this level of the SEM. The policy level directly impacts accessibility of food and the magnitude of food insecurity, however, creating policies that will counteract food insecurity and allow easy food access are formidable feats as elected officials and policy makers control regulation development and the law (Glanz, 2015). COVID-19 displayed the urgent and necessary

need to endorse policy changes to protect at risk families during disaster. Golden et al. (2015) mentioned that the social networks of health promotion professionals can be leveraged to connect people across resource and power differentials and encourage more diverse voices within the organizations as well as the groups to which they belong.

During the first year of the pandemic (2020), SNAP benefits had been raised to 115% of the June 2020 value of the Thrifty Food Plan through September 30, 2021. This change occurred as a response to the COVID-19 pandemic and not as a result of a proposed SNAP increase to afford adequate food or (Carlson, 2016) to better reflect healthy food cost (Anderson & Butcher, 2016; Andreyeva et al., 2015; Carlson & Keith-Jennings, 2018). An increase in SNAP benefits allowed for resources to be used for medical care and health-promoting activities (Carlson & Keith-Jennings, 2018).

Pollard and Booth (2019) reported interests of government policy makers and emergency relief providers applying a Food Stress Index to isolate areas that require action against food insecurity. If such a program were to be applied in the USVI it would assist in identifying which families are under food stress by the need of spending 25% of their disposable income on food (Ward et al., 2012). Inadequate income puts families at risk for food insecurity because of the food stress faced by financial hardships (Landrigan, 2017; Landrigan, 2018). By utilizing a Food Stress Index in the USVI, policy makers will be able to satisfactorily include factors that contribute to food insecurity identified through the program.



## **Literature Review Related to Key Variables and/or Concepts**

### **Food Insecurity**

The US Department of Agriculture (USDA) defined food insecurity as a household's inability to access nutritious food to sustain members of the household due to lack of financial resources (USDA Economic Research Service, 2020). Having access to nutritious, safe, and sufficient food year round is the definition of food secure (Gassner et al., 2019). Availability to food, access to food, food utilization, and stability are the four facets of food security (Laborde et al., 2020; Nzabuheraheza & Nyiramugwera, 2017; Westengen & Banik, 2016) and are distinct challenges and obstacles residents of developing countries face. Food access is when individuals have access to adequate resources for obtaining appropriate foods for a nutritious diet. Food availability is when sufficient quantities of appropriate quality supplied via local production or imports are available. Food utilization is the process where sanitation and healthcare such as clean water and adequate diet achieve nutritional wellbeing and all psychological needs are sated. Food stability occurs when the individual or household must always have access to adequate food without risk of losing food access because of a crisis. Each facet in conjunction with the other three creates food security. These challenges now include food price instability, less nutritious foods caused by consumer demand for cheaper foods (Laborde et al., 2020); and household demographics that significantly influence food insecurity rates (Pollard & Booth, 2019).

Yet, food security which has been designated a universal human right (FAO, 1996) remains unfulfilled (Smith et al., 2017) while hunger and poverty remain the

greatest challenges in development of our time (Gassner et al., 2019). Eighty percent of all children living in poverty are headed by single females within the USVI (Baecher-Brown & Dudley, 2019). While the pandemic is ongoing and uncertainty is the only certainty, food access is of utmost importance for vulnerable populations. Currently, there is a 2015-2030 sustainable development goals for food security that highlights the Food and Agriculture Organization's (FAO) food security governance (Pérez-Escamilla et al., 2020); decision making that is multisectoral and participatory (FAO, 1996), accountability and transparency (FAO, 2015), resource allocation and service delivery equity (Ramakrishnan, 2002), and multilevel and multisectoral policies and corresponding programs (Forouzanfar et al., 2015) are all aspects on which adequate food security rely. Sadly, food systems and economies worldwide have been disrupted and those at greatest risk of suffering from food crisis are the poor (Swinnen, 2020).

### ***Effects of Food Insecurity on Health***

The high prevalence and adverse consequences for health, nutrition, and wellbeing are of great concern due to the significant public health crisis that is food insecurity (Hartline-Grafton & Hassink, 2021). Access to and availability of less nutritional quality foods could lead to health issues (Piaskoski et al., 2020). There are several mental health and physical health risks and consequences of food insecurity for children and adults alike (Gonzalez Guittar, 2017). Health risks such as poor quality of life, cardiovascular disease, restricted activity due to poor function health, poor self-rated physical and mental health, and poor nutrition are some such consequences. Poor health outcomes in children due to food insecurity include chronic conditions, mental health

problems, development problems, and higher rates of acute infections (Clay & Ross, 2020). Children who are undernourished are more likely to benefit from school feeding than their adequately nourished counterparts (Simeon, 1998). Even if the period of food insecurity is brief, there can be long-term harm to health that includes developmental, emotional, physical, and psychological of which children in low-income households endure (Dunn et al., 2020). Increased risk of hospitalization among infants (Ettinger de Cuba et al., 2018), lower bone density among boys (Eicher-Miller et al., 2011), more frequent colds and stomachaches (Alaimo et al., 2001), untreated tooth caries (Chi et al., 2014), cardiometabolic risk factors (Robson et al., 2017), asthma (Mangini et al., 2015) and iron deficiency anemia (Metallinos-Katsaras et al., 2016) are possible health outcomes.

Across the globe, household food insecurity and hunger have subtle but harmful health effects on members of the household, especially women and young children (Khanna, 2020). One such example comes from a study done in Miami, Florida where young girls experience menarche earlier because of their food insecure household (Burriss et al., 2020). The researchers further supply that early menarche has an association with risk of chronic disease in adult life. Finally, they recommended deeper research into the influence of living in food insecure environments on menarche and adolescence.

As a parallel, a study done in Mumbai, India drew the conclusion that women in food insecure households range between overweight and underweight polars of the double burden of malnutrition spectrum (Kaku & Patil, 2020). The researchers suggest that poor quality of nutritious food choices in their socioeconomically poor homes might

be reason for the high prevalence of overweight. Diabetes, heart disease, and hypertension are among other comorbidities of which high levels are observed in these women (Kaku & Patil, 2020). These comorbidities occur as a result of poor nutrition.

The health care of children may be impacted by food insecurity because they are at greater risk of being hospitalized since birth (Cook et al., 2004). Children in food insecure households have high rates of healthcare use (Thomas et al., 2019). By participating in government food assistance programs such as SNAP, health care costs might be reduced by as much as 25% (Carlson & Keith-Jennings, 2018). However, adolescents who self-report the effects of food insecurity on their health were suffering poorer health status (Jebena et al., 2017). Poorer health status association with food insecurity and longitudinal development in adolescents self-reporting showed that adolescent girls reported higher food insecurity as opposed to the adolescent boys which might be explained by behavioral, biological, and environmental exposures as well as social determinants of health and illness (Jebena et al., 2017).

Food insecurity can influence the mental health of household members thus causing maternal depression and other mental illness among parent and child alike. Children who experience sustained interruption to their nutrition may develop persistent deficits in fine and gross motor skills, physical size, and cognitive growth if not treated early (Chilton et al., 2009). There is a high association of anxiety and depression mental health problems when becoming food insecure during the COVID-19 pandemic (Fang, Thomsen, & Nayga, 2021). Anxiety and depression are more associated with food insecurity than job loss due to the negative stigma attached to receiving food aid (Fang,

Thomsen, & Nayga, 2021). Jones (2017) found a dose-response relationship between food insecurity and poor mental health status including socio-demographic status. Anger, sadness, stress, and worry were adverse psychosocial conditions experienced by those found to have higher odds of being food insecure. Being treated with respect, enjoyment, and feeling well rested were positive psychosocial conditions experienced by those found to have lower odds of being food insecure. Still, the influence of food insecurity on well-being and mental health on men was similar to that the impact on women (Jones, 2017).

The impact of food insecurity on child mental health might be subtler; some children may indeed do as they are told by not worrying about where their next meal is coming from and being thankful for what they have. Other children might unintentionally draw attention to the status of food security in their households while speaking with relatives or schoolmates. Psychosocial and mental health symptoms and diagnoses associated with food insecurity include anxiety, depression, dysthymia, counselling, and suicidal ideation (Shankar et al., 2017). Adolescents have reported attempting suicide, wanting to die, unintentional weight gain or weight loss as effects of being in a food insufficient household (Shankar et al., 2017) whereas younger children preschoolers had increased risk of aggressive behavior, anxious or depressed moods, and attention deficit/hyperactivity (March et al., 1997).

## **Effects of COVID-19 Pandemic and Food Insecurity**

### ***Disaster, Food Shortages, and Food Access***

Transboundary disease and natural disaster present enormous threats to food security and food safety (Garcia et al., 2020). A leading cause of food insecurity is

natural disaster (Reddy et al., 2019). Natural disasters such as drought, earthquakes, and flood can have lasting consequences (Ainehvand et al., 2019), to which COVID-19 have now added. The pandemic became a second leading cause for food insecurity in developing countries. The aftermath of natural climatic shocks and other adverse events can cause a change in food availability (Islam & Ahmed, 2017). Developed countries with socio-demographically challenged populations continue to encounter long-term food insecurity after disasters (Pollard & Booth, 2019). Organizations that provide emergency food changed their operations; emergency food was prepacked in boxes rather than giving clients the option of choosing their own food, introducing sanitation measures to ensure food safety and protect workers, and ask clients to stay outside instead of coming into the building (Shanks, 2020).

The most vulnerable and poorest members of the population have felt an enormous impact on their nutrition status caused by the COVID-19 pandemic (Mardones et al., 2020). Layoffs related to the pandemic disproportionately affected those in low-paying jobs such as service workers in cafes, malls, restaurants, and shops while doors were shut indefinitely (Roy et al., 2020). Due to income loss the access to food and ability to buy food were threatened (Laborde et al, 2020). Children of low-income parents faced additional difficulty in accessing their school meals when health emergencies such as COVID-19 caused school meals to be reduced (Pereira & Oliveira, 2020). While areas across the continental US were able to meet students' needs for supplemental nutrition through school meals (Pereira & Oliveira, 2020), during the early stages of the pandemic, the USVI was unable to follow suit. While the federal government has not issued

approval for Disaster SNAP, a one-time Pandemic Electronic Benefits Transfer was implemented (US Virgin Islands Department of Health, 2020). The amount of money issued on each P-EBT was consistent with how many children are in the household; patterning the format of all other government food assistance programs.

### ***Coping with Food Insecurity in the Home***

To combat food insecurity mothers might buy lesser quality food which result in lower nourishment (Garcia et al., 2020). Mothers of infants reported diluting or rationing formula (Burkhardt et al., 2012). Women sometimes let their children eat first and they eat smaller portions, have leftovers, or nothing at all as a coping mechanism to limited food (Lawlis et al., 2018). Mothers may have to buy cheap food that can be stretched until their next paycheck or until the next income support is posted to their account (Lawlis & Jamieson, 2016).

Bezuneh et al. (2020) reported an array of coping strategies families utilized to be able to meet their food needs; they bought inexpensive clothing and shoes or none at all, they only bought necessities, they bought less junk food, did not eat out, and cut down on their food consumption to make it through the month. Another coping strategy used was controlling nonfood expenses (Bezuneh, 2020). According to Kisi et al. (2018) who did a study on pensioners coping with food insecurity in South West Ethiopia found similar strategies differing strategies and a few others. Similar strategies pensioners reported were eating less frequently, eating smaller portions, eating less expensive and lower quality foods, and not eating at all (Kisi et al., 2018). Differing strategies reported were inability to buy foods of preference, eat foods they did not want to eat, eat limited kinds

of food, eating more street foods, and selling household assets (Kisi et al., 2018). The pensioners also reported receiving donations from relatives, borrowing money to buy food, buying food on credit, selling wood, livestock or household assets, sending children to work, trading, and begging (Kisi et al., 2018). More exorbitant coping methods such as selling household assets were implemented when food insecurity conditions worsened (Farzana et al., 2017). According to Cordero-Aihman et al. (2018) who reported families borrowing food, decreasing household size by sending members to eat elsewhere, gathered wild food, and harvested immature crops as strategies to cope with food insecurity.

### **Single Mothers of School Aged Children**

Mothers of school aged children have a daily life that is hectic and topsy-turvy. Natural disasters and pandemics only add to their already busy lives. COVID-19 in the 21<sup>st</sup> Century has not made the lives of these mothers any easier. During the onset of the global pandemic, the Governor of the USVI, like leaders of other countries, declared a territory wide shutdown in March 2020. Therefore, only who were considered essential employees were authorized to work. This meant that all other areas of the workforce were to work from home or be laid off. Hospital workers urged communities to stay indoors, and schools were closed. Somehow the education system of the United States Virgin Islands had to shift to online learning without the necessary resources. K-12 students had to adjust to an online classroom using Zoom or Microsoft Teams which was already difficult on its own, but then there was the added hardship of not all households having internet connectivity or a functional computer. Some households might not have



connectivity and relied on the parent's mobile data plan (Young & Donovan, 2020), or some households might have had sufficient connectivity but lacked the accompanying devices necessary for online learning (Young & Donovan, 2020). Although the government has been able to secure adequate mechanical and technical resources for the transition of online learning by school aged children, food and nutrition have not had that courtesy.

Before lockdown and safer-at-home were declared in the USVI, school meals were the only surety that some children consumed nourishment (Turner, 2020). The pandemic-enforced lockdown put an instant halt to how those meals were served. During the infancy of the COVID-19 pandemic, the School Breakfast and School Lunch Programs initiated a meal-to-go concept in which parents could collect the meals for the children (US Virgin Islands Department of Health, 2020). Still, there has been no federal approval for the USVI territory to implement Disaster SNAP (DSNAP), but Pandemic Electronic Benefit Transfer (PEBT) has been issued by the VI Department of Human Services (US Virgin Islands Department of Health, 2020). The Virgin Islands Department of Health (2020) received names of private school students whose schools participate in the School Lunch Program from the Department of Education and issued PEBT to eligible recipients; students enrolled in USVI public and private schools who participate in the School Lunch Program – each received a one-time benefit of \$379.00. These were names of students who were enrolled in the 2019-2020 school year (US Virgin Islands Department of Health, 2020). The monetary benefit was issued onto an EBT Card in the

name of the student and households with more than one student received multiple cards (US Virgin Islands Department of Health, 2020).

Women workers at risk for job loss in the service, food processing, and distribution industries have been most disproportionately affected (Torero, 2020) including single mothers. Food security status is highly predictive by income (Gorman et al., 2017) and income became sorely lacking during the COVID-19 pandemic lockdown imposed by the USVI Governor. Social determinants of health such as employment, income, and wealth are causes of health inequalities (Braveman & Gottlieb, 2014) and furthermore are the gateway to securities like a home and food. Nonetheless, these socioeconomic resources have been abruptly halted thus unbalancing the natural routine of these single mothers.

### **Accessing Food and Nutrition Programs**

The lack of investment in school-aged children and adolescents has been deemed a major constraint on global development (Drake et al., 2020) which can be addressed in part by supplying this demographic with healthy meals at school. The meals served at school are sometimes the only meals the children get (Fram & Frongillo, 2018). Simeon (1998) reported that school children in Jamaica ages 11 to 13 improved their arithmetic scores after one semester of receiving school breakfast on account of their more regular attendance and were able to study more effectively. This absence of daily nourishment, although sporadic, might have had lasting effects on the children who experienced it.

In the United States of America there are several nutrition assistance programs which offer infants and school-aged children nutritional support: namely National School

Lunch Program (NSLP), School Breakfast Program (SBP), Supplemental Nutrition Assistance Programs (SNAP), and Women Infants & Children (WIC). The NSLP was established in 1946 and is federally funded (United States Department of Agriculture, 2018). It provides low-cost or free meals to public school children or nonprofit private school children (United States Department of Agriculture, 2018). The SBP is federally funded and was created in 1966 (United States Department of Agriculture, 2017). It too provides low-cost or free breakfast to public school children or nonprofit private school children. Both programs require the potential participant to fill out an application to determine eligibility.

SNAP is the largest nutrition assistance program in the United States and was founded in 1939 (United States Department of Agriculture, 2018). SNAP requires the recipients register for work, participate in employment and training programs assigned by the state and take a job if offered, do not voluntarily quit a job or reduce hours (United States Department of Agriculture, 2018). As an emergency measure to combat food insecurity during the COVID-19 pandemic of 2020 the Families First Coronavirus Response Act increased the benefit allotments of SNAP to the maximum allowable amount (US Department of Labor, 2020). With the multitude of job loss at that time, little evidence was found to support the SNAP expansion reducing food insecurity (Fang, Thomsen, Nayga, et al., 2021). WIC provides supplemental food and nutrition education to breastfeeding women, non-breastfeeding post-partum women, pregnant women who have low income (United States Department of Agriculture, 2022). It also provides nutrition assistance to infants and children up to five years of age. This program was

established in 1972 (United States Department of Agriculture, 2022). Both programs require families to apply within the state they reside on account of application process and eligibility differing in each state. Eligibility is determined by families meeting gross and net income limits which adjusts each fiscal year. However, although WIC recipients might be eligible due to monetary limitations, not all participants receive benefits.

The SBP and the NSLP served approximately 15 million breakfasts and 30 million lunches daily in 2019 (Kinsey et al., 2020). These meal service programs were interrupted by the Coronavirus pandemic that caused long-term school closures (Kinsey et al., 2020) which ultimately put single mothers in the uncomfortable position of increased risk of food insecurity (Coleman-Jensen et al., 2019). The eased burden of providing healthy and nutritious meals to their children, once done by the school meals program, had been returned to single mothers. However, the Families First Coronavirus Response Act gave the USDA authority to issue nationwide waivers on the regulation of school meals (Kinsey et al., 2020). The waivers created innovative flows of offering school meals; meal deliveries were made at intersections along the bus routes (State of South Carolina, Department of Education, 2020), home deliveries (United States Department of Agriculture, 2020), and some districts sought to maximize the reach of the program by stationing meal delivery sites in central community locations such as apartment complexes, churches, community centers, libraries, and school parking lots (Baltimore City Health Department, 2020). Outdoor grab-n-go meal distribution sites were also situated at fire stations or community centers. School meals served by these conditions

have allowed proper social distancing to be observed with non-congregate settings based on national waivers (Kinsey et al., 2020).

### **Qualitative Studies on Food Insecurity**

The phenomenological approach has been used in several studies to explore food insecurity. For instance, Hardcastle and Caraher (2021) conducted semistructured interviews with a sample of 33 food bank users to explore the perceptions of food bank users receipt of food and to obtain insight of household food choices in Margaret Court Community Outreach (MCCO) Perth, Australia. The researchers' data analysis revealed four themes; (a) food hamper: ties you over until payday, (b) fresh food and longevity of the hamper, (c) food choices; preferences and cultural norms, (d) and household gatekeeping and food control. The participants reported various reasons of expenses within the above themes which took precedence over food, such doctor appointments, transportation, and utilities. They also reported choosing less healthy inexpensive food items when grocery shopping such as not getting fresh produce. Hardcastle and Caraher concluded that their findings were consistent with previous literature about food banks being lifelines for many of the users as it provides much need food supplies until payday. They go further to describe the users' comparison among food banks; the MCCO food bank offered fresh produce and dairy whereas the other frequented food banks offered tinned foods, thus describing the comparison a novel finding in their study and an opposite report than the findings in a recent review on the quality and choices provided by other food banks (Hardcastle & Caraher, 2021). Although their study did not explicitly

emphasize the difficulties of applying to and accessing nutrition assistance programs, it underlined the participants' experiences and perceptions of receiving food aid.

A systematic review of qualitative studies on food insecurity suffers living in rural areas of high-income countries, namely Australia, Canada, and USA was conducted by Piaskoski et al., in 2019. They reviewed 32 qualitative articles upon assessing eligibility requirements of an initial 457 articles. Their review of food insecurity was guided by the 5 As: *availability, accessibility, adequacy, acceptance, and agency*. Each regularly prompted in and recurring across the articles reviewed. Piaskoski et al., compiled obstacles and barriers associated with each A. Obstacles and barriers to availability of food were lack of funds for the available healthy foods and distance to affordable foods required transportation. Accessibility to food, it seems not only has a financial barrier but an individual barrier as well in which parents fed their children what food was available and did not eat themselves. The parents also reported eating last if any were left and the mental stress of being food insecure. Acceptability was met with shame, fear, and stigma to receiving food aid from foodbanks, another food access barrier. The agency aspect of the researchers' systematic review referenced receiving food aid and applying to nutrition programs. Participants and recipients of these services reported them as insufficient, hard to get, helpful when received but not nutritious. The adequacy of food was described by participants across the systematic review as lacking. The foods available to them consisted of canned goods high in sodium and a limited supply of fresh produce. The participants compared the cheaper junk foods against the more expensive healthy fresh foods that were in short supply. This systematic review highlighted how the programs

and services developed to ease food insecurity can be disheartening because of difficult navigation and the complexities involved (Piaskoski et al., 2020).

The studies presented in this section described the reality of food insecurity for many people. While these studies identify sufferers' experiences with food insecurity and their coping strategies, they do not address pandemic-related food insecurity or accessing available nutrition assistance program needs and deficits. By gaining insight from single mothers who have experienced pandemic-related food insecurity and accessing available nutrition assistance programs, then solutions can be offered to improve already in place protocols or develop new interventions equipped to handle unforeseen events of the COVID-19 magnitude.

### **Summary and Conclusions**

In Chapter 2, I discussed the literature search strategies used. I listed the databases searched along with my key search words and phrases. The social ecological model (SEM) initially created by Urie Bronfenbrenner was presented and all five levels, individual or intrapersonal, interpersonal, community, organization, and policy of the model were discussed. I reviewed several studies which were based on the SEM levels and their relation to food insecurity. The section entitled food insecurity offered a summary of what is known and what is not known about food insecurity. The section defined the four facets of food security: food access, food availability, food stability, and food utilization. It described challenges faced while attempting to become food secure, as well as policies disseminated by the FAO to govern global food security.

I provided a detailed description of food insecurity which was accompanied by differing effects of food insecurity on its' sufferers. I discussed how food insecurity has been affected by the COVID-19 pandemic as well as how food insecurity is affected by natural disasters and other crises. I also discussed how food insecurity affects physical and mental health. I discussed the coping strategies single mothers' utilized to make food in their homes last. Single-mothers of school aged children and accessing nutrition assistance programs was discussed. Each of the discussed areas mentioned food access, food availability, stigma associated with being a food aid recipient, and nutrition education. By reducing socioeconomic inequities, social exclusion, and social injustice then the high rates of food insecurity, poor mental and physical health which are major underlying factors (Forouzanfar et al., 2015) can be rectified. COVID-19 will have taught us how to develop policies equipped for handling future pandemics and to create more inclusive and resilient food systems that limits the influence of future outbreaks (Swinnen & McDermott, 2020).

My literature review provided evidence that food insecurity is a silent fiend constantly battled by family, communities, organizations, and policies. However, some interventions during crisis are slow to mobilize and non-existent in other areas of the world. My literature review also provided justification based on evidence for including food insecurity sufferers' experience since they are most suited to supply an understanding of accessing available nutrition assistance programs. What my literature review lacked was evidence-based knowledge of how single mothers access available nutrition assistance programs for their school-aged children during crises, specifically the



COVID-19 pandemic of 2020. Although the COVID-19 pandemic has been ongoing for a year now, it is still new, and parents are still processing the experience. Therefore, their recount of the experience might not be as developed and processed due them contemporarily living the experience. As an ongoing stressor, parents cannot yet give a complete recollection of what they experienced; time passes and the mothers are able to return to normal life, they can lookback on the experience. As such, I explored their recollection of the phenomenon of interest during the pandemic of 2020. The individual characteristics, the characteristics of the community, and that of the environment which include the political, physical, and social elements all influence health through the lens of SEM (Kilanowski, 2017). The present study based on my research questions extended knowledge and filled a gap in the literature by focusing on the types of experiences in accessing available school nutrition in families headed by USVI low-income single mothers with school-aged children who faced food insecurity during the COVID-19 pandemic in the USVI.

In Chapter 3, I present the research design, rationale, and the methodology. I also present the role of the researcher, issues of trustworthiness, and instrumentation necessary for the proposed research method. Additionally, I discuss ethical procedures in detail, as no human participant research study can be executed without thoroughly ensured and approved protection of participants by the Institutional Review Board.

## Chapter 3: Research Method

### **Introduction**

This study focused specifically on the types of experiences in accessing available school nutrition assistance programs during COVID-19 by food insecure USVI low-income single mothers with school-aged children. This study explored the types of lived experience of food insecure single mothers' ability to access available nutrition during the COVID-19 pandemic of 2020. This Chapter contains a section on the research design and rationale, role of the researcher, the methodology, trustworthiness, ethical procedures, and the summary. I give a detailed explanation of the phenomenological approach as well as data analysis and the ethical procedures. I describe my role as the researcher along with my positionality and how I ensure reflexivity. The section on methodology specifies participant selection criteria, the interview guide, and how it aligns with the research question. The section on trustworthiness explains credibility, dependability, and transferability; and likens them as the counterparts of the quantitative research reliability and validity. Lastly, the summary section concludes Chapter 3.

### **Research Design and Rationale**

The study was done to gain an in-depth understanding and make sense of the types of lived experience of food insecure single mothers access to available food and nutrition programs during the COVID-19 pandemic of 2020. The study served as a stepping stone for future studies on food insecurity and single-parent families during natural disasters, pandemics, and never before experienced global crises. My study was guided by the research questions:

RQ1: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their individual and interpersonal experiences in accessing available school nutrition assistance programs during the COVID-19 pandemic?

RQ2: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with community and organizational structure in accessing available school nutrition assistance programs during the COVID-19 pandemic?

RQ3: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with policy in accessing available school nutrition assistance programs during the COVID-19 pandemic?

Interpretative phenomenological analysis (IPA) focuses on individuals' sense making of an event in detail (Smith et al., 2009). IPA employs a double hermeneutic; while the participants are attempting to make sense of their world, the researcher in turn is trying to make sense of the of the participants attempting to make sense of their world (Smith & Osborn, 2008; Smith & Shinebourne, 2012). Idiography has a major influence on IPA thus making IPA studies interested in the particular (Smith et al., 2009). In addition, the experiential phenomena in particular is to be understood from the perception of a particular context, by particular people (Smith et al., 2009). IPA was the method by which collected data were analyzed; the unique understanding of the lived experience is what anchors this research tradition and separates it from the constructivist paradigm of

other qualitative research (Frechette et al., 2020). Essentially, this phenomenological approach examines the participant's life world in detail, that is, this approach is subjective relative to the participant's personal experience with their perception of an account, event, or object (Smith & Obsorn, 2009). Phenomenological studies are descriptive, and the researcher is required to provide an interpretation of the participants' lived experience. Here, he or she who has experienced the phenomenon of interest has an epistemic privilege making his or her qualitative narrative the best proxy for others to deduce that he or she is experiencing the subjective phenomena of interest (Stilwell & Harman, 2019). These types of studies are centered around a small number of participants and require lengthy, exhaustive engagement to develop patterns and relationships of meaning. The collected data is rich and the approach to understanding the participants' experience is unique. The interpretation of significance for the person is what completes the account of the lived experience as opposed to the experience remaining entirely descriptive (Frechette et al., 2020). Because my goal was to understand the lived experience of my participants, the phenomenological approach was appropriate.

Qualitative research using semi structured interviews is an approach health psychologists often use (Kallio et al., 2016); it involves a detailed and highly intense analysis of the phenomena of interest experienced by the participants. The growing policy and practitioner emphasis on patient/client practices and experiences regarding illness, prevention, and service use are other reasons for qualitative health research (Gough & Deatrck, 2015). As a means to give patients a voice, qualitative methods are

now used and promoted by major health research funders. This is referred to as patient-centered outcome research (Gough & Deatrck, 2015).

### **Role of the Researcher**

As a West Indian who grew up food insecure, I have an intimate relationship with my research topic. I have been in a single parent food insecure household during several natural disasters as a child. Relief provided was minimal. We were often told to clean our plates because there were starving children elsewhere with no food. Throughout my study, I attempted to remain objective by journaling even though I was aware of hardships single mothers' endured during the pandemic; this proved difficult because qualitative research is steeped in and focused on an appreciation of subjectivity and interpretation (Ravitch & Carl, 2016). However, due to my role as a qualitative phenomenological researcher I had the responsibility of investigating and interpreting the impact of the phenomena of interest on the lived experience of the research participants (Alase, 2017).

In qualitative research, the primary instrument is the researcher, whose role is a central consideration (Ravitch & Carl, 2016). A researcher of qualitative research also has the responsibility of using reflexivity in which there is an ever-present awareness of the researcher's role and influence in the development of and relational contribution to interpretation and meaning throughout the research process (Anderson, 2008). In addition to constantly exercising reflexivity, my social identity and social location were identified by positionality (Ravitch & Carl, 2016). As such, subjectivities that fall on the personal side are of vital importance (Ravitch & Carl, 2016). Ultimately, this role affords

qualitative phenomenological researcher's opportunities and possibilities that should be maximally explored (Alase, 2017). Therefore, dispelling of all preconceived notions I had by keeping a journal was a fundamental exercise prior to data collection and in transit, reduce researcher bias. For me, throughout data collection, a good practice to assist researcher bias was to report findings indicated by the data as opposed to manipulating the data.

During this study I did not anticipate encounters with participants with whom I might have personal relationships. However, my geographic target population area was small and there was a possibility that I might encounter someone I knew. Such an event might cause conflict of interests, namely respondent bias, and my ability to maintain a professional manner while remaining impartial. By reassuring the participants their confidentiality and anonymity will be maintained, avoiding judgmental language or facial expressions, and letting them know their questions are encouraged, I established a rapport and a safe environment. If my participants viewed both them and I as equal instead of me being more powerful than them, then the necessary environment that does not threaten data collection was maintained (Creswell & Creswell, 2018).

Lastly, in my study, I held the ethical position of protecting human research participants. Remaining aware of the subconscious trauma that lingers in their psyche was necessary for me to avoid or at least minimize any triggering reminders of their food insecure experience during the COVID-19 pandemic of 2020.

## **Methodology**

### **Population and Sampling Procedures**

Qualitative research is consistent with understanding how food insecure single mothers of school-aged children describe and perceive accessing available nutrition programs during COVID-19, which was the focus of this study. My focus remained on the single mothers' perspectives on food insecurity in their households during the pandemic as well as their experiences accessing available nutrition assistance programs at that time. I administered detailed and thorough semistructured one-on-one interviews to my participants, who provided first-hand knowledge containing experience on the phenomenon of interest.

Participants for my study were selected using the purposeful sampling strategy. Purposeful sampling strategy ensures only participants who have experienced the phenomenon of interest are included in the study (Creswell & Creswell, 2018). Specifically, I used the chain sampling strategy under the purposeful sampling umbrella. Chain sampling offers the benefit of participants' suggesting additional possible participants. Using chain sampling also functions as a recruitment method since participants' assistance are asked to recruit other possible study participants (Carl & Ravitch, 2016).

Frechette et al. (2020) suggested a small sample size because it will be diverse and rich in lived experiences of the phenomenon of interest. Small sample sizes are recommended for interpretive phenomenological studies since the richness of collected data precedes large sample size and generalizability (Frechette et al., 2020). Smith and

Shinebourne (2012) maintained in IPA that small size is best because of the elaborate case-by-case detailed examination. When selecting participants, existing homogeneity within the participant sample pool should be represented and reflected (Alase, 2017). A homogenous sample offers perspective on the phenomena of interest from which psychological differences and similarities within the sample can be analyzed in detail (Smith & Shinebourne, 2012) thus making the analytical process rich and descriptively deep (Alase, 2017). Therefore, I aimed to recruit a homogenous sample of eight to 10 participants who were information rich on the phenomenon of interest.

### **Inclusion and Exclusion Criteria**

Criteria for inclusion in research studies requires specific demographic, clinical, and geographic characteristics (Patino & Ferreira, 2018) which made identifying the target population a consistent, objective, and a uniformed process (Garg, 2016). Whereas exclusion criteria included characteristics which make participants who were recruited ineligible for the study (Garg, 2016), or the participants met the inclusion criteria but also held additional characteristics that contributed to an unfavorable outcome (Patino & Ferreira, 2018). Eligibility criteria for this study: potential participants had to be single mothers, at least 18 years of age, had a fifth-grade reading level, had school-aged children, and both parent and child resided in the USVI during the COVID-19 pandemic of 2020. Upon being contacted by potential participants to participate in the study, I asked the participant screening questions which assisted me in determining eligibility see Appendix C. If potential participants were under 18 years old, did not reside in the USVI



during the COVID-19 pandemic of 2020, or refused to give informed consent, they were excluded from the study.

### **Participant Selection**

Participants who experienced the phenomenon of interest were considered primary sources and were interviewed to collect data. In qualitative studies, participants are chosen with the aim of maximizing their information relevant to the study. How the key informants make sense of the experience were analyzed using IPA. While the sample size should be small, no larger than three to six participants as suggested by Smith et al. (2009); Alase (2017) recommended homogeneity among the participant sample pool. Smith et al.(2009) further recommended that graduate students have a sample size larger than six. The research question and quality of obtained data influence the sample size (Smith & Shinebourne, 2012). Smith and Shinebourne (2012) also recommended a small sample size because it allows a detailed look at the psychological similarities and differences within the defined sample. They did not specifically give a number or range of numbers for the sample size; however, they offered the advice that the research question and the quality of the data collected gave reasons why IPA sample size varies accordingly.

I sampled single mothers who resided in the USVI during the COVID-19 pandemic of 2020. The desired sample size for my study was eight to 10 participants. Potential participants were identified by eligibility to participate in my study. I recruited potential participants by posting flyers of the study on social media platforms as well as in community boards of health clinics, churches, beauty salons, barbershops, and grocery

stores. The flyer contained my contact information. Chain sampling was also used as a recruitment strategy. Potential participants were able to contact me using my contact information on the flyers.

### **Data Saturation**

A qualitative research study is said to have achieved data saturation when no new information is revealed (Patton, 2015). Data collection and data analysis are discontinued when saturation occurs (Lipworth et al., 2013). Sebele-Mpofu (2020) explained data saturation as being achieved when philosophical and evaluative adequacy is attained relative to the theoretical framework by which the research study is guided. Qualitative research uses saturation as an indicator of sample size effectiveness (Hennick et al., 2017). Different meanings of saturation can be applied to different approaches of qualitative research (O'Reilly, 2013). Theoretical saturation has the principal focus of saturation being achieved by sampling in relation to theoretical categories development (Saunders et al., 2018) or grounded theory methodology (Glaser & Strauss, 1967). Inductive thematic saturation has the principal focus of saturation being achieved by analysis in relation to new codes of themes being emerged (Saunders et al., 2018). Data saturation has the principal focus of saturation being achieved by data collection in which new data repeats what has been expressed in previously collected data (Saunders, 2018). However IPA studies primarily focus on data quality thus allowing these studies to benefit because of the smaller, more concentrated cases (Pietkiewicz & Smith, 2014); I ensured saturation through data collection was met although IPA does not seek

saturation. My aim to have a small sample size of eight provided the information rich data necessary to conduct IPA studies.

### **Instrumentation**

Qualitative studies often reference the researcher as the primary instrument (Merriam & Tisdell, 2016). My research guide was based on the research questions I presented in Chapter 1, see Appendix A. I audio-recorded the videoconference virtual face-to-face semi structured interviews. Smith and Osborn (2008) notions tape recording is a requirement for interviewing in IPA studies. Recordings of interviews are an essential tool that aids in capturing important nuances of participants' experience. Observation and fieldnotes were also instruments used to collect data. They were used to record firsthand how the research participants are engaged in and respond to the context in which the events occurred (Ravitch & Carl, 2016). For without observational fieldnotes data is not collected (Ravitch & Carl, 2016). The interviews were transcribed verbatim. Both the audio-recording and the fieldnotes helped supply accuracy while transcribing the interview.

The open-ended questions and the semi structured interview method gave participants the opportunity to talk about their experiences in detail. Open-ended questions gave way to probing for detailed responses about the participant's experiences, feeling, knowledge, and perceptions, as opposed to the dichotomous yes/no or other forced response closed ended questions (Patton, 2015). Semi structured interviews help establish a comfortable environment for participants (Pietwiewicz & Smith, 2014) which made them more open to sharing their experience.

## **Researcher Developed Instruments**

My interview guide consisted of 12 open-ended questions which gave the participants leeway to answer without being confined to choosing readily supplied responses, see Appendix A. Qualitative researchers cannot use instruments designed by other researchers so qualitative researchers must create their own instruments (Creswell, 2013). The interview guide questions were created using the SEM and ask about the participants experience with food insecurity and accessing nutrition assistance programs at each level of the SEM. The questions were crafted to delve into the experiences of single mothers' accessing nutrition programs, food insecurity, and their perceptions of how they fed their school-aged children during the COVID-19 pandemic of 2020. The interview questions which applied to each research question and the appropriate level of SEM concepts are in Table. 1 below Appendix A. My committee reviewed the interview questions and offered feedback on how directly related my interview questions were to the research criteria.

In qualitative research, experts in relevant fields, patients, and the public, can establish content validity (Keeley et al., 2013). Content validity has been described by Brod et al. (2014) as being created during the development of a concept; the purpose of content validation is to measure whether items are comprehensive and sufficiently reflect the participant perspective for the population of interest. Or, the extent to which the most important and relevant aspects of a concept are represented as a descriptive system of measure (Magasi et al., 2012). Individuals with firsthand experience can provide emic perspective, while clinicians and researchers who observe individuals interact with the

construct of interest can provide an etic perspective (Keeley et al., 2013). The evidence provided by content validity supports that the content of items, the conceptual framework, and overall approach of measurement are consistent with the experience, perspective, and words of the population of interest (Brod et al., 2014) thus establishing content validity. Keeley et al. (2013) recommended pursuing the participant's conceptualization of the concept the measure seeks to assess in addition to the opinions of the measure under consideration. Therefore, by gaining an understanding of my participant's conceptualization of the phenomena of interest brought potential for a richer understanding of the opinions of the phenomena of interest, and thus provided a stronger conclusion as to the content validity of the interview guide.

### **Procedures for Recruitment, Participation, and Data Collection**

#### **Recruitment**

I posted recruitment flyers in local supermarkets that have community bulletin boards as well as posting the flyer in the social media Facebook group What's Going On St. Thomas to draw potential study participants, see Appendix B. Flyers were also posted on the community boards of health clinics, churches, beauty salons and barbershops. The flyer provided a contact number and an e-mail address for potential participants to use for an initial interview. During the initial interview, inclusion criteria was verified and preliminary verbal consent to participate in study obtained while I emailed the informed consent forms to the participants. I then instructed participants to read the consent terms and reply to my email with the words "I consent" to participate in the study. However,

when too few participants were recruited, I readvertised the flyer on social media as well as in the aforementioned physical locations.

### **Data Collection**

Data were collected from eight eligible, consent confirmed participants. I, the researcher, was the primary instrument of data collection used. The interview guide was used to assist the flow of the conversation between participants and me. Each face-to-face audio recorded interview lasted between 60-90 minutes. Telephone interviews were arranged at the event the participants preferred not to be visual. Even though only one interview per participant was needed, there were instances when an interview was not completed due to an unforeseen circumstance. When this occurred, then another interview was scheduled. Another interview was scheduled if the participants contacted me and expressed her need to clarify responses. Upon completion of the interview, I thanked the participants for their time and provided them with a \$20 e-gift card. I also informed participants of the 211 number which would connect them to the National Human Service Call Center if they felt overwhelmed or experienced emotional distress during the interview. My study participants were debriefed by my informing them of my intentions of the study in which they just participated. I let my participants know that there was no further action required of them, but I contacted them to verify the accuracy of their transcribed interview. I also informed them that they would be notified when my study was completed.

## **Data Analysis Plan**

My data was analyzed using IPA. True to form with IPA studies, orderly managing the analytic process is one of the main roles (Smith et al., 2009). Smith et al. (2009) recommended reporting in detail on the view from within a particular homogenous sample group experience, but not claim to generalize about all homogenous groups of similar phenomena. Processing and analyzing data is the phase of IPA which is most crucial and labor-intensive (Smith et al., 2009). Smith et al. (2022) described the IPA data analysis process in seven stages, with key steps serving as outlines for beginners. Smith et al. (2022) recommended becoming familiar with and analyzing the first case in detail, thus staying true to the idiographic commitment of IPA. They then suggest moving on to the second case and so on. However, they specifically recommend beginning with an interview that the researcher finds to be most complex, detailed, and engaging. I began transcribing each audio recorded interview within one day of the interview. All interviews were transcribed verbatim.

Stage 1 of IPA data analysis is designed to ensure the focus of the analysis is the participant. In the first stage, I was instructed to become familiar with the transcribed interviews by reading and reading them a few times and listening to the audio-recording if it exists. By immersing oneself in the original data the researcher can acquire a general sense of the participant's recollection of the entire event. Additionally, at this stage, my experience of the interview informed the data analysis process. Here, I recalled moments in the interview or came across distinctiveness in the transcripts which informed data analysis. Usually at this point, notes of possible connections can be made to alleviate the

overwhelming feelings accompanied by the initial data analysis process. The notes made at this stage of the process were necessary to produce so that my first impressions of the interview had been captured. This stage was also the most time consuming as it required meticulous finessing and thorough detailing.

Stage 2, exploratory noting, required of me to reread the transcripts once again and tentatively organize emergent themes (Smith et al., 2022) and maintain an open mind (Smith et al., 2009). Language and semantic content were explored at the second stage; in doing so my aim was to catalog a detailed and comprehensive set of comments and notes on the data (Smith et al., 2009). Here, the objective was to create corresponding phrases of a psychological or theoretical perception (Smith & Shinebourne, 2012). Smith et al. (2009) suggested working with a hardcopy of the transcripts that had wide margins in which to make initial notes and comments on the left, then document emergent themes on the right. This note taking strategy was done for each transcript, throughout each transcript.

Stage 3 brought the identification and development of experiential statements. Here, Smith et al. (2022) recommended I reduce the detailed amount of data from the transcripts and notes, and concurrently preserve complexity regarding connections and patterns to exploratory notes and map interrelationships across the data. As this happened, my primary work tool became the notes instead of the transcript. The focus now was to capture in the text what is crucial; certain phrases which communicated the psychological essence of the piece were considered themes. These contained enough abstraction to be conceptual and enough particularity to be grounded. While reflecting on



the original thoughts and words of the participants, I too reflected my interpretation. Smith and Shinebourne (2012) suggested grouping themes by theoretical similarities then issuing each grouping a name. The groupings should make sense relative to the original transcript.

Stage 4 the search for connections across experiential statements began. Here, some emergent themes may be discarded since not all themes will be incorporated into this stage of analysis (Smith et al., 2009). Smith et al. (2009) recommended developing map and charts of how the researcher thinks the emergent theme fit together. They once more recommended keeping an open mind during this stage as this is the initial transcript being analyzed and there are more transcripts to be done. Upon analyzing subsequent transcripts, I re-visited earlier transcripts and re-evaluated some themes' importance. Essentially, at this point, I looked for a connection that brought together the emergent themes and formed a structure which allowed the researcher to focus on all the most intriguing and significant aspects of the participant's account. Finally, when data saturation of the first transcript was achieved by the absence of new connections and patterns explored, and I was comfortable with the outcome. Smith et al. (2009) suggested documenting how this stage of analysis has been conducted.

Stage 5, naming the personal experiential theme and consolidating and organizing them in a table. The experiential statement clusters were now given a title descriptive of its characters. The clusters are then transformed into the participant's Personal experiential themes (PETs).

Here I began Stage 6; moving on the next case to continue the individual analysis. After completing data analysis of the first transcript, I moved on to the next transcript and repeated stages one through five. I treated this transcript as its own case as recommended by Smith et al. (2009) and continued to do so for each transcript. Once again I made notes to help me focus on the transcript and ease any overwhelming thoughts, I had in relation to the first case. I observed these steps for each transcript, thus staying true to the idiographic commitment of IPA. By doing so, I remained open-minded and aware of new themes that might emerge with each individual transcript.

Finally, at Stage 7, which upon completion of data analysis of each transcript, I worked with the personal experiential themes to develop Group experiential themes (GETs) across cases. Here, my aim was to move to a more theoretical level and distinguish GETs shared across the transcripts as well as unique idiosyncrasies. Discrepant cases that appeared throughout the data analysis process we described in their difference from the sample and how they were incorporated into the analysis. However, before doing so, I inspected the discrepant cases for their distinguishing importance in understanding how single mothers perceive the SEM levels of accessing available nutrition assistance programs.

### **Issues of Trustworthiness**

A note on qualitative methodologies; good qualitative research characteristics are the commitment to rigor, impact and importance, sensitivity to context, and transparency and coherence (Yardley, 2000). These characteristics help guide the validity and quality in qualitative research (Shinebourne, 2011). The entire analytic process is permeated by

sensitivity to context due to commitment to care and attention to deal in data analysis (Yardley, 2000).

When specific procedures and protocols are in place to ensure that the information provided by a study is acceptable as the definition of trustworthiness (Connelly, 2016). Trustworthiness and all that it encompasses about research in psychology seem to expect constancy while in search of new meanings regarding the reason for things' being. Trustworthiness strengthens the value of a research study (Lincoln & Guba, 1985). Criteria for evaluating the quality of qualitative research designs are confirmability, credibility, dependability, and transferability along with the umbrella under which they fall, trustworthiness. Trustworthiness is the qualitative equivalent of validity in quantitative research (Burkholder, 2016). Measurement validity makes certain that criteria being measured is what is indeed supposed to be measured and measurement reliability holds the responsibility of producing consistent results each time the measure is used (DeVellis, 2017). Validity in qualitative research means specific procedures are used by the research to check for the accuracy of the findings (Gibbs, 2007). Member checking or participant validation is used to assess, validate, or verify the trustworthiness of qualitative results (Birt et al., 2016; Doyle, 2007). Member checking requires the researcher to have the research participant read and confirm the interview of analyzed data (Birt et al., 2016).

Research that is reliable is research that is credible (Cypress, 2017). In qualitative research, reliability comes in the forms of consistency (Leung, 2015). Qualitative reliability denotes that the research's approach remains consistent when employed by

different researchers and different projects (Gibbs, 2007). When using computer software packages good qualitative reliability is achieved when coding consistency is in agreement at least 80 percent of the time (Miles & Huberman, 1994).

### **Credibility**

Credibility is the qualitative counterpart of internal validity (Statlander, 2015). Credibility is used by positivists researchers to ensure that their study tests or measures what is intended (Shenton, 2004). In qualitative research, credibility presents itself as the integrity of the data. Data saturation, member checks, prolonged contact and triangulation are the common methods (Statlander, 2015). Member checking allows participants to authenticate their interviewed transcriptions (Jamieson, 2016). Patton (2015) recommended that researchers connect the study results with reality in order to convey the truth of the findings. Lincoln and Guba (1985) referred to this linkage as confidence in the truth of the finding.

### **Transferability**

Transferability in essence has the objective of maintaining richness that is context specific (Ravitch & Carl, 2016). The focus of transferability is on the individual experiences of the participants, although each participant might not share the same individual experience (Connelly, 2016), and that is my intention with this study. Variation in participant selection and thick description are common methods used to ensure transferability (Statlander, 2015). Use of artifacts, observable actions, and words as part of thick descriptions offer context and meaning to which aid in understanding the collected data (Hong & Cross Francis, 2020). The transferability of this study is not

largely to apply the findings to other contexts or settings, however, that applicability is feasible.

### **Dependability**

Dependability is the equivalent of reliability; the methods and apparatus used to collect data should produce consistent results with each repetition. Showing data accuracy by using audit trails and triangulation are common methods (Statlander, 2015). Triangulation occurs when the same research questions are asked to different study participants, by data collection from different sources, and by using different methods to answer the research question asked (Statlander, 2015). Justification for themes is created through triangulation when evidence from different data sources is examined (Creswell & Creswell, 2018). An interview schedule, researcher reflexivity, and clear examples of codes are additional methods used to achieve dependability (Jamieson, 2016). Peer debriefings and process log audits are good strategies for dependability (Connelly, 2016). All methods used are documented meticulously so that other researchers can replicate the study. Dependability shows that findings are consistent and replicable (Lincoln & Guba, 1985).

### **Confirmability**

Exploring and acknowledging ways to explore prejudices and biases that influences data interpretation is the goal of confirmability (Ravitch & Carl, 2016), then finding ways to thorough reflexivity to resolve those biases and prejudices (Ravitch & Carl, 2016). Confirmability is likened to objectivity in quantitative research (Connelly, 2016) meaning that there are no claims by the qualitative researchers to be objective

(Ravitch & Carl, 2016). At this issues of trustworthiness juncture, study findings should produce the focus of the study rather than exhibit researcher biases (Statlander, 2015). The extent to or the degree of neutrality of which study findings are molded by the respondents instead of researcher bias, interest, or motivation (Lincoln & Guba, 1985). Audit trails, reflexivity, and triangulation are methods used to ensure confirmability (Lincoln & Guba, 1985). An audit trail is transparency in research steps description from the beginning of the project, project development, and report findings (Lincoln & Guba, 1985).

### **Ethical Procedures**

Ethics in research is sacred. In addition to applying responsible conduct in research, ethics is the beacon by which researchers honorably make certain that their human research participants are well informed of and properly comprehend what they have voluntarily agreed. Often, qualitative research embraces sensitivity and sensitive topics, have the ability to clarify phenomena in which operationalized variables have not yet been identified (Merriam, 1995), and give new understanding to familiar problems (Merriam, 1995). Ethics in research is guided by three founding principles for protecting human research participants: beneficence, justice, and respect for persons. Ethics is necessary, to be observed and genuinely applied during the research process. Therefore, protecting the rights of human research participants is vital. I completed the National Institutes of Health “Protecting Human Research Participants” on 04/01/2017 Certification Number: 2364564.

The Institutional Review Board (IRB) are the caretakers and overseers of the three ethics principles. The IRB scrupulously dissect researcher study proposal to determine whether the researcher has made sufficient provisions in the study to protect human research participants. Otherwise, IRB would not approve the study and request ethical considerations be provided and ethical research criteria met. The IRB approval number has been presented in Chapter 4.

To recruit potential participants, I contacted several areas of interest about my study and requested permission to advertise in those establishments. Areas of interest were local supermarkets and grocery stores, health centers and clinics, and beauty salons. Upon receiving permission to advertise my flyers in their establishments, I posted the flyers which included my name and contact information at each establishment.

Potential participants agreed to participate in human research participant studies without coercion. All study participants signed informed consent forms which described in detail the purpose of the study, as well as the role of the researcher, and that of each study participant along with their rights to refuse or withdraw from the study at any time. The informed consent form included how anonymity will be maintained, that the interviews will be confidential, how data will be collected, and that each participant would have the opportunity to review her transcribed interview. Once contacted by potential participants and gained their agreement to participate, I requested they sign the informed consent form and return it to me.

Participant identity remained confidential throughout the data collection process by assigning each participant a unique identifier. When transcribing the interviews each

participant was identified by the unique identifier assigned to them. I ensured privacy by securing my participants' identity in a locked file cabinet kept in my home office. When the participants and I are had the interview, I informed them of potential risks involved with their participation. These potential minimal risks included stress while recollecting their experience with food insecurity and access to nutrition assistance programs during the COVID-19 pandemic of 2020. Additionally, if I detected any discomfort or unease with a participant while interviewing, I offered a short recess and reminded them that participation was voluntary, and they could withdraw at any time. Consequently, had any participants disclosed personal medical or educational information I informed them that I was barred from commenting. If the disclosure was illegal activity such as domestic abuse or substance abuse, I informed them that I was obligated to report the abuse.

Once data collection and analysis were completed, I stored the uniquely identified transcripts on an encrypted external drive. The external drive was locked file cabinet in my home office, of which I am the sole user. This data will remain in my possession for five years as required during dissertation completion. At the five-year mark, I will destroy the data on the encrypted external drive. No data will be disseminated since the collected data will be used only for my current research.

### **Summary**

My qualitative study employed an interpretative phenomenological approach to explore how food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children perceive their individual and interpersonal experiences in accessing available school nutrition assistance programs during the



COVID-19 pandemic. The conceptual framework that guided my study was the social ecological model. I collected data by conducting virtual face-to-face, one-on-one interviews with participants. The interviews consisted of open-ended questions which were crafted to answer each level of the Social Ecological Model upon which my research questions were based. Upon completion of interviews, I initially hand coded the data then used Dedoose qualitative software to assist in data analysis.

When I gained IRB approval, I began recruiting participants and data collection. The data collection method and data analysis are more thoroughly discussed in Chapter 4.

## Chapter 4: Results

### **Introduction**

The study was done to gain an in-depth understanding and make sense of the type of lived experience of food insecure single mothers' access to available food and nutrition programs during the COVID-19 pandemic of 2020. The study served as a steppingstone for future studies on food insecurity and single-parent families during natural disasters, pandemics, and never experienced global crises. My study was guided by the research questions:

RQ1: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their individual and interpersonal experiences in accessing available school nutrition assistance programs during the COVID-19 pandemic?

RQ2: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with community and organizational structure in accessing available school nutrition assistance programs during the COVID-19 pandemic?

RQ3: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with policy in accessing available school nutrition assistance programs during the COVID-19 pandemic?

In this Chapter I present the settings of which the interviews took place or what might influence social desirability bias, demographic information relevant to my study, and data collection which meticulously describes the process. In the Chapter I further explain how data are analyzed, evidence of trustworthiness, as well as the results and findings of this study. The IPA method of data analysis produced three group experiential themes and seven group-level subthemes. The results of this study will potentially guide health educators and nutrition assistance program staff on creating platforms to teach recipients how to choose healthier foods and how to utilize food as a resource during global pandemics. Results are structured by research question; data to support each finding is presented here as direct quotes from transcripts, tables, and figures. Finally, the answers to my research questions are summarized in this Chapter.

### **Settings**

Participants were recruited via social media postings and physical flyers posted on the community boards of supermarkets, health centers, churches, and beauty and barber shops. Participants were instructed, as per their informed consent form, to secure a quiet and safe location from which they could freely speak. Although the interviews were videoconferenced, a quiet space was not always entirely available to the mothers as their children would sometimes come to ask something of them. The participations were invited to the interview via a link emailed to them; for added security the meeting was passcode protected as well as having a waiting lobby. This method of face-to-face interviewing was chosen due to restrictions in place a result of the COVID-19 pandemic and in consideration of participants' concerns with meeting in-person.

### Demographics

My sample size was eight single mothers, and I was able to conduct eight interviews. The participants met my eligibility criteria: being single mothers of school-aged children, both mother and child(ren) resided in the USVI during the pandemic of 2020, the child(ren) were enrolled in USVI K-12 institution. Each single-mother was a current nutrition assistance program recipient, and all resided in the USVI during the COVID-19 pandemic of 2020. Five of the participants resided in the St. Thomas/St. John district, all on the island of St. Thomas. The remaining three participants resided on St. Croix in the St. Croix district. Two mothers are currently employed by the government, three are unemployed, the remaining three are employed with supermarkets. Table 1 shows the relevant demographics of single mothers who participated in this study.

**Table 1**

#### *Demographics*

Participant	Children	Island of Residence	Employment
P1	5	St. Thomas	Employed
P2	1	St. Thomas	Employed
P3	2	St. Thomas	Employed
P4	1	St. Thomas	Employed
P5	1	St. Croix	Unemployed
P6	3	St. Croix	Unemployed
P7	2	St. Croix	Unemployed
P8	3	St. Thomas	Employed

### Data Collection

My research instrument was an interview guide containing 12 semi structured open-ended questions asked in interviews lasting between 60 and 90 minutes in efforts to

gather single mothers' perceptions on accessing available nutrition assistance programs. Upon receiving approval number (04-12-22-0682482) from Walden University's IRB on 12 April, 2022, I began the recruitment process for to collect data. Data collection occurred between 12 April, 2022 and 16 January 2023, a period of 9 months. Data were collected for 9 months, possibly due to single mothers' busy schedules, them wanting to participate but fearful to do so, or simply forgetting to contact me. Several interviews were scheduled but were not met for various reasons: they forgot the meeting, lack of childcare, not yet ready to talk about the experience, or connectivity issues. Recruitment efforts concluded when data saturation and thematic saturation were achieved. I was contacted by 13 single mothers and a total of eight interviews were conducted. Participants contacted me initially by email and then by WhatsApp after I received approval from IRB to include a contact number on my flyer. After initial contact from the participants, I emailed them informed consent form and I received a return email saying "I consent." Then, we scheduled a meeting time that was convenient. I created a Word document to track when I was contacted, eligibility, participant resident island, employment status, number of children, and dates interviews were completed.

All eight participants gave electronic consent to a video conferenced recorded interview conducted using Zoom. I sent each participant a specific Zoom link for our meeting. The Zoom meeting room was equipped with two security measures: a waiting room and a passcode. At the start of the interview, I introduced myself to the participant, explained why I was doing this research, reminded them that their participation is voluntary and that their responses will remain anonymous and confidential, asked if there were

anything questions or points which needed clarifying, then let them know when I would begin recording. During the interviews, I rephrased my interview questions when asked to ensure the participants understood correctly. When the interview was completed, I thanked the participant for her time and participation, and ended the recording. Each interview lasted between 38 and 75 minutes. I had no variations in my data collection plan presented in Chapter 3.

However, the unusual circumstance which presented itself during data collection was my being contacted by scammers via email through the Walden University Participant Pool. This single mother provided detailed information, but that interview was not recorded. She received her e-gift card but did not respond when I contacted regarding redoing the interview so I may record it. I then received an additional two emails from other potential participants who said they fit the criteria. However, through email exchange between themselves and myself, I realized they were not residents. Walden Participant Pool sent an email shortly after, confirming those three mothers who contacted me were scammers.

### **Data Analysis**

Each recorded interview was uploaded to REV for transcription, then I manually transcribed my interviews to correct the errors generated by the transcription software due the Virgin Island accent. I then sent a summarized version of the transcript through their emails for member-checking so that the participants could verify the accuracy with which I captured their perspectives. Each participant responded that I accurately captured their perspectives. At this point, I initiated the seven-stage IPA method developed by

Johnathan Smith, Paul Flowers, and Michael Larkin. I created a Microsoft Excel workbook in which there was a worksheet for each research question. Within each worksheet were columnized subheadings with the interview questions specific to the research question of that worksheet. Each participant's responses to the interview questions were color-coded.

IPA Stage 1 requires the researcher to immerse oneself in the data by reading and re-reading each transcript; while re-reading, I also listened to the interview. By re-listening to the interviews, I was able to remember a deviation in the participant's voice, or a less than forthcoming answer to the question; telling cues I would not have been able to observe with reading alone.

IPA Stage 2 had me apply note taking; here, I used a running Microsoft Word document that contained key or repeating words and phrases my participants said. Headings consistent with the interview question were used to record participants' responses categorically. This Word document evolved into a spreadsheet in which each participants' responses were put into columns and sectioned by rows headed with each research question. The transformation of the Word document interview headings to an Excel spreadsheet with research question sections allowed me to get a clearer picture of my participants' experiences during the COVID-19 lockdown period and new normal of their children in online school while home. Smith et al., (2022) stated that by taking such exploratory notes that pinpointed descriptive, linguistic, and conceptual comments, I would be able to understand how and why my participants had these concerns. There were three disabled participants who spoke of their mobility issues causing difficulty in

their ability to independently access food resources during the pandemic. The conceptual comments brought up personal reflections helping the participants to share new realizations.

Moving into IPA Stage 3 which brought me to constructing experiential statements (Smith et al., 2022) (new terminology that replaces emergent themes, Smith et al., 2022). The IPA methodology at this stage requires the analyst to maintain complexity while reducing volume of detail by using the exploratory notes. I executed this step in my excel spreadsheet that contained each exploratory comment made by the participants. At this point, Smith et al., (2022) suggest I ask myself if my analytic entities are reflecting the participants' experience?

At Stage 4, Smith et al., (2022) instructed to search for connections across experiential statements. My Excel workbook consisted of several spreadsheets, one of which was labelled personal experiential statements where each participant had her own column. My experiential statement search included color-coding in which each participant's responses were color-coded. This made it easier to match experiential statements among participants.

Stage 5 is the birth of personal experiential statements (PETs) which happens after finding experiential statements and searching for connections across them. Upon completing a cluster of experiential statements that make good sense of the data (Smith et al., 2022), the PETs formed, see Table A2 in the Appendix section. Next, as Stage 6, Stages 1 through 5 were repeated for my remaining seven transcripts.



Finally, at Stage 7, all the PETs from the eight transcripts were brought together to develop group experiential themes (GETs). In this stage, I looked for differences and similarities patterns across the PETs of each transcript. The GETs aligned with the research questions, quite surprisingly! The GETs are provided in the results section, Table 2.

### **Discrepant Cases**

My first interview conducted was with a single mother of two, who had excellent food aid from family during the pandemic. Sadly, this interview was not recorded and further I became aware that the mother was a scammer who infiltrated the Walden University Participant Pool. Before I was aware of the ambitions of this participant, I attempted to contact her for another interview, in efforts to record and use the data. I was unable to retrieve any useful information taken as notes in our interview. I was then contacted by two other single mothers, who later turned out to be the first participant using other email addresses to collect gift-cards.

### **Evidence of Trustworthiness**

Qualitative studies are regularly cited as questionable by practitioners of quantitative methodologies since reliability and validity are presented rather differently than the quantitative standard. Therefore, the trustworthiness of this study was maintained and was evidenced by credibility, transferability, dependability, and confirmability being established.

**Credibility**

Credibility was ensured by my asking interview questions which aligned with the research question to my participants; further, credibility occurs as accurate representation of participants' examined experience results from a study of which the participants were present (Korstjens & Moser, 2018). To remain consistent, I spoke with a standard tone and voice as I conducted each interview. Member checking was used in efforts to confirm credibility; each participant received a transcription summary of their interview to verify that I represented their experience correctly.

**Transferability**

Transferability was established in my study by the steadfast notion of focusing on the participant's experience as that participant's experience alone, and not implied as all other participants' experience. However, because I used purposeful sampling, my participants would all have had similar experiences due to the likeliness of them being significantly impacted by food insecurity. My offering exhaustive descriptions of the interviews with the participants served to meet transferability; this was driven further by the single mothers adequate, yet deep illustrations of my researched phenomenon. The eligibility criteria such as mother and child being residents of the USVI during 2020, being a single-mother, and having school-aged children were inclusive factors ensuring transferability. These criteria along with employment status constitute demographic characteristics which allow for application to contrasting groups or replicability by future researchers.

**Dependability**

Dependability was secured in my study through an audit trail by recording the videoconferenced interviews, documenting the data collection process, completing transcriptions of the interviews, and documenting my data analysis method (Korstjens & Moser, 2018). This audit trail strategy is a book-keeping tactic; it is used to record each step throughout the research process from the beginning of the study to findings dissemination (Korstjens & Moser, 2018). The audit trail have been kept on my laptop computer in the “Dissertation” password protected file. The transcripts were stored in a locked file cabinet at my home office. Dependability was established further as my chair was consulted and debriefed continuously throughout the research process and data analysis procedure.

**Confirmability**

Confirmability was achieved using several methods; I applied researcher reflexivity to reduce researcher bias, to remain aware of any situation dynamics I might harbor (Reid et al., 2018) for the duration of my data collection period. By keeping a reflexive journal, I was able to anchor myself with my thoughts while remembering that I am attempting to make sense of my participants’ making sense of their experiences. By doing so I ensured that my findings were reflective of my participants’ experiences rather than my bias. Reflexive journaling guided me in maintaining my objectivity in a subjective process. During interviews, I would ask for clarification where necessary as my participants shared their recollections. Excerpts from the interviews were used to confirm identified themes. Additionally, detailed discussion regarding research

methodology was provided to strengthen the integrity of the results. Lastly, the study limitations presented in Chapter 5 provide an explanation for the research findings contribution of confirmability of the study.

### **Results**

The purpose of my study was to gain insight into food insecure mothers' perceptions in accessing school nutrition programs during Covid-19. To answer my three research questions, I analyzed the eight transcripts of each participant's interview which revealed three group experiential themes (GETs). Before arriving at the GETs, I discovered and identified 63 codes during data analysis which were transformed into the group-level subthemes. There were seven group-level subthemes comprised of 35 experiential statements shown in Table 2 below. A detailed analysis, organized by research question and experiential theme follows.

**Table 2***Group Experiential Themes and Experiential Statements*

Research Question (RQ)	Group Experiential Themes	Group-Level Subthemes	Experiential Statement Cluster
RQ1	Gratitude	Eligibility for Nutrition Services	Needed the help, qualified during lockdown, issues with paperwork delivery
		Challenges, Barriers and Supports to accessing Nutrition Services	Restrictive purchases, difficulty accessing programs during COVID-19 lines, shop specific brands, case worker made it easy
		Survival and Strategizing just to get by	No help from family, help from strangers, help from church, bought nonperishable foods, sacrificed so child could eat, budget, meal planning, bought in bulk, stretched food, cooked large meals
RQ2	Accessing Supplementary Emergency Assistance	Pride	No shame! No guilt, "Everybody wish they could get some snap!" Feels sorry for those who could not benefit
		Social Capital and Social Networking for Resources	Easy access depending on area of service, options to collect Grab n' Go meals, good program especially for those who do not receive benefits
RQ3	Mitigation for food aid during pandemics and natural disaster	Financial Relief from Out-of-Pocket Spending	Took burden off mother, happy benefits are loaded electronically, helpful since regular food stamps reduced, happy it is preloaded for existing participants, liked that all students in school qualify
		Advocacy and Agency	Pandemic resources needed to continue, more could have been done, general population should have gotten, everyone should get assistance, impoverished needs to be defined, create foodbank plans before disaster, nutrition education

### **Group Experiential Theme 1: Gratitude**

RQ1: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their individual and interpersonal experiences in accessing available school nutrition assistance programs during the COVID-19 pandemic? Group experiential theme gratitude was developed from single mothers' overall sense-making of their responses to RQ1. The participants of the present study were rather vocal about their gratitude towards the food aid provided to them during the COVID-19 pandemic. P1 did not directly state her gratefulness for food aid received but it was evident throughout her story, she talked about her difficulties feeding five children on her salary as a cashier.

P2 gave the example:

Once you have the nutrition assistance, you are happy, oh my gosh, food so expensive! Even though you can see like sometimes you buy a few milks and whatever is on there. And they're like, okay, that came up to a hundred and something. And you're like ooo yeah, that's a hundred something dollars I did not have.

P3 explained:

Um, I think they're [nutrition assistance programs] excellent programs, especially for single mothers. Um, you know, they, you know, we single mothers or any help, you know, count or any help is, you know, appreciated. Um, I think they are awesome programs because they, you know, could come true when, you know, you really down and all, and don't have nothing.

P4 said someone told her to “just be glad you qualify,” which she was. P5 said, “I am grateful for the foodstamp. Thank God for the foodstamp.” P6 shared, “I was just excited to know that there was help for as far as the EBT and the nutrition” and that “I am just grateful.” And P8 said flatly, “Any assistance I could have get, I was thankful for it because it helped a lot.”

***Group-Level Subtheme 1: Eligibility for Nutrition Services***

While interviewing each participant shared their experiences and memories of deciding to apply for nutrition aid; most mothers recall they knew they had to provide for their children, so they applied. Single-mothers were asked about any personal barriers to accessing available nutrition assistance programs. Reasons such as I knew I needed the help, paperwork issues, child’s age, shopping for bare necessities are the main eligibility for nutrition services given by participants for accessing available nutrition assistance programs. P1 recalled her difficulty,

I didn't get no food stamp until like in the middle of April, last month, because I had to turn in paperwork and they sent whatever paperwork to the wrong address and then go through the, I went to the address the other day and me ain [I do not] see no paper from them.

P3 shared,

Um, I wouldn't say that. Well, um, personally for me, I didn't have any barriers down here, um, in the USVI, it was readily accessible for me to get, you know, whatever help from whatever programs I needed down here. No, I just, I just kinda just up and did it, like, I just, it kinda like, I just, I knew I needed help, so I

just did. I, I guess I just always, you know, had my stuff together. I just knew what I had to do. And I just went out and just, you know, did it basically.

P4 said,

Okay. For me as a single parent, with my income, I don't qualify for like snap and stuff like that. So the cost I've being so high, it's really difficult to keep up with paying bills and buying nutritious foods. So I basically shop just to survive basically. So I just take the basic necessities, so I'm not able to provide like five, three to five servings of food every day and so forth like that as recommended by the pyramid.

***Group-Level Subtheme 2: Challenges, Barriers, and Supports to Accessing Nutrition Services***

All participants shared their interpersonal, positive, and negative experiences as challenges, barriers, and supports to accessing nutrition serves. Their experiences included only buying certain brands, how much money could be spent per category such as fruits and vegetables, the change from paper cheques to a debit-like card, the Human Services staff and procedures, and the ability to buy hot meals with SNAP benefits. P1 expressed frustration about the brand of milk:

Um, it have WIC, but the only thing about WIC lately, when you go for the milk, they have no milk in the stores that you supposed to pick up and then is only such tin milk you could pick up from WIC.

P2, too expressed frustration over the restrictive purchases:



At the actual store was that you had to buy a specific brand. You can't just go and say, Hey, you need brown rice and then go pick up brown rice. You gotta find brown rices in Uncle Bens. And it's not in Uncle Bens. You can't get it. And then even simple stuff like, okay, you get cornflakes, but at twelve ounces. So if it's like 12.5 ounces, you can't get it. If it's less than they don't mind, but it can't more at all. Um, yeah, so it's very calculating. And then sometimes they just don't have the brand new one in stock period. It's not like you pick up the wrong one. It's just, they don't have it.

P1 also shared that miscommunication during recertification caused her to lose benefits:

When I had stopped working, they did, yeah. They gave a no call no show. They try and say I just came in with a paper thing that I resign. So I said, I didn't tell them nothing. I didn't no call in when I just had pop up that's what trying to tell them, which was a whole lie.

P2 gave detailed recollection of the switching from paper cheque to a card that can be swiped:

Especially since when I started, they weren't doing coupon books, it was, uh, card. So I could just swipe it in instead of having like a bunch of little coupons. Okay. This one is, so now this one is for cereal. This one is, that's how it used to be before. Pretty recent. Right? Yeah. So it used to be a coupon book. So they'd give you a milk coupon, cereal coupon, baby food coupon. If it's formula, they're really young, then you have a formula coupon.

She furthered shared, “It tells you what weights you get as well. That's sometimes difficult based on when you go to the store.”

P6 shared her joy over being able to purchase hot meals:

And then I realized I went to Seaside one day and you could have used the EBT card to purchase lunches. And lemme [let me] tell you something that worked well for me on two days out of the week. It's helped me to save because cooking gas, you know, have to wait two and three weeks before you can get a tank because of the, the covid. That is what took place. So, you know, you used the other time you actually get it tomorrow you have to wait until like two or three weeks, you know. Gosh. I was like, you know, sometimes I was like, okay, you know, why can't I just go and buy a meal and you know, share it up for the kids. and that, that helped me a lot when instead of me having to prepare meals to take to them or going to the supermarket to buy stuff, you know. Yeah. I was able to use their cards and purchase their own meals and drop it off to them.

Negative experiences varied as my participants provided their accounts. P1 also shared her disappointment with the paperwork system for receiving aid:

I mean, actually still waiting because sometimes like last month I didn't get no food stamp until like in the middle of April, ye, last month, because I had to turn in paperwork and they sent whatever paperwork to the wrong address and then go through the, I went to the address the other day and me ain see no paper from them. So Yeah, I get the food stamp on you know.

The sentiment being disappointed with the communication as well as the recertification system was expressed also by P2, P6, and P8. P2 described the process as tedious:

Let's see. Well, it's definitely not big on communication. So their recertification process is a bit tedious and I'll be a little unnecessary um, they do a lot of in person stuff and it's at a time where you are supposedly mostly at work, they require the presence of the child as well. So you actually have to take them out of school or outta daycare to do that, then take them in. And, they're hard to reach over the phone. Like if you have an issue to like have a inquiry.

P6 stated,

They doubled a payment. Like say I was supposed to get, um, 400 and change. I got 800 and change like twice. And I called, Okay. So I know how to utilize the, the, the first part of it, which I know was entitled to me. I was entitled to. And um, I couldn't get any response as to, I tried calling to find what happened, why is it there two deposits instead of, you know, one, why is it doubled instead of one? And it's like, I'm not touching until I know what happens with it, you know? And then the following month came and that portion came on and it doubled again. And I'm like, I didn't receive any, you know, information as to why. I know it's a mistake and they're gonna come back and get it and I'm not touching it.

P8 shared her dislike of the paperwork dropbox drop off:

Cause they were not helpful. Just, it was like, just put everything in a Dropbox and they get back to me. It was a Dropbox. But is like, you have to stay there in

the long line, to know, like you have to go back to Dropbox to put all your information instead of somebody just there and asking you, like, like to assist you with it. Like actually, like, what are you here to do? Or anything? Like, you actually have to wait down long line before you have to drop everything that much.

***Group-Level Subtheme 3: Survival and Strategizing Just to Get By***

Each single-mother gave an account of how they managed to get food supplies and how they coped with food insecurity in their homes during Covid-19. Their descriptions of what they went through during COVID-19 birthed this PET. Most said they got some additional food supplies from family or friends. P1 said,

Um, I guess at the time when I was pregnant with my son and I wasn't receiving food stamp because my children them was not with me at the time of 2019. So I used to have to ask people for help with food. I will ask them for a veggie burger, a pack of salmon burger, a Kool-Aid, a case of water, um, some noodles, a cup noodles just for me to have something to eat. Some rice, something just for me to eat cause I only was getting like \$20 at the time and cause I was working two jobs.

P2 and P6 shared that family members dropped off care packages, while P3 said she would ask her mother for help until her benefits were loaded the next month. P5, P6, and P7 got food supplies brought to them by coworkers or went to food distribution sites such as churches. Alternately, P4 and P8 bluntly expressed that they received no help from anyone and did everything on their own. P4 stated that,

Well I didn't have any aid from family actually. I just had to. I had no choice.

When he was younger I ain't had no aid from nobody. No. Cause what, what? It was, what I, I had no aid in food, food wise. Everything was basically on me to provide for my son and myself.

And P8 said curtly, "I had had to do everything on my own."

When asked about how they coped with managing their food supplies, the single mothers bought in bulk, bought non-perishables, used buddy systems when cooking and grocery shopping, they cooked large quantities, and utilized portion control to make their food supplies last longer. P1 and P8 shared that they stretched the food available in their homes. P8 gave the example:

Thankful for the little food I had in my house, cook something up and that was it. We had to stinge on it. We had to stinge on the food until, you know, we could do better with it. Yeah, we just cook one big pot what could hold us all, and then afterwards we put it in the fridge and go back to it.

P2 said her strategy was making family meals and to buy non-perishables:

Just made, um, family meals and I had alotta food I was straight. A little bored but um its only two in the house. So it was pretty easy to do. And then the only thing that would've been like sticky, would've been chocolate milk, which is her favorite. So I also got syrup in the addition to the powders, and then for milk, I got some canned milk in addition to the ones in the refrigerated and, um, lots of pastas, lots of canned foods, rice, crackers, things that don't expire very quickly.

P3 bought non-perishables as well, “um, well, I had prepared myself, so I had a, I, I stocked up on lot, like canned food and, you know, different stuff that could last, that wouldn't spoil and stuff”. P4 and P7 bought in bulk, P4 stated that she “had to sacrifice whatever my needs were to provide my son's. So if that meant going bed hungry or not eating for a day or two to make sure he ate, that's why I had to be, you know?” P6 started a garden in her backyard and teamed up with another mother for cooking and grocery shopping:

Um, we had a garden. I have a garden. And that was beneficial to a very great degree. Um, I had purchased a property and I started to cultivate stuff on it. So that served me well too. Not only that, um, I had friends who would prepare meals for, and even me when some of the people would tell me, Oh, I cooking tomorrow. You could cook and bring something for me to eat. I teamed up with another family, um, um, myself and another young lady and we bought stuff. And if she cooked, I didn't cook. So that way. I would have, we would have food for the, so we, we strategized, there was some that we could agreement we came to. And so it worked out well. And then it was so funny. So we'll cook, she was like, you have a bandage for every sore. So today we'll cook rice and chicken. The extra chicken will we have tomorrow will be either, um, a cook up. Soup or something. So, and then the soup will last two and three days, you know, that kinda way. Cause you make, your pot and you make, you know, you through every little thing in there and stuff. So, I must say that was a good strategy.

Differently, P5 mentioned that although she sometimes gets food packages delivered by family and friends from various organizations, she has gotten no support from her child's father, "She have a father but the father don't take care, she, she's 13 years old and he tells her she have to work."

***Group-Level Subtheme 4: Pride***

All eight of my participants proudly stated they are happy they can get nutrition assistance and they do not think there is a stigma. They shared a resounding, "No, I do not think there is a stigma" and gave reasons how they came to that decision. P1 said, "Meeno [I don't know]? I shame or embarrassed because I got five children? And know if I didn't have food stamps it would have kinda been a little hard for me." P2 expressed,

It's not, it's not shame on the behalf of the users. It's more... Definitely not shame. Once you have the nutrition assistance, you are happy, oh my gosh, food so expensive! Even though you can see like sometimes you buy a few milks and whatever is on there. And they're like, okay, that came up to a hundred and something. And you're like ooo yeah, that's a hundred something dollars I did not have. So definitely not under users, definitely outward perception. And it's understandable. And that's because of how it's generally used by the majority of the recipients and that's, um, they don't shop as they would shop.

P3 openly shared,

No, I don't not, not in 2022. No. Maybe 10 years, maybe 10 years ago. It's like, you know, I don't say that people were ashamed to say they have food stamp. It's like they didn't, its it was almost like not sitting well with society that, you know,

you have low income. but um, now I think, you know, because the cost are living now, you know, everybody, even some, I have a nurse, I have a friend that's a nurse right now in hospital. She like wish she could get food stamp right now. So yeah, I, I wouldn't say it's a stigma you know, right now the, world we living in, um, because the cost of living going up and not our, you know, money and our pay. It's like any little help, anybody could get it, taking it!

P5 and P8 also plainly said they do not think there is a stigma, while P4 and P7 agreed with P2 regarding they stigma is an outward perception. P4 said there might have been a stigma once before, but not now:

Um, back in the days. Yes, but now it's like, you know, I could use some food stamps, like, like, like, everybody wish they could get some snap benefits now. Like, you know it came in handy, whenever they gave to the kids, we were able to shop for them and stuff like that. Cause like I said, not everybody who partake in school lunch program that was provided here. I guess you're looked down upon, frowned upon.

Both P4 and P6 talked about encounters with non-benefactors of SNAP, P4 shared, "But like one person told me before you pay taxes, right? You work, right? So you're just as entitled. Just be glad that you qualify." And P7 stated,

It could be. I believe so. Sometime when I go, I used to go to shopping, like you said that question. Um, I going like in a line to pay the cashier would say, "Look how these people who get the food stamp, the buying junk. And if I was getting food stamp, I would buy a case, ah chicken, a case ah rice, a case ah beans."



P7 also shared a conversation with a friend who sees using benefits as shameful:

Someone had told me, um, I want you to buy me, you just get food stamp. So I want you to buy me a bag of, um, chicken on a, a big bag of chicken on a big bag of rice.

And I don't want hear it from anyone. If I hear anything they told me that they're not gonna talk me.

**Group Experiential Theme: Accessing Supplementary Emergency Assistance**

RQ2: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with community and organizational structure in accessing available school nutrition assistance programs during the COVID-19 pandemic? Group experiential theme accessing supplementary emergency assistance was developed from single mothers' overall sense-making of their responses to RQ2. P1 spoke about the close proximity to her home and that she could easily send her children to collect their Grab n' Go meals and that the quantity "was enough." There were no accessibility obstacles preventing her from the available food aid. P2 was lucky enough to have a neighbor who "would go and get for all the apartments in the area. So I, I would say it was very, fairly easy. As I don't think they would've volunteered, had it been difficult." P3 mentioned that "at times when I couldn't go myself, um, my mom would go and, you know, bring whatever I needed" when the pick-up location for food aid was inaccessible to her. P4 did not have accessibility to available food aid since she had transportation and stated, "But for some people, like, I guess different communities, um, it might be difficult for other them to get their stuff." P5 faced food access obstacles; she was disabled and unable to drive, nor did she own a

vehicle. The Grab n' Go distribution center was three minutes away from where P6 lived so she had no accessibility issues. Her issues were the availability, she gave the example:

it [the distribution site] was like, like three minutes from where I lived and every time I went, they didn't start yet. You go early, and if you go like during the middle of the time, they didn't have none and, and they like, they trying to hurry, get rid of the food so they could go home too!

P7 too faced food access challenges as she did not own a vehicle; she shared, “It was kind of rough it because due to transportation. And then we have a cousin that, she's the one that help us also to shopping when she have her own to deal with too.”

***Group-Level Subtheme 5: Social Capital and Social Networking for Resources***

This theme emerged from participants sharing positives and inconveniences around the community factors and organizational structure of emergency assistance. They cited proximity to the food distribution sites, lack of transportation, and the quality and quantity of food distributed. P2 mentioned her allotment was delivered to because of where she worked:

I never physically went because I was in a government agency that worked all along. They, they brought the boxes for each employee who could not wait in line. So all those four times I just got a box delivered and I put it in my car and it said it was from the drive.

P4 said that “my church made sure all the members got something”, and that getting supplies from distribution sites was easy because she drove herself, “but for some

people, like, I guess different communities, um, it might be difficult.” She also shared that the organization of the Grab n’ Go meals was not too bad depending on the location:

It depends on what location you went to. Some were more organized than others. I must say. Um, the only thing I didn't really like that I've seen and experienced is like some, you have a limit to how many meals you can take. I've seen students that have taken breaks to go to the line, to grab and go and they have multiple siblings at home. So the parent will just send one child to collect but they will limit them. They'll limit them. So that one child, if they have five siblings at home supposed to for five, but they're only allowed to take three.

She explained how she too would sometimes bring the Grab n Go meals or other community organized food aid distribution to other single mothers in her neighborhood, “So what I would do is okay, if the child say, yeah, I have some brothers and sisters at home, I will take the max and give the child remain.”

P5 and P7 said they received food packages were delivered by friends with transportation from their community outreach programs such a Catholic Charities and My Brother’s Workshop. Due to P5’s distinction in her community she was able to resolve food delivery issues:

And in my community, which somebody said at the called the XXXXX office, I live at XXXXX. And they said, the manager told them that we don't need food. Okay, I tell the person don't listen to she you know. Everybody need food in this world. Bring the food! So guess what, you can call XXXXX and call me and I will call everybody out to get food.

Meanwhile P6 confessed she did not think the Grab n' Go was well structured:

Um, I don't think it was well structured. There were days when I would go to pick up my daughter's breakfast and lunch and you said it starts at 10 o'clock? by 10 30, it's all done. And then some people get more than they fair share, you know, and others didn't get, and I just stopped going altogether, period.

P8, when asked about accessing the meals said, “to collect food? It was easy.” Although glad there was another avenue from which her children could be fed, P8 did not continue to collect meals since, “my son wasn't eating it. He said it was not good. My children wasn't eating it, so there was nothing to take. So it was just a waste” to continue taking breakfast and lunch.

**Group Experiential Theme: Mitigation for Food Aid During Pandemics and Natural Disaster**

**RQ3:** How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with policy in accessing available school nutrition assistance programs during the COVID-19 pandemic? Group experiential theme mitigation for food aid during pandemics and natural disaster was developed from single mothers’ overall sense-making of their responses to RQ3. The participants’ collective stories shaped this GET. P1 offered the advice, “I would say, you know, like, okay, what did it do for like hurricane times, couple months before, I guess Hurricane season that give like type of stuff. They should help everybody.” P4 suggested, “instead of waiting for a pandemic, um, locally, there should be like food banks, like stateside have food banks where like every weekend you can go

to like a church and pick up this, pick up that.” She suggested further, “I think they should also do for like preparing for hurricane season for those individuals that are struggling already and can't really afford to like prepare or stock food.”

P6 proposed,

They need to have a unit where you have people specialize in disasters, different disasters whether it's pandemic, epidemic, or it's um, hurricane or whatever. And it needs to operate all year round and become a part of society. Where you can bring kids in not only just children because say okay for school, you can have them come for like two day or three days session and you can, you know, bring things out and they can give you feedback and use that in studies and stuff so that when this center is going on, even when a pandemic hits people are prepared or a hurricane hits, people are prepared that okay, you know, they're not gonna be fighting for this and that we will get stuff outta you at such and such a time. We will try to have certain things, necessities available and um, you know, things like that. They just have to start small.

***Group-Level Subtheme 6: Financial Relief from Out-of-Pocket Spending***

The mothers did not hesitate to share their memories of receiving the Pandemic-Electronic Benefit Transfer (P-EBT). While stating that they might not know everything about the policy behind the P-EBT, they enjoyed the program while it lasted. One mother pointed out that even though all mothers might not have been receiving SNAP benefits, all students would receive a pre-loaded P-EBT card. P1 expressed, “I used to just take money out of my pocket and buy food” for her five children on her \$150 paycheck when

she had no SNAP benefits. P2 gave the example of buying \$100 worth of groceries using SNAP benefits because she otherwise would not have had the funds (see GET gratitude, and subtheme pride). P3 was of the same opinion,

Yeah. It's a big help. Of course it's a big help. Anything, anything free, really.

Anything that's, anything is a help, honestly, anything where you don't have to, you know, go in your own pocket or a struggle for a year, is a big help.

She went on to say that even for two income households, both incomes might be low so the P-EBT received on behalf of children enrolled in school was a relief. She then restated, “the cost of living going up and not our, you know, money and our pay”, so the P-EBT lessened the food expenses.

P4 described, “So being able to collect this food money, qualify, you have five children, you have such and such amount of money. And as a parent, you know how to make things work, you know, to stretch the money.” She said a manager at a supermarket told her, “We didn't raise the price. But now awu [you all] get PEBT it going be more. And we know awu going buy the stuff for the children,” when she asked why are the prices so high this week when they were much lower the week before? Then her concern about the high prices turned to those who were not receiving benefits.

P6 again shared that she enjoyed the idea of get prepared meals she did not have to use her personal money to purchase and that children were able to use their P-EBT cards themselves:

and that, that helped me a lot when instead of me having to prepare meals to take to them or going to the supermarket to buy stuff, you know. Yeah. I was able to use their cards and purchase their own meals and drop it off to them.

She then mentioned how much the P-EBT funds helped her save money indirectly:

It's helped me to save because cooking gas, you know, have to wait two and three weeks before you can get a tank because of the, the covid. That is what took place. So, you know, you used the other time you actually get it tomorrow.

P7 said, "You know, sometime it, it lasts sometime it don't last and then you have to spend whatever little cash money you get, you know," referring to when her P-EBT benefits run out then she would have to use her money that was allocated for bills to buy food.

### ***Group-Level Subtheme 7: Advocacy and Agency***

When asked of their perceptions on the resources in place to assist with food insecurity during the COVID-19 pandemic of 2020, my participants unanimously said it was "good" and that "should have lasted longer" and "they probably could have done a little more." They then shared various accounts of their experiences during that time. P1 said she was glad for the resources were implemented because, "It was feeding children that probably didn't even eat on the regular too" and P8 endorsed this statement through her words, "at the end of the day, those are really helpful for people who can't assist as well with their child who don't really have it. I feel it was a good thing."

P2 and P4 made mention of how difficult that time might have been for everyone who was not able to participate in the P-EBT and the Grab n' Go meals. Specifically, P2 shared,

I do believe that for the rest of the population that may have been quite difficult. Because that P-EBT was a one time load. But luckily if you lost your job then, and you got to register over the phone, I think was a Dropbox. You would have done it in at the time. Um, it's actually a pretty good time to not have money because, um, you, you automatically qualify.

P3 voiced, "I feel like if everybody could, you know, receive it, they would, you know, jump on it" regarding benefits being issued to all residents. P4 said,

I wish there was, I could say, they coulda probably do a little more, I dunno, probably could do a little more. Reach other people like, cause a lot of hotels and stuff had closed for a point into the pandemic. And I work in a hotel industry as well as government. Cause I have two, two jobs to survive and still struggle. And a lot of people are like immigrants and stuff, certain things they need to qualify in order to... certain documents they need in order to qualify for the program.

Whereas when they're working, they get tips and stuff like that. They're making it, they're making it work among themselves.

P5 talked about the increase in food prices and said she hoped "maybe food stamp will be going up and they continue to give you free food. And aint nothing, aint going change right now."



P6 and P7 talked about their not so pleasant moments with receiving stimulus checks. P6 said she was “just excited to know that there was help for as far as the EBT and the nutrition, I was just happy that there was provision made for children to be able to receive some additional assistance.” Then, still in disbelief, P6 shared:

And then when I got the stimulus for my kids, I didn't get for two of my children, only one. And then I called them, and I said, Well I know the stimulus and whatever. And she's [the representative on the line] like, Well if the check you get wasn't good enough for you, you could bring it back in and you could wait until we go through whatever it was.

P7 said she the resources were okay, but she is still waiting for her stimulus checks for her and her son.

When asked what feedback health educators can integrate from the Grab n' Go and P-EBT services to develop interventions that will positively address food insecurity during global pandemics such as COVID- 19, my participants willingly suggested nutrition education, disaster preparation as is done for hurricane season, and that everyone should have received aid. P1 and P4 suggested strategizing for disaster or pandemic early on so we are prepared. P4 further suggested that the government should create foodbanks or food drives and partner with churches to store and hold the distribution events. P1, with emotion in her voice, from the memories of hurricane hardship and now COVID-19, stated:

I feel they should do more, the government has enough money, to get alot of things done but they just choose not to. So I think they should do more, you

know, cause they keep on complaining that the people in poverty say because they're not making that efficient effort for everybody. Like certain people if they ain getting this amount or if, if they're working the place, but they trying say they making too much, then they can't get food stamps. You know, they should to help everybody. So I think they could just do a little bit more better for all the community instead of some. Because I know lump sum of people is still struggling.

P2 and P8 had opposing views on who is working hard and should or should not receive aid. P2 genuinely said, “you have to really be rock bottom to get anything. And, and that doesn't make it feel good for the rest of the people because they're working their butts off and they get nothing. Nothing for their efforts.” She referred to those who received aid due to rippling pandemic effects. Whereas P8 saw it quite differently, she expressed her discontent:

It have people who are like trying to benefit off of these things and they don't want to work. So you have to try to be, put yourself to work to help and the people who is not working the getting better help than the people who actually working. We out here killing our butts, out here we don't get as much help as the people who sitting down at home.

P2 and P6 recommended nutrition education for purchasing healthy foods, preparing healthy foods at home, and teaching children how to make healthier eating choices. However, such healthy shopping is hard to do due to cost of fresh produce or the amount allotted for fruits and vegetables by the assistance program is low. For example,

P2 recalled while using WIC she was given \$9 to purchase fruits and vegetables. P6 said the pandemic period was an opportune time for parents to cook healthy meals for their families but might not have known how. She shared her memories of grocery shopping:

When I went to the grocery store, I would try to get fruits and vegetables and you know, nice healthy stuff for the kids to snack on. And there were some other people and they were like, everything is microwaveable. I'm like, why are we trying to do, this is your time, you're home. A lot of people, parents were home. this should be your opportunity to prepare good food for your kids, you know? Microwave thing should have been a resort, you know, a end thing. And I was like, the children should have been healthier during that time. Even if it was less of something, it was better of having something healthier, a home cooked meal than have a microwave meal. You know, that kind of way. So see that's I think they need to educate these parents as to, you know, you know, encourage your kids to eat more fruits than vegetables and this is what's gonna help them with the energy levels and the, you know, stuff like that.

P3 recommends that government publicize the statistics of the Grab n' Go meals were accessed by students and families:

Um, I guess they could, if, if they want to really put it out there, how important or stress, how important the grab and go, like you say, that's what we talking about, right? How important that was. They could use the numbers to, you know, tell people that, you know, all these people show up for the, you know, the food that we had out here for them. Like they could show like, you know, how much

students, how much families they had to feed every day from how, however much different schools, how many, however much different communities they had to go to, or however much, um, you know, how many islands participated, you know, in the Virgin Islands, they could use their numbers from, you know, from the time the pandemic start until, you know, the ending, you know, to everybody that, you know, you didn't stress how important it was.

### Secondary Findings

Table 3 shows two additional themes which emerged from the participants of St. Croix. No help from fathers and concern for the elderly and homeless were loud and recurring among the single mothers residing in St. Croix. These themes were not mentioned by the St. Thomas counterparts, but I am of the belief these themes add valuable information.

**Table 3**

*Emergent Secondary Themes*

Secondary Themes	Sample Participant Responses
No help from fathers	She have a father but the father don't take care of she
Deep concern for elderly and homeless	They put it in there for the homeless. So the homeless don't go hungry

Two of the three single mothers on St. Croix spoke of the children's fathers lack of providing any assistance. P5 said her daughter's father told their 13 year-old daughter, "he tells her she have to work." P6 shared a blanket statement based on her experience,

“And these fathers think it's okay. I mean you didn't hear or see them or, I mean they already done absent in the children's lives.” Upon hearing these two participants mention lack of paternal involvement and support, I went through the other six transcripts and found no other participants spoke of their children's fathers. Possible reasons might be, although I cannot with certainty say their words and experience were echoed by other participants since none of them explicitly said they received no support. The other participants might have considered their children's fathers to be family or friends, or interpreted IQ5 as only food aid from family and friends and therefore did not categorize the fathers as such.

Of the two districts, participants of the St. Croix district were more concerned about enough meals for their families and the elderly/homeless. Whereas mothers in the St. Thomas district concerns lie with feeding their families only. The idea of individualism vs collectivism come to mind. All three participants made mention of making sure the elderly and homeless were feed. P5 said that she and her daughter have a tradition of feeding the homeless every year on her daughter's birthday; a practice that came from her mother's volunteer work. P6 shared that,

And like with the extra that I had gotten from, from the food stamps, I would, I, I told, I promise my children, I said, there are people who don't have a meal to eat. And once a month I would buy, you know, say a bag of chicken, a bag of rice, and some vegetables. And I would fix 20 plates and just go out to the market, to the homeless and on the street and just give them something.

P5 and P6 brought up making sure groceries were delivered to the elderly even if it meant multiple trips to the supermarket due to age-group specific times to shop. They also talked about sometimes cooking meals and taking to their elderly friends. P7 said she thought it was better for the elderly to have early shopping times and not have to stand in long lines.

### **Summary**

To address my three research questions, the data from eight interviews with single mothers produced three GETS and seven group-level subthemes. Themes that emerged from each IQ were: Eligibility for nutrition services from IQ1; Challenges, barriers, and supports to accessing nutrition services from IQ2, IQ3, and IQ4; Survival and strategizing just to get by from IQ5 and IQ6; Pride from IQ7; Social capital and social networking for resources from IQ8 and IQ9; Financial relief from spending out of pocket from IQ10; and Advocacy and agency from IQ11 and IQ12. I used the Social Ecological Model as the conceptual framework to explore how my participants made sense of their types of experiences accessing available nutrition assistance programs. My research findings, as evident in the experiential themes, corroborate my presupposition that single mothers of school-aged children faced food insecurity during the COVID-19 pandemic of 2020. Their responses offered answers to each level of the SEM framework upon which my research questions were fashioned.

Gratitude as the GET of RQ1 emerged from the participants' experiences on the individual and interpersonal levels of SEM. The findings shed light on their internal and external struggles with accessing available nutrition assistance programs, their positive

and negative experiences with accessing available nutrition assistance programs, their coping mechanisms in their homes regarding their food supplies whether or not they got help from family and friends, and their dignity and humility behind receiving SNAP benefits to feed their families. All eight single mothers expressed their gratitude for the assistance, food distributions, and SNAP benefits they received throughout the entirety of the interviews.

Accessing supplementary emergency assistance as the GET of RQ2 emerged from participants' experiences with the community and organizational levels of SEM. Shared knowledge, word of mouth, and a genuine bond of positive community connection ensured that everyone was abreast of the ongoings of food distribution and ability to access those sites. Although recollections of their experiences were mixed by fifty-percent, their collective stories showed how social networking and social capital went hand-in-hand to address the community and organizational levels of SEM.

Mitigation for food aid during global pandemics and natural disaster as the GET of RQ3 emerged from participants' experiences with policy level of SEM as well as feedback for health educators. Thirty-three percent of my participants suggested getting plans in place, similar to what is done as preparation for the Hurricane season to be done for the possibility of future pandemics. Around 75 percent of the single mothers spoke of applicable food aid to all residents during these traumatic events, and 33 percent of them recommended nutrition education for both parents and children.

In this Chapter I presented the data collection and data analysis procedures, as well as the results of my study. In Chapter 5, I review the nature, purpose, and

significance of the study. Key findings are summarized and illustrate how the results contribute to the body of knowledge. I also discuss the interpretation of the findings as it relates to the SEM framework, the limitations, implications, and recommendations for future research.



## Chapter 5: Discussion, Conclusions, and Recommendations

### **Introduction**

The purpose of this qualitative study was to focus specifically on the types of experiences in accessing available school nutrition assistance programs during COVID-19 by food insecure USVI low-income single-mothers with school-aged children. Through this study, I explored how food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children perceive their individual, interpersonal, community, organizational, and policy experiences in accessing available school nutrition assistance programs during the COVID-19 pandemic. The social ecological model (SEM) by Bronfenbrenner (1977) and McLeroy et al. (1988) was the conceptual framework used to seek answers for my three research questions which were presented earlier in the study. The results of this study aimed to inform United States Virgin Islands' (USVI) health administrators of the reality facing single mothers when accessing adequate nutrition for themselves and their children during a pandemic. USVI health administrators can understand and learn of non-existent or overlooked areas in organizations and public policy that compromise food security in time of crisis, and the results aim to assist policy makers in developing new and restructuring existing food and nutrition services.

Previously conducted research on food insecurity was done on disaster struck places (Fitzpatrick et al., 2020), food deserts (Jones et al., 2022), and areas in which agricultural economy (Parven et al., 2022) failed. However, none of these studies focused on SEM level obstacles food insecure single mothers faced when accessing available

nutrition assistance programs during the COVID-19 of 2020 in the USVI. Therefore, my interpretative phenomenological research design supported the lived experience of eight participants. Through semistructured, open-ended questions, I explored my participants making sense of their lived experience with food insecurity during the pandemic. Based on individual transcript review, then collective review of all eight transcripts, three Group experiential themes or GETs (final themes) were identified and discovered. The findings of this research study which presented an understanding of food insecure single mothers' perceptions to accessing available nutrition assistance programs, included the following GETS: (a) Gratitude, (b) Accessing supplementary emergency assistance, and (c) Mitigation for food aid during pandemics and natural disasters. GET 1 Gratitude emerged from the compilation of four group-level subthemes: Eligibility for nutrition services; Challenges, barriers, and supports to accessing nutrition services; Survival and strategizing just to get by; and pride. All eight participants said that they were appreciative of the assistance they were able to receive even though there were bumps along the way. GET 2 Accessing supplementary emergency assistance emerged from the group-level subtheme, Social capital and social networking for resources. GET 3 Mitigation for food aid during pandemics and natural disasters emerged from a compilation of the two group-level subthemes which were Financial relief from out-of-pocket spending and Advocacy and agency.

In Chapter 5, I discuss and explain the specific results through a phenomenological lens to contribute to the growing value of this study. I discuss the

interpretation of the findings, the limitations of the study, recommendations, and implications in this Chapter. Finally, I discussed my conclusions.

### **Interpretation of the Findings**

In Chapter 2, I discussed detailed information on how natural disaster and global pandemics affect food access, food availability, food stability, and the successive levels of the social ecological model (Arlinghaus & Laska, 2021; Balistreri, 2018; Carlson & Keith-Jennings, 2018; Gee & Asim, 2019; Kleve et al., 2018) in relation to food security. Detailed information of coping with food insecurity (Garcia et al., 2020) in the home as single mothers with school aged children (Kinsey et al., 2020) and accessing food and nutrition programs (Fram & Frongillo, 2018) were also presented. Data collected has assisted in answering in the research questions of this study. All participants gave accounts of their experiences with food insecurity in their homes and resourcefulness. The findings of the current study support previous research that explored beneficiaries' gratitude for nutrition assistance programs, accessing supplementary emergency assistance (Bruckner et al., 2021), and mitigation for food aid during pandemics and natural disasters (Laborde et al., 2020). Some of the personal experiential themes of this study are similar to previous qualitative research, such as financial influences (van der Velde et al., 2019) and increased benefits are useful (Melnick et al., 2022). In this section each finding, presented as group experiential themes are discussed. The interrelation of the conceptual framework used for the study is also discussed.

**RQ1: Group Experiential Theme of Gratitude**

Gratitude is a general state of appreciation and/or thankfulness and is the appreciation of what is meaningful and valuable to oneself (Sansone & Sansone, 2010) a positive emotional reaction in response to the receipt of a gift or benefit from someone (Roberts & Telech, 2019). This is a clinical practical definition of the word gratitude depending on the context (Sansone & Sansone, 2010). The group experiential theme gratitude which emerged from my study is consistent with the theme found by Booth et al. (2018) whose study focused on welfare recipients' perspectives on food aid. While participants of the program were grateful for the aid, they stressed healthier options. This is true of the participants in the present study; all participants expressed sentiment of how glad or thankful they were to receive the aid. P5 said, "I am grateful for the foodstamp. Thank God for the foodstamp," and P6 shared, "I am just grateful." Participants of a 2015 study communicated gratitude for receiving food aid, but also mentioned feelings of desperation, shame, and powerlessness (Douglas et al., 2015). Besides gratitude, these emotions were not shared by participants of the present study. Finally, the concept of welfare queen did not emerge as deterrent against receiving aid, nor was there mention of this mainland United States stereotype in participant responses. This reasoning could stem from (a) the participants seeing the aid for what it is, aid, and therefore do not associate it any stigma, (b) cultural upbringing with strong emphasis on pride while providing for the family, and (c) participants emigrated from neighboring Caribbean countries that do not possess a deep American influence thus removing the related welfare stereotyping. Alternately, while this term might elicit negative connotations for

the majority of mainland United States residents, there is the possibility of a small percentage of residents who interpret the behavior as resilient and is worth further exploration.

***Group-Level Subtheme: Eligibility For Nutrition Services***

The first group-level subtheme that was revealed for RQ1 was a theme of eligibility for nutrition services. Participants overwhelmingly expressed their gratitude over being eligible to receive SNAP benefits. P6 expressed, “I was just excited to know that there was help for as far as the EBT and the nutrition” and P8 said, “Any assistance I could have get, I was thankful for it because it helped a lot.” Although one mother said she does not qualify for benefits, at the time researched she qualified. They welcomed the assistance especially since the cost of nutritious foods, as well as the cost of living have increased exceedingly between the hurricanes of 2017 and the COVID-19 pandemic. This finding does not entirely disconfirm feelings of shame or guilt as stated in the systematic review by Piaskoski et al. (2019) in Chapter 2, however, two possibilities may account for this divergence: (a) benefits received to counter loss of income due to the pandemic removed negative feelings towards being recipients and (b) the geographic setting and the cultural relevance might be factors to support this finding. US Virgin Islands households struggle with food insecurity after the hurricanes of 2017 was not a focal point of my research, this topic requires further investigation. After experiencing two Category 5 hurricanes within 14 days of each, all four islands of the USVI were without power for about 6 months from 14 September 2017 to March 2018 (US Department of Homeland Security, 2018). Power was incrementally restored across the USVI over the 6-month

period. Conducting a study to learn how families, and residents in general, met their basic needs during this time is needed.

***Group-Level Subtheme 2: Challenges, Barriers, And Supports To Nutrition Services***

The second group-level subtheme revealed for RQ1 was the theme challenges, barriers, and supports to nutrition education services. The three participants who were unemployed faced diminished purchasing power (Siddiqi et al., 2021) which was leveled somewhat by SNAP. P6 shared, “It's helped me to save because cooking gas, you know, have to wait two and three weeks before you can get a tank because of the, the COVID.” Recertification and requalifying for benefits went mostly smoothly, with the suggestion from half the participants that Human Services staff could benefit from customer service training echoed by the findings of Haynes-Maslow et al. (2020). Seven of eight participants said their interpersonal experiences were positive and had very little issues with the process. For example, P3 said, “yeah, every, it, it was positive. I went in, I did my paperwork and like I said, got through quickly and, um, all the programs that I've been on, I never had any issues with that so far.” Some participants made small mention of case workers’ brief moments of hostility which dampened one participant’s spirit. P6 recalled, “some of the employees at the human services weren't, you know, like really helpful and, um, kinda deterred me a little bit.” Another participant voiced concern for the caseworkers’ frustrations during the pandemic. P5 sympathetically said, “It took a while, but it did get, um, processed. Workers were stressful. They was stressful. They, they had lot of stress, you know.” Granted the human service staff could benefit from customer service sensitivity training, I offer grace to them in their time of service to the

USVI population during a global pandemic, and quite possibly managing their feelings of anxiety and fear in a time of worldwide unknown. The remaining mother who experiences accessing the services were somewhat mixed because of the ridicule and comments made by other shoppers. However, no participant made mention of failing to recertify. One support received by some participants was in the form of food brought by family members. Familial support as a safety net to stave off food insecurity is a finding corroborated by the previous research of McCarthy et al. (2018). Participants' accounts varied on the interpersonal experiences related to family and friends, for instance, P1 shared, "I used to have to ask people for help with food. I will ask them for a veggie burger, a pack of salmon burger, a Kool-Aid, a case of water" and P7 shared, "Um, from family probably like, uh, maybe water, and, um, uh, a bag of rice."

In Chapter 2, I noted a digression into the social circle's knowledge of food access. Findings of my research support this statement with the tenet that interpersonal and community levels of the SEM framework were acknowledged as interchangeable during the time researched.

### ***Group-Level Subtheme 3: Survival And Strategizing Just To Get By***

The third group-level subtheme that was revealed for RQ1 was the theme of survival and strategizing just to get by. Three participants or 38% of the participants were unemployed, and the other five or 62% were low income; McCarthy et al. (2022) supported my finding that the participants could not absorb the economic shock of job loss and or being low income as they still lived paycheck to paycheck and therefore did

not possess the financial means to adapt. For instance, P1 explained that even though she worked two jobs and supporting five children, a friendly stranger came to her rescue:

A stranger, you know she had know me from, she had know, she met me when I was pregnant with one of my daughters them and she tell me anytime I need help with anything, you know, she wouldn't mind helping or pitching in.

At least one single-mother in my study said she sometimes fed her child and went hungry (Lawlis et al., 2018; Payán et al., 2021). P4 shared that she would feed her child while “I was left, you know, unfed.” Lawlis et al. and Payán et al. reported participants of their studies also professing the coping strategy where the participants ensured their children ate while they went hungry. Others of the current study mentioned getting food from family and friends (Kinsey et al., 2019; Yeganeh et al., 2018), or growing their own food (Haynes-Maslow et al., 2020). The participants’ methods of managing food in their homes such as skipping meals while the children ate, receiving food from their family and community circles, and being resourceful by planting vegetable gardens in their yards are consistent with the literature (Bezuneh, 2020; Kinsey et al., 2019; Lawlis et al., 2018; You et al., 2021). These methods shared by the participants were consistent with the research of Fiese et al. (2016) and Gonzalez Guittar (2017).

#### ***Group-Level Subtheme 4: Pride***

The fourth group-level subtheme that was revealed for RQ1 was the theme of pride. At the beginning of COVID-19 news coverage displayed government assistance through an equity-focused lens and shed participation stigma while highlighting benefits (Mejia et al., 2022). In the present study none of the participants said they felt



embarrassed or ashamed to receive benefits as was stated in the group-level subtheme eligibility above. They each mentioned that they knew they had to feed their families and therefore they used their SNAP, P-EBT, and Grab n' Go benefits without carrying the scarlet s of stigma. P1 exclaimed, "I shame or embarrassed because I got five children and know if I didn't have foodstamps it would have kinda been a little hard for me," and P3 echoed, "I wouldn't say it's a stigma, right now the world we living in, um, because the cost of living going up and not our pay. It's like any little help, anybody could get it, taking it!" There is uncertainty regarding why this is the perception of USVI single mothers unlike their United States mainland counterparts; is it situational? No participant said, adamantly or bashfully, they are thinking up ways to get more government aid. And although these residents are all sufferers of the same traumatic event, the attached stigma within the USVI is dispelled. Meija et al. (2022) performed an ethnographic content analysis on food assistance and food insecurity using news media and photographs based on U.S. newspaper publications and wire services. Their findings illuminated the deservingness of receiving aid and simultaneously evoked empathy and support for those in need. Photographs revealed an almost even make-up of the recipients (52% White, 48% people of colour), which may have softened the general perception towards deservingness. These findings do not support the literature in Chapter 2 and challenge the assumptions and beliefs surrounding nutrition assistance programs and welfare programs in general.

**RQ2: Group Experiential Theme of Accessing Supplementary Emergency****Assistance**

The findings of the current study revealed the GET assessing supplementary emergency assistance which emerged from IQ8 and IQ9 and was comprised of one group-level subtheme social capital and social networking for resources. Bruckner et al. (2021) argue the importance of emergency food assistance programs as direct and immediate contact point for those facing food insecurity during the COVID-19 pandemic.

***Group-Level Subtheme 1: Social Capital And Social Networking For Resources***

The participants leveraged their relationships and resources to replenish their supplies (You et al., 2021) which included the social support and informational network from family and friends (Kinsey et al., 2019). Community togetherness and interconnectedness play a role in how knowledge of and accessibility to events occurred; the participants who resided in St. Croix seemed to exude this social capital. Possibly because of their roles at work before they became unemployed and therefore had access to community and institutional meal service programs (Cardarelli et al., 2021). These findings are supported by the literature in Chapter 2. For instance, both Kinsey et al. (2019) and You et al. (2021) have referred to word of mouth and social networks to be critical components of food access and a valuable resource to individuals. As mentioned by Cardarelli et al, (2021) community-led efforts through social capital narrow shortages of food access. Without these bonds between families, friends, and the community, those in need may not be informed on food access and food availability in a timely manner, if at all.

### **RQ3: Group Experiential Theme of Mitigation for Food Aid during Pandemics and Natural Disaster**

Research by Laborde et al. (2020) explained that threats to food access and food availability happen when there is a disruption income. COVID-19 and natural disasters are two such threats. Both of which residents of the USVI have encountered within a three-year period and these threats have indeed heightened food insecurity. Pereira and Oliveira (2020) found that COVID-19 caused school meals to be reduced and paused the guarantee of children from low-income parents to access their school meals. An essential part of emergency preparedness planning efforts to be considered is strategies to manage food insecurity (Parekh et al., 2021).

#### ***Group-Level Subtheme 1: Financial Relief from Out-Of-Pocket Spending***

The first group-level subtheme that was revealed for RQ3 was the theme of financial relief from spending out-of-pocket. P3 explained, “it's a big help. Anything, anything free, really... is a help, honestly, anything where you don't have to, you know, go in your own pocket or a struggle for a year, is a big help.” This finding does not support that of research by Haynes-Marlow et al. (2020) whose participants said they did not have enough aid to carry them from one month into the next allotment. Food hardships and financial struggles of low-income families increased due to the COVID-19 pandemic (Siddiqi et al., 2021). The participants likely worried about keeping their food supplies stocked and was provided relief by the P-EBT (Jowell et al., 2021), P6 solemnly said, “Listen, I was just grateful for whatever I received for my two children and that's it.” An obvious finding was the participants' ability to apply their money to other bills

such as healthcare and utilities (McCarthy et al., 2022; Miller & Morrissey, 2021) since the pandemic resources alleviated their monetary spending on food. Some participants described what their SNAP benefit spending was like before the additional benefits came into effect during the pandemic; their purchases have not changed, but they can relax a little knowing they have enough to see them through the month. P1 dredged up the memory,

Um, I used to just stretch the food... say like I take one salmon burger and rice and I cook it, and if I don't eat that day, I heat it back up for next day or so, or if I make a veggie burger and noodles, ... just save it ... put fridge and next day I eat it. I heat it and I eat it.

I offer a further explanation that the addition of momentary increased funds such as the stimulus checks and the P-EBT assigned to each school-aged child in the home, along with the rent-freeze, permitted otherwise financially dependent individuals some leverage and stability. Unlike the participants of Haynes-Marlow study, my participants did not candidly declare their aid was insufficient from month to month, perchance due to their food coping and management systems, the social support by family and friends, and their social capital reach within their communities.

### ***Group-Level Subtheme 2: Advocacy and Agency***

The second group-level subtheme that was revealed for RQ3 was the theme of advocacy and agency. No participants reported a reduction in food insecurity in their homes as a result of the resources put in place to combat the pandemic. Nor did any participant directly say the amounts they received was not enough, they advocate for

others to be eligible to participate. P4 spoke of the difficulties immigrants potentially faced having no income during the pandemic,

And a lot of people are like immigrants and stuff, certain things they need to qualify in order to... certain documents they need in order to qualify for the program. Whereas when they're working, they get tips and stuff like that. They're making it, they're making it work among themselves.

However, Wolfson and Leung, (2020) support my finding that institutional and organizational long-term support to address food insecurity is needed. They implore that coordinated, sustained, and robust federal policies are needed to ensure Americans who are out-of-work and low-income do not go hungry. They go on to say that nutrition assistance programs which reduce food insecurity need the crucial continuing support of the federal government. Ultimately, the authors aimed for long-term emergency food systems to be in-place to assist and prevent acute hunger crisis. The participants' feedback to USVI Government call for better planning and preparedness before disaster. New social practices were encouraged to be applied to the culture focused on reducing disaster risk (Pineiro et al., 2021).

One participant, P5 spoke about the lack of educational and medical infrastructure following the hurricanes of 2017 and the COVID-19 pandemic. She shared, "We don't have medication! We don't even have a hospital! We don't even have a, we don't even have a school! Only one school [building], everything merged!" She advocates for schools to be rebuilt and reopened so the merged primary, junior, and high schools can end, with sadness in her voice, shared, "We have a lot of schools on St. Croix that are

abandoned miss. We have a lot of school that is abandoned. I would like that the governor, I would like the governor to fix the schools.” She advocates too for the construction of a new hospital, qualified staff, and medical experts, she shared from her experiences between 2017 after the hurricanes up until 2022 of the pandemic that, “We don't even have doctors. Doctors are quitting their jobs. And the doctors them here can't read your chart good! And we don't have enough medication. and we don't have a hospital in the Virgin Islands.” She mentioned many teachers and physicians left the island due to these events. These losses are considered vulnerabilities because of the outcome of the pandemic as well as the hurricanes and the wherewithal of the USVI to cope; vulnerability occurs in communities if access to resources either at the individual or household levels is a crucial element in effectively recovering from a disaster or accomplishing a secure livelihood (Proag, 2014). Furthermore, the suffering of socially vulnerable caused by natural disaster becomes exacerbated by a plethora of reasons which include: i) pre-existing health conditions, ii) residing in substandard housing that cannot withstand storm conditions or being situated in hazard-prone areas, and iii) the inability to evacuate because they are unable to afford such emergency expenses (Guannel et al., 2022). The majority of USVI residents are overwhelmingly in two of those categories. These social vulnerabilities are common across the USVI and were present in my data collection; one participant had pre-existing health conditions before both events, while another just began recovering from hurricane damages to her home. The participants of the present study described what I deem efforts in resiliency through their agency and advocacy conceived from years of traumatic natural disaster experiences

and being on ground zero when rebuilding takes place. They have first-hand experience on how disaster aid and emergency food aid are administered.

### **Conceptual Framework in Context of Study**

The Social Ecological Model was a fitting choice for this study as it aims to explore the influence an individual's community and environment has on human development (Kilanowski, 2017). Using the SEM, I was allowed explore the breadth and magnitude of relationships single mothers cultivated within their environments and therefore allowed me to learn their perceptions of the various SEM level activities that mitigated their food insecurity during the pandemic. The SEM guided a clearer understanding of the factors that further fueled food insecurity during COVID-19 and therefore can produce guidance towards developing applicable intervention or adjusting interventions already in action.

#### **SEM: Individual Level**

The individual influences that propelled participants needs to access nutrition benefits was the need to feed their children. Melnick et al. (2022) supports my finding that single mothers expressed benefits were easy to access during the pandemic. None of the participants expressed feelings of being judged or embarrassed, or that they were not good mothers, nor being able to independently provide for their children. Although these reasons are documented in the literature as personal barriers to decrease food insecurity, this was not the case with my study. Additionally factors on the individual level such as educational attainment, geographic location, and income, which are other determinants of food insecurity were not assessed during my study.

**SEM: Interpersonal Level**

Because this study on food insecurity was specific to the pandemic, the level of interconnectedness between family and friends was not as solid as it is in previous research. Half of the participants mentioned direct contact with family and friends whether it was a care package sent through the mail, or just some cooked food or groceries delivered. Adjacently, the finding on elderly inclusivity so as not to make them feel isolated or forgotten is supported by other research. Interaction, whether in-person or virtual is recommended to keep their [the elderly's] mental and emotional health safeguarded from suicidal ideation, anxiety, and depression (Cocuzzo et al., 2022). This finding was very dear to P6. She spoke of in her absence, the elderly individuals who are in her life became curt and short with when delivered their groceries and meals. She shared,

A lot of the elderly people that I dealt with, they were very angry because it's like, Oh, you don't even, you know, you come, you just drop off the food or you drop off the groceries or you pick up on your payday bills or whatever. And they're like, they were snapping and as everything was a problem. That's like, really? But I realized that that's what, that's isolation did to a lot of people.

Differently, the participants described their methods of sustaining food in their homes ranging from meal planning, bulk buying, and stretching food, to teaming up and making community meals.



**SEM: Community Level**

The supports created through social capital and social networks were reported as beneficial to seven of the eight mothers. Although this area should have been categorized on the interpersonal level of SEM, the participants voiced this knowledge through community shared resources. This included those with vehicles collecting food distributions and bringing back to others in the community, spreading the word where a distribution is scheduled to take place, and awareness. For example, P7 said, “it was kind of rough it because due to transportation. And then we have a cousin that, she's the one that help us also to shopping where she have her own to deal with too.” The central community factors reducing food insecurity that were captured in this study included information networks, community supports, and community collaborations. P4 gave a brief narrative of her informational network that evolves into community supports in action,

So, you know, and then it's like once you know, something you share with somebody else, somebody share with somebody else, you know, you just spread the word around. Or sometimes people get stuff like, "oh you want this? no, like you're swapping food like, oh yeah I have enough of this.

In the literature review Carter et al. (2014) suggested research on the relationship between food insecurity, household characteristics, and neighborhood resources be investigated; my finding on social capital and social networking for resources has shed some light on the researchers' request. The factors in question by Carter et al. surfaced

during data analysis and were found to influence each other. Whether this influence was caused by the COVID-19 pandemic or due to genuine social support was not determined.

### **SEM: Organizational Level**

Single-mothers indicated the resources activated during the COVID-19 pandemic of 2020 benefited them tremendously. The food distributions, P-EBT cards, and stimulus checks helped keep food insecurity at bay. These avenues were exceptionally helpful between pay periods, when their food stamps benefits ran low, and as a means to keep afloat if they were laid off; the aid acted as a buffer against financial hardship (Reimold et al., 2021). A positive outcome of this research is that participants were able to buy in bulk, or had their groceries delivered to them which lessened their exposure to the COVID-19 virus. Conversely, even though the participants wanted to purchase healthier options, prices were too high while quality and quantity were insufficient (Kinsey et al., 2019).

### **SEM: Policy Level**

In order for policy changes to be made, there first has to be discussions of a combination of emotional and structural components of food access from populations that are food insecure (Bruckner et al., 2021). Additionally, Bruckner et al. (2021) and Douglas et al. (2015) argue that challenges such as job loss, illness, and homelessness are the personal deficiencies that cause food insecurity, rather than the structural components like access to food through political economy and structural racism. While no participants reported adverse health as a result of COVID-19, health educators and health systems should be prepared to address the consequences of unaffordable dietary options available

(Wolfson & Leung, 2020) to food insecure single mothers. Health psychologists can provide only so much assistance and guidance on behavior change based on what foods are available and affordable to their patients. As such, the public health community and policy makers need to work on implementing more affordable and healthier food choices to be accessible to food insecure single mothers. Providing housing, food, and healthcare to the homeless during the pandemic (Ahillan et al., 2023) was another finding; policies need to be created to address the homeless population during times of crisis. This was a very sensitive topic for P5.

### **Conclusion for Conceptual Framework**

All the SEM levels flowed into each other during data analysis which made some of the findings difficult to put into their designated levels. As I began data analysis, I realized there was an interdependence on and an independence across each SEM level. For instance, the interpersonal, community, and organizational levels' data were not well defined based upon participant experience. Personal experiential statements such as *glad for the foodstamps, it was helpful* and *any assistance available was welcomed*, as well as group experiential subthemes like *social capital and social networking for resources* appeared either blatantly or subtly throughout each SEM level. Because I used an interpretative phenomenological analysis, I was able to rearrange experiential statements into different clusters where they are more suited, per Smith et al. (2022) guidelines. Accessibility and availability of food as my participants recalled, however, were not factors influencing their food insecurity. This is true since the participants had help getting food in several ways through these SEM levels.

In each SEM level I saw aspects of resiliency and resourcefulness described by my participants. In their individual roles they budgeted and managed their food supplies using the agency and coping skills in their arsenal. Although the distinction of the interpersonal and community levels were blurred, factors like interacting with human services staff and informing others in the community of food distribution events were clearly illustrated. The organizational level of SEM was more visibly distinct from the community and interpersonal levels although there were some instances where each manifested as one; for instance, there was a participant who was well-known in her community and recently worked with an organization that regularly had food distribution events. She regularly had beforehand knowledge when and where an event would take place and shared it with her community. Finally, my participants' description of the policy level of SEM came in the form of what is currently permitted as it relates to nutrition assistance programs and the Pandemic Electronic Benefit Transfer (P-EBT), such as buying hot meals with the P-EBT; and what can be done to improve already in place measures, such as nutrition education. The SEM application to the present study demonstrated how models designed to explain behavior (Bronfenbrenner, 1977) and guide behavioral interventions (McLeroy et al., 1988) function in global pandemics.

### **Limitations of the Study**

The primary limitation of this study were participants level of honesty in disclosure (Kwak et al., 2021). Social desirability was not a limitation of this study. Another limitation of this study was the demographic information collected on participants such as age, education, and race which constituted another limitation to the

representativeness of all participants experiencing food insecurity during pandemic of COVID-19. This limitation impacts the transferability of the findings to similar groups (Wang et al., 2006). Participant size was another limitation of the study; IPA methodology requires at least 10 participants for graduate level research (Smith et al., 2022). I was contacted by 13 potential participants, three of which turned out to be the same person, and one other single-mother who was unable to meet the scheduled interview. Sampling strategy directly influenced the sample size since only one participant passed on the information about the study. A major limitation of this study was the geographic location; because this study took place in the US Virgin Islands, participants were not afforded the magnitude of food aid and other resources (Stoylar et al., 2021) offered in the continental US on account of island size and agricultural dependence on imports. Lastly, the underrepresentation of non-English speaking participants who would have otherwise been eligible was a limitation of this study.

### **Recommendations**

As a step forward to further this research, a quantitative study within the USVI Territory should be conducted. I strongly suggest this study be replicated with the appropriate cultural modifications or variables across the Caribbean Archipelago to explore and investigate the how policies influenced access to food during the COVID-19 pandemic. Such cultural modifications or variables include rationing of government food aid per household, state-of-emergency policing on individuals' ability to access available food sources, and socioeconomic status or social class ranking specific to that country. Another future study done across the Caribbean should focus on how different

governments (British, Danish, Dutch, French, and Spanish rules) supported their territories and commonwealths during the pandemic.

A recommendation to improve the already in place Grab n' Go school meals is flexibility (Melnick et al., 2022) whether by grade level, specific times, or subdistrict. That way everyone who comes to collect their child's portion of meals will receive them. This method will improve the adequacy of meals received for each child. Another recommendation is for the USDA School Meals Program to partner with local farmers and food distributors so that in the event of future crises, food supplies that would be reallocated to needed families (Reimold et al., 2021). P4 pointed out the difficulties for immigrants during the coronavirus pandemic, she cited the immigrants might not have proper documentation to be eligible and advocates policy change; as such policymakers should revisit the public charge policies (Payán et al., 2021; Siddiqi et al., 2021). Finally, a recommendation on food and nutrition education, health literacy, and financially responsible spending guidance for single mothers as it relates to their health and the health of their families would be beneficial.

### **Implications**

This study contributes to positive social change in a number of ways. Firstly, by answering RQ1 regarding personal and interpersonal experiences accessing available nutrition assistance programs. The participants are aware that SNAP aid is not meant to be a life-long crutch, rather a temporary support while they get back on track. To do so, assistance in the form of social support is needed from their individual and interpersonal environment. Research questions two and three are answered together since the

community, organizational, and policy levels are intertwined. Positive social change can come about through community and organizations working together to build empowerment and agency for single mothers. Policymakers and health educators can then build policies around the empowerment and agency developed by the community and organizational levels of the SEM.

Positive social change at the organizational level can come in the form of health educators raising awareness on the adverse health effects that accompany food insecurity. In the age of social media, health educators can use these platforms to share infographics on healthy eating habits, cost-effective shopping tips, and have nutritional value recorded sessions available for public viewing. Health educators can also partner with local SNAP and WIC programs and have joint or guest sessions which might be more appealing to their audience.

At the policy level, another path towards positive social change is for those who have lived the experience of food insecurity to be central in the construction of food insecurity obstacles and solutions. Health educators, policymakers, and researchers, with the knowledge and wisdom gleaned from those who have experienced food insecurity, can create a sustainable intervention. The intervention may be community gardens in which produce can be sold to supermarkets or local farmers markets.

Based on the responses of the participants, ending the stigma around being on welfare is a step towards positive social change at the individual, organizational, and societal levels. This positive social change can only happen when shameful recipients and non-recipients alike understand that social welfare is directly related to healthy wellbeing

which includes physical health and mental health (Shahidi et al., 2019). Virgin Islanders might be on to something since they do not believe there is a stigma; however, in order to effect positive social change, policy needs to be in place for other states not to intentionally deny welfare applicants for the sole purpose to defraud the programs by (US Department of Justice, 2022) reallocating the federally funded welfare disbursements into “slush funds” or misappropriating elsewhere (Alonso & Gallagher, 2022). By developing programs and policies to address the unmet social needs and to combat social determinants of health brought on by situational circumstance such as the coronavirus pandemic might be an effective strategy to reduce poor health outcomes (Wolfson & Leung, 2020). Advocating for policy change that reduces food insecurity is another step towards effecting positive social change.

How did mothers adapt to keeping food stores in their homes? Is it nature or nurture? Have we as Caribbean people learnt these food coping skills due to our natural disaster-prone geographic residence and therefore it comes naturally to us? Or is it a behavior that was nurtured because islanders do not have the ability to get in their vehicles and drive to safer state, or get on the next plane off the island? Those luxuries are not afforded here.

Accessible as it may be to use quantitative survey instruments and gather voluminous data on my topic, such quantitative data collection does not hone in on the contemporary lived experience that qualitative research can accumulate. Using the SEM as a conceptual framework by which to guide my study, I was able to gather thick, rich, descriptive data from the participants. The IPA methodology guided me in making sense



of the participants making sense of their lived experience. My research presented the contemporary perspective on single mothers experience accessing available nutrition assistance programs for their school-aged children during the pandemic of COVID-19.

### **Conclusion**

The Social Ecological Model exposed overlapping and contrasting environmental influences on the participants' lives and efforts to accessing available nutrition assistance programs. Findings of this study revealed areas of vulnerabilities where USVI single mothers and food insecurity intersect while living through the COVID-19 era of 2020. Prioritizing funds for rental and utility payments were constant battles the mothers faced. Some were able to allocate funds more easily than others. Social networks and social support were essential to some of the participants receiving food and for having access to food sources. The ingenuity of these single mothers through social networking and social support can be seen as acts of agency, creative problem-solving, and resiliency when accessing available food sources.

Findings also revealed that single mothers do not perceive receiving nutrition assistance as a negative or shameful experience. Vastly different than the omnipresent perception of the welfare queen in the USA. This divergence from the American norm might stem from cultural understanding and need to provide for the family, the Caribbean understanding of *every bit helps*, and the general lack of stigmatization in the face of resiliency.

Pandemics are not an everyday occurrence and because of that a multitude of interventions developed. This study focused on COVID-19 period where single mothers

of different socioeconomic status were asked how they managed. The study is further empirically necessary since it explored the phenomena in the USVI from culturally congruent standpoint as well as a geographical disadvantage. It is a snapshot taken to fill a gap in the research surrounded by COVID-19 related food insecurity in the USVI.

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## Appendix A: Interview Guide

Hi, good day! Thank you for participating! My name is Deshona Audain, and I am a doctoral student at Walden University. This research is necessary for partial fulfillment of the requirements for the doctoral program. My study aims to explore how single mothers in the USVI perceive their experiences accessing available nutrition programs for their school-aged children during COVID-19.

I would like to remind you that your participation is voluntary, and you can withdraw from the study at any time. Your identity and responses will remain confidential. This interview should last between 60-90 minutes and it will be recorded. If you need to take a break, or stop, do not hesitate to inform me. We will temporarily stop the interview. Should you experience any stress or discomfort during or after the interview, you can call 211 the National Human Service call center. Before we begin, do you have any questions or concerns about the interview process?

*(Interview questions 1-7 refer to RQ1)*

1. Describe the personal barriers to accessing available nutrition assistance programs?
2. Describe the interpersonal barriers to accessing available nutrition assistance programs?
3. Tell me about how you perceive your positive experiences when accessing nutrition assistance programs?
4. Tell me about how you perceive your negative experiences when accessing nutrition assistance programs?

5. Tell me about food aid and/or food supplies provided by other family members?

*Follow up:* Tell me about other ways you can get food?

6. Tell me about how you coped with food insecurity in your home during the pandemic of 2020?

*Follow up:* Tell me about any strategies you used to make your household food supply last longer?

7. Do you think there is a stigma around using nutrition assistance programs?

*(Interview questions 8-9 refer to RQ2)*

8. Tell me about how you perceive the community factors that impact your decisions to access nutrition assistance programs?
9. How do you perceive the organizational structure of the 'grab n' go' school meals set up by the Department of Education food distribution?

*(Interview questions 10-12 refer to RQ3)*

10. How do you perceive policies in place with receiving the Pandemic Electronic Benefit Transfer (P-EBT)?
11. How do you perceive the resources put in place during the pandemic of 2020 to assist with food insecurity?

12. How can health educators integrate feedback from the 'grab n' go' and the P-EBT services to develop interventions that will positively address food insecurity during global pandemic such as COVID-19?

This concludes our interview. Is there any other information you would like to add? I would like to remind you that your identity and everything shared with me will remain confidential. I will email you a transcription of the interview for you to confirm I have accurately captured what you have shared with me. Thank you for participating in my research study!

**Table A4***Instrumentation and Theoretical Alignment*

Research Questions (RQ)	Interview Questions (IQ)	Framework (SEM)
RQ1: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their individual and interpersonal experiences in accessing available school nutrition assistance programs during the COVID-19 pandemic?	IQ1: Describe the personal barriers to accessing available nutrition assistance programs?	RQ1 is in alignment with the SEM individual and interpersonal levels.
	IQ2: Describe the interpersonal barriers to accessing available nutrition assistance programs?	IQ1 is in alignment with the SEM individual and interpersonal levels.
	IQ3: Tell me about how you perceive your positive experiences when accessing nutrition assistance programs?	IQ2 is in alignment with the SEM individual and interpersonal levels.
	IQ4: Tell me about how you perceive your negative experiences when accessing nutrition assistance programs?	IQ3 is in alignment with the SEM individual and interpersonal levels.
	IQ5: Tell me about food aid and/or food supplies provided by other family members?	IQ4 is in alignment with the SEM individual and interpersonal levels.
	FU5: Tell me about other ways you can get food?	IQ5 is in alignment with The SEM individual and interpersonal levels.
	IQ6: Tell me about how you coped with food insecurity in your home during the pandemic of 2020?	IQ6 is in alignment with The SEM individual and interpersonal levels.
FU6: Tell me about any strategies you used to make your household food supply last longer?	IQ7 is in alignment with The SEM individual and interpersonal levels.	
IQ7: Do you think there is a stigma around using nutrition assistance programs?	FU5 is in alignment with The SEM individual and interpersonal levels.	
		FU6 is in alignment with The SEM individual and interpersonal levels.
RQ2: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged	IQ8 : Tell me about how you perceive the community factors that impact your decisions to access nutrition assistance programs?	RQ2 is in alignment with the SEM community and organizational levels.
		IQ8 is in alignment with the SEM community level.

children make sense of their experiences with community and organizational structure in accessing available school nutrition assistance programs during the COVID-19 pandemic?

IQ9: How do you perceive the organizational structure of the ‘grab n’ go’ school meals set up by the Department of Education food distribution?

IQ9 is in alignment with the SEM organizational level.

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RQ3: How do food insecure USVI low-income single mothers who receive nutrition assistance for their school aged children make sense of their experiences with policy in accessing available school nutrition assistance programs during the COVID-19 pandemic?

IQ10. How do you perceive policies in place with receiving the Pandemic Electronic Benefit Transfer (P-EBT)?

IQ11: How do you perceive the resources put in place during the pandemic of 2020 to assist with food insecurity?

IQ12: How can health educators integrate feedback from the ‘grab n’ go’ and the P-EBT services to develop interventions that will positively address food insecurity during global pandemic such as COVID-19?

RQ3 is in alignment with the SEM policy level.

IQ10 is in alignment with the SEM policy level.

IQ11 is in alignment with the SEM policy level.

IQ12 is in alignment with the SEM policy level.

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**Table A5***Personal Experiential Themes and Experiential Statements*

Interview Question (IQ)	Person Experiential Themes	Experiential Statement	Participant Identifier
IQ1	Eligibility	Needed the help, qualified during lockdown,	P1 – P8
IQ2, IQ3	Upgraded services for easier use	no more paper checks, recertify easier because of dropbox	P2 – P6
IQ4	If Don't Use It, You Lose It	Assistance expires every month, time restrictions, human services employees a deterrent, issues with paperwork delivery	P1 – P5, P7, P8
IQ5, IQ6	Coping	Cooked large meals, portion control, bought in bulk, bought non-perishable foods	P1 – P4, P6 – P8
IQ7	Pride	No shame, no guilt. Feels sorry for those who could not benefit	P1 – P8
IQ8, IQ9	Supplementary Assistance	Easy access depending on area of service, options to collect Grab n' Go meals, good program especially for those who do not receive benefits	P1 – P4, P6 – P8
IQ10	No Money Out of Pocket Used	Good addition to regular food stamps, glad to get P-EBT since regular SNAP was reduced, not eligible for SNAP but my children in school automatically got P-EBT	P1 – P5, P7, P8
IQ11	Resources Should Last	Pandemic resources needed to continue, more could have been done, general population should have gotten...	P3 – P7
IQ12	Nutrition Education and Disaster Recovery	Government should have plans like plans for hurricane season, teach people how to eat and shop healthy	P1 – P4, P6, P7





## Appendix C: Screening Questions

1. Are you a mother of school-aged child(ren)?
2. What was your highest grade completed?
3. Were you working in the USVI during the COVID-19 pandemic of 2020?
4. Was your child/ren in a USVI primary or secondary school during the COVID-19 pandemic of 2020?
5. Were you in the USVI during the COVID-19 pandemic of 2020?