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How Community-Based Solutions Affect Households Headed by Single Mothers in an Urban Food Desert

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Abstract

How Community-Based Solutions Affect Households Headed by Single Mothers

in an Urban Food Desert

by

Christie W. Ross

MBA, Belmont University, 2001

BA, Winthrop University, 1992

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Public Policy and Administration

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Abstract

Limited access to affordable and nutritious foods is a growing problem in the United

States, leading to a rise in obesity, diabetes, and heart disease as well as poor academic

performance. With this has come the rise of urban food deserts, specific geographic areas

with limited access to affordable, healthy, and nutritious foods within a 1-mile radius,

which impacts low-income and minority communities at a greater rate than the rest of US

society. Single mothers represent the largest demographic impacted by urban food deserts

yet are the least represented in research. The purpose of this narrative study, using the

human rights framework, was to gain a more in-depth understanding of how urban food

deserts impact the lives of single mothers who reside there. Data were collected via a

series of open-ended interview questions with 19 participants, who were identified

through purposeful sampling. The participants included 12 single mothers, one local

community leader, and 6 local food program leaders. The interviews were then

transcribed and coded to identify themes using qualitative analysis software. The results

confirmed the difficulties single mothers faced accessing food and emphasized the need

for services provided by community-based programs. The findings may be used by local

community leaders to help formulate partnerships as well as develop additional

community-based programs to help alleviate food insecurity. With effective policies and

appropriate partnerships, communities can improve the overall health and wellbeing of

underserved and inadequately nourished populations, thereby affecting positive social

change.

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Dedication

   This dissertation is dedicated to the memory of my father, Frank Will, who passed away in 2015. Just three days before he died, he made me promise that I would finish my doctorate "No matter what"; to the memory of my late Aunt Rosemarie Davis who was my doppelganger, the one from whom I get my curly hair and my ability to talk for hours on end about absolutely nothing at all, who constantly encouraged me, but didn't get to see me fulfill this dream; as well as the best support system a girl could ask for - my husband, Michael Ross, who did not hesitate when I wanted to return to school and has been a fierce supporter and amazing editor; and my children Hannah Griffin and Colin Ross, for their constant love, encouragement, and unwavering support.

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Chapter 1: Introduction to the Study

Hunger and food insecurity have become endemic in the United States. The country currently has nearly 40 million people, including 34% of households headed by single mothers who either lack adequate food or do not have access to healthy and nutritious food (Anderson, 2013; Chilton & Rose, 2009; Coleman-Jensen et al., 2019; Knowles, et al., 2015; Ver Ploeg et al., 2015). Single mothers represent the most impacted demographic yet are the least researched. Studies conducted over the past decade regarding urban food deserts, defined as an urban area with limited access to affordable and nutritious food within a 1-mile radius (Coleman-Jensen, et al., 2019; Leete, et al., 2012; Ver Pleog, 2012; Walker et al., 2010, and areas with limited access to affordable and nutritious food have established definitions, identified affected communities, determined root causes, and proposed national solutions. No unanimous opinion exists regarding how to mitigate the problem of food deserts and food insecurity, and there is a lack of information regarding how affected communities and those who reside in those communities can help alleviate the problem.

Poor access to healthy and nutritious food impacts low-income and minority communities, and particularly single mothers at a greater rate than the rest of US society. Urban food deserts, which are often limited to local convenience stores and fast food restaurants, coupled with lack of access to healthy fruits and vegetables have led to a rise in obesity. This has also resulted in an increase in other diseases, including diabetes and heart disease, which are two major causes of preventable illness and death (Brinkley et al., 2017; Burke, 2011; Chilton et al., 2017; Schafft et al., 2009). Further, there is a

correlation between poor nutrition and inadequate academic performance, which often leads to poor choices later in life and presents an eventual burden on US society as a whole (Bogden et al., 2012). Researchers have written extensively about the topic of urban food deserts over the past two decades by defining them and examining their origins, as well as analyzing resulting social, economic, and health implications. Researchers have also investigated various solutions to food insecurity predominately at the national level. A gap in research exists, however, in terms of understanding how community-based projects can contribute to alleviating the problem of urban food deserts, and more specifically, improve experiences of single mothers who comprise the largest demographic in urban food deserts and access community-based solutions. As a result, the need for an in-depth understanding of how urban food deserts impact the lives of single mothers who reside in urban food deserts is crucial. The purpose of this qualitative study is to explore lived experiences of single mothers and barriers they face as they reside in and access community-based solutions within an urban food desert located in a mid-sized city on the East Coast of the United States.

Background of the Study

The United States Department of Agriculture (USDA) started collecting data on food insecurity and food deserts in 1995. Approximately 12% of the population or 39 million people in the United States live in urban food deserts (USDA, 2018). Of that number, 34% are households headed by single mothers. This number has remained relatively constant since 2013, and as a result, has since become a policy priority (Coleman-Jensen, 2009; Coleman-Jensen et al., 2019; Knowles, et al., 2015; Ver Ploeg et

al., 2015). Food deserts are defined as an urban area with limited access to affordable and nutritious food within a 1-mile radius (Coleman-Jensen, et al., 2019; Leete, et al., 2012; Ver Pleog, 2012; Walker et al., 2010). Research has also identified affected communities, determined several root causes, recognized detrimental effects of urban food deserts, and has proposed as well as examined various programs and initiatives designed to help alleviate, if not eliminate, the problem. No unanimous opinion exists, though, regarding how to improve the issue of food deserts and food insecurity, and little focus has been directed at households headed by single mothers who represent the largest demographic living in urban food deserts, or how community-based solutions impact single mothers who reside in these areas. Additionally, little focus has been directed at soliciting active participation of single mothers in discussions about local food programs and initiatives.

Raja et al. (2008) found significant disparities in terms of access to healthy and nutritious foods in low income and minority neighborhoods where food choices are often limited to convenience stores and fast food restaurants that offer unhealthy choices at higher prices compared to nonminority neighborhoods (Ghosh et al., 2017; Ver Ploeg et al., 2009. Early research focused on a lack of grocery stores as the primary cause (Hamidi, 2020), while additional suspected causes include systemic racism, urban sprawl, inequities in the food system, and high poverty rates (Brinkley et al., 2017; Chilton & Rose, 2009; Crowe et al., 2018; Hamidi, 2020; New York Law School Radical Justice Project, 2012; Silver et al., 2017; Walker et al., 2010; Zhang & Debarchana, 2016).

In addition to research that focused on causes of urban food deserts, much is available regarding detrimental effects associated with poor nutrition that accompanies residing in urban food deserts. nutrition and academic performance and the subsequent impact on choices made by people later in life, along with the indirect impact including lost productivity, disease, disability and lowered quality of life (Bogden et al., 2012). Brinkley et al. (2017) and Burke (2011) address obesity and its negative effects, while citing food access as one of leading causes of disease including, obesity, diabetes, and heart disease, while other research identifies poor health outcomes in children who reside in food insecure households (Helton et al., 2018).

Finally, Brinkley et al., 2017; Horst et al., 2016; Pollard & Booth, identified programs and initiatives, including food policy councils and public-private grocery store initiatives, alternative food movements, including community gardens, food pantries, corner store initiatives, alternative food distribution and urban agriculture, which are all designed to combat the growing problem. Additional studies involve eliminating food deserts through alleviating poverty, which is identified as a prominent underlying cause of food deserts. Raising the minimum wage to a living wage, increasing the prevalence of affordable housing, and exploring universal basic income are methods to address food deserts. Disagreement, however, persists among experts in terms of how to best accomplish this goal. Just as no definitive answer existed in how urban food deserts initially developed, no unanimous agreement exists in terms of how to best address the issue.

Problem Statement

Limited access to affordable and nutritious foods is a growing problem in the United States. Despite vast wealth and resources, the US has not only seen a recent rise in food deserts but also has one of the highest instances of food insecurity when compared to other industrialized countries. The term food desert is defined as a geographic area "with limited access to affordable and nutritious food" (Ver Ploeg et al., 2012, p. 211) and is commonly associated with low-income communities. More specifically, urban food deserts, which make up 78% of all food deserts (Jacobson & Silverbush, 2013), are defined as low-income areas that are more than one mile from a grocery store (Van Ploeg et al., 2012). Coleman-Jensen et al. (2019) said food insecurity is a household's inability "to acquire adequate food for one or more household members because they had insufficient money and other resources for food" (p. 25). According to the International Monetary Fund's "advanced economy countries," report, the United States ranks last out of 19 countries in food security (Jacobson & Silverbush, 2013). Currently, just over 11% of the US population, including over 33% of households headed by single mothers, are experiencing food insecurity (Coleman-Jensen et al., 2019). Despite being the largest demographic affected by food insecurity, single mothers are the least represented in literature. Additionally, little has been done to give a voice to or facilitate participation in discussions about local and community-based programs and initiatives for those who are most impacted by and experience food insecurity, nor how community-based solutions can affect them.

Purpose of the Study

Lack of access to healthy and nutritious foods impacts all Americans because of disparate effects poor nutrition has on the health of individuals and communities. Food deserts are areas where the only food in proximity is local convenience stores and fast food restaurants. Limited access to healthy fruits and vegetables leads to a rise in obesity, and subsequently, diabetes and heart disease, which are two major causes of preventable illness and death. Lack of nutritious food also leads to poor health outcomes in children, including inferior physical health, diminished cognitive development, reduced emotional functioning, and substandard social skills (Helton et al., 2018). Further, Bogden et al. (2012) said there is a correlation between nutrition and academic performance, which leads to poor choices later in life and present an eventual burden on US society as a whole. Possible factors which contribute to the problem include governmental policies, reduction in SNAP (Supplemental Nutrition Assistance Program) allotments, (Rosenbaum et al., 2013), lack of incentives for grocery stores to remain in certain markets (Bonanno et al., 2013), issues with mobility and transportation to grocery stores outside of the neighborhood (Boden & Hoover, 2018), and poverty and systemic racism (Horst et al., 2016). Single mothers are most impacted by food insecurity yet are least represented in literature and rarely are given the opportunity to participate in discussions about community-based programs and initiatives or how those programs and initiatives affect them.

The purpose of this narrative study was to explore the lived experiences of single mothers residing in a local urban food desert in a mid-sized city on the East Coast. This

location was chosen because it contains several neighborhoods that were identified as urban food deserts as well as due to its proximity to me. This study will contribute to the body of knowledge by providing in-depth perspectives about accessing healthy and nutritious foods as well as barriers single mothers face in urban food deserts. I also identify community-based programs that exist to help overcome barriers when accessing healthy and nutritious foods and their impact on single mothers residing in urban food deserts.

Research Questions

I developed one primary research question as well as four subquestions in order to gain perspectives of single mothers in urban food deserts and learn from and better understand their experiences:

RQ1: How do single mothers describe their lived experiences involving residing in an urban food desert?

Subquestions were: *SQ1:* How do community-based solutions affect the lives of households headed by single mothers in urban food deserts?

SQ2: What solutions do single mothers perceive as effective?

SQ3: What barriers do single mothers face in urban food deserts?

SQ4: What are community programs doing to promote community-based access to healthy and nutritious food?

Theoretical Foundation

The human rights framework was chosen to guide how this research project was approached. This framework is based on the United Nations' 1948 Universal Declaration

of Human Rights (UDHR). Article 25 of the UDHR articulates the right to a minimum standard of living that people have an inherent right to food, emphasizes the need to protect the ability to obtain food, ensure others do not hinder the ability to obtain food, and enable the creation of social and economic environments that guarantee adequate food to those in need (Chilton & Rose, 2009).

In personal communication with Dr. Mariana Chilton, who along with Dr. Diego Rose, first applied the framework to the study of food insecurity and food deserts in 2009, she stated, "The human rights framework is very robust and has a very specific structure/scaffolding for participation of rights bearers in the process of demanding that states respect, protect, and fulfill their rights."

Chilton and Rose (2009) said, "a human rights framework repositions our understanding of food insecurity to acknowledge and actively address its social and economic determinants" (p 1203). Food insecurity is the result of social and economic practices that lead to limited access to food (Chilton & Rose, 2009). Moreover, using the human rights framework to address the problem of food insecurity is a natural progression.

The framework includes four key components that involve how food insecurity should be studied: creating government accountability, encouraging and expanding public participation, focusing on the most vulnerable, and linking public policy to measurable outcomes. The framework was also designed to help researchers address social and economic issues involved with food insecurity, and environments that allow for easy and affordable access to healthy and nutritious food must be created in order to bring about

more awareness regarding connections between food access and health outcomes
(Chilton & Rose, 2009, as cited in Ross, 2013c).

The current food system in the United States propagates the issue of food
insecurity, and resulting negative implications such as poor health outcomes, lowered
quality of life, and poor academic performance, associated with this issue because food
has not been approached from the perspective that food is a right and not a privilege. The
framework, particularly key components of raising awareness and encouraging
participation, offered a foundation for the current research to be expanded upon, further
contributed to the field of study on regarding urban food deserts in order to lead to social
change.

The human rights framework has been used by leading experts in the field of
hunger and food insecurity to guide how they approached studying the issue. Chilton et
al. (2009), who grounded their research in the framework as they studied the lack of
engagement from those most impacted by hunger, said participation by those most
impacted by food insecurity is crucial to creating a system based on the right to food.
Later, Knowles, et al (2015) also utilized the framework as part of their study. Each
separately used this human rights-based framework to explore local, sustainable,
community-based and rights-based food systems and advocate for those who are most
impacted to actively participate in the development, improvement, and application of
initiative than ensure the right to food.

The human rights framework was chosen because of it involves advocacy for food
as a right, its four key components, particularly raising awareness and encouraging and

expanding public participation, and because it aligns with this research study and how it was approached. The primary focus of this study was to address those most affected by limited access to nutritious and health foods, give them the ability to participate and be heard, and raise awareness of the issue, thereby directly addressing how the issue should be studied and approached. My research question involved the lived experiences of those who struggle with access to healthy and nutritious foods, and I encouraged participation in discussions about local programs and initiatives for those most impacted by food insecurity.

Nature of the Study

Qualitative studies are most appropriate for studying social issues in order to gain comprehensive knowledge about an issue (Creswell, 2013). A qualitative and narrative method of inquiry was used to address the research question. Narrative studies entail lived experiences of participants and are used to advance understanding of the issue being studied. This approach was chosen in order to elicit perspectives of single mothers, the most impacted but least studied demographic, through their lived experiences, including available community-based solutions, their food purchasing, cooking, and eating habits, and barriers they faced when accessing healthy and nutritious foods in urban food desserts. This was required in order to develop an in-depth understanding of both urban food deserts and their effects on single mothers as well as how community-based solutions impacted those facing food insecurity. McMullen and Braithwaite (2013) said through storytelling, the narrative method of inquiry is the most appropriate method for

relating social experiences with depth and complexity, resulting in better understanding issues.

I conducted in depth and open-ended interviews with single mothers who reside in the identified community regarding their food purchasing, cooking, and eating habits, as well as barriers they faced. I also conducted interviews with local community and food initiative program leaders as the basis for narrative research.

Definitions

Food insecurity: The inability to acquire adequate food for one or more household members because of insufficient money and other resources (Coleman-Jensen et al., 2019).

Urban food desert: an urban area where there is limited access to affordable and nutritious food within a one-mile radius (Ver Ploeg, 2012).

Assumptions

Several assumptions guided this study. According to Connelly and Clandinin (1990, as cited in Mueller, 2019), human beings are natural storytellers, and narratives are a fundamental method of communicating their experiences. Jovchelovitch and Bauer (2000) said, "there is no human experience that cannot be expressed in the form of a narrative" (p. 57). Humans instinctively tell stories, and studying how to tell those stories helps in terms of recognizing how humans create meaning. Additionally, humans make sense of the world and create social identities through storytelling (Robert & Shenhav, 2014). It was assumed, participants were truthful when telling their stories. I also assumed qualitative research, specifically the narrative approach, was the most

comprehensive method for examining participants' lived experiences as related to the research question and subquestions, and thus would contribute to positive social change.

Scope and Delimitations

I explored lived experiences of single mothers residing in an urban food desert located in a medium-sized city on the east coast of the US. Experiences explored through this study involved barriers these women faced when accessing healthy and nutritious foods, as well as community-based programs and initiatives available to them and how those programs and initiatives impacted them. Single mothers comprise the largest demographic residing in urban food desserts, yet little existing research has focused on them. Further, I wanted to elevate voices of these women in order to create a more in-depth understanding of and call attention to the issue.

Participants were single mothers who reside in the identified neighborhood. Additional participants who represented the local community as well those who represent local food programs and initiatives were also chosen to gain their expertise on the issue along with perspectives of available local programs and initiatives. Purposeful sampling was chosen to identify participants and because it is an effective strategy both for identifying participants who have extensive knowledge and/or experience with the issue being studied. Because they were the largest demographic in urban food deserts and were not focused on in literature, single mothers within the food desert neighborhood itself were chosen.

Transferability involves ensuring research outcomes are applicable in other situations or circumstances. It is achieved when outcomes of the study are meaningful to

those who are not part of the study (Cope, 2014). Thick description, which is the most common method for facilitating transferability, involves "evaluat[ing] the extent to which the conclusions drawn are transferable to other times, settings, situations, and people" (Pandey & Patnaik, 2014, p 5750). Outcomes may be unique to those participants involved in this particular study because experiences are also unique to them, and transferability may be limited to single mothers who reside in urban food deserts, I used thick description to establish transferability.

Limitations

Limitations are possible weaknesses related to the methodology or the study itself. Qualitative research in general is often disparaged for not being as scientifically rigorous as quantitative methods of research (Amankwaa, 2016; Cope, 2014; Pandey & Patnaik, 2014). Procedures have been created, however, to help researchers conducting qualitative studies ensure studies are credible and trustworthy. These strategies include peer debriefing, prolonged engagement, persistent observation, journaling, triangulation, thick description, and member checks. It is recommended that at least two strategies be used to establish trustworthiness, including credibility, dependability, confirmability, and transferability (Butina, 2014). For this study, member checks and thick description were used to address the identified limitations and establish credibility and trustworthiness.

Additionally, because the researcher as interviewer is considered the research instrument, the potential for bias exists. More specifically, narrative research presents certain limitations, particularly if the researcher and participants interpret narratives differently (Moen, 2006). Therefore, the researcher must take steps to prevent bias.

Potential bias can also be addressed through the use of member checks, in which the researcher shares the themes identified during the analysis phase with the participants. Feedback from the participants is, then, requested to clarify if the researcher has accurately understood the information as the participants intended (Cope, 2014). Further, purposeful sampling, considered the most effective strategy for achieving an in- depth understanding of the issue being studied, will also help to establish trustworthiness. The sampling strategy was used to address this potential limitation as well. Lastly, the narrative method presents additional limitations including possible difficulty recruiting and accessing participants for interviews within the targeted community. However, I worked closely with local community and program leaders to identify, recruit, and access the participants who were interviewed.

Significance of the Study

I addressed a gap in research by exploring lived experiences of single mothers and understanding barriers these women face involving accessing healthy and nutritious foods, as well as community-based programs and initiatives available to them and how those programs and initiatives impacted them. I also provided opportunities for woman who are most impacted by hunger and food insecurity to actively participate in discussions involving the issue. Results of the research project will lead to a necessary increase in understanding about the issue of food deserts and effects of locally-based solutions. Understanding can be used by local policy makers and community leaders to help formulate partnerships as well as develop additional community-based programs or initiatives to help alleviate the problem. With effective policies and appropriate

partnerships, communities can improve overall health and wellbeing of underserved and inadequately nourished populations.

Significance to Practice

This study could potentially lead to further awareness of experiences of single mothers who reside in urban food deserts, as well as identify opportunities or barriers to accessing healthy and nutritious foods that were previously not known. Such awareness and acknowledgment of the experiences of single mothers can help guide local leaders, policy makers, and heads of food programs and initiatives to create new policies and/or programs that address the issue of lack of nutritious and healthy foods in the identified neighborhood. In addition, through the study, potential strategies for local policymakers might be identified that could lead to more funding or potentially help alleviate barriers involving healthy foods that single mothers face residing in such neighborhoods. This, in turn, could lead to changes to local policies.

Significance to Theory

The human rights framework involves food as a right. The theoretical framework is based on the key concept that those most impacted by food insecurity not only have a right to have a voice in programs and services designed to assist them, but also should actively participate in related discussions. Through exploring lived experiences of those who struggle with access to healthy and nutritious foods, this study allowed for participation of those most impacted by food insecurity and identified how community leaders can advocate food becoming a right in the United States.

Significance to Social Change

I chose the narrative approach in order to give a voice to and share stories of women who live these experiences. Narratives constructed as a result of this process can not only empower those whose lived experiences are being shared (Dauite, 2013), but also inspire people to act and encourage discussions in order to achieve positive social change involving a particular issue. Riesssman (2008) said narrative inquiry contributes positively to social change, and telling of lived experiences advances social justice. By speaking out, the participants can affect change and encourage others to do the same.

I used the interview process to listen to and learn from those who struggled with access to healthy and nutritious foods and how it impacted their daily lives as well as learn what is happening in their community and who is suffering. The most effective way to convey their stories and elevate their voices was through the narrative method.

I also identified experiences and barriers participants faced as well as available community-based solutions. The study provided further awareness not only of the needs of single mothers residing in urban food deserts, but also available programs designed to help these residents access health and nutritious foods. Finally, it is my hope that this study will lead to positive social change as a result of connecting participants and their community as a whole with previously unknown community-based food programs.

Summary and Transition

Chapter 1 included an overview of urban food deserts, including background information regarding the problem as well as single mothers who represent the largest demographic yet are rarely the subject of studies on urban food deserts. I examined how

urban food deserts developed, detrimental effects that are a result of poor nutrition related to living in an urban food desert, and various programs and initiatives in place across the country.

Additionally, Chapter 1 included the purpose of this study, which was to explore the lived experiences of single mothers residing in a local urban food desert and in-depth perspectives of accessing healthy foods, barriers, and overall impact on participants along with perspectives of those involved in local food programs and initiatives. The human rights framework served as the foundation for this study. This is followed by an outline of the narrative study design, assumptions of the study, and how participants were chosen. The chapter concluded with a brief summary of how I addressed the gap in literature, and how the study contributed to positive social change. Chapter 2 includes a literature review on urban food deserts. I address literature involving the human rights framework, contributing factors to the development of urban food deserts, detrimental effects associated with urban food deserts, and current research on programs and initiatives designed to help alleviate the problem.

Chapter 2: Literature Review

Hunger and food insecurity have become endemic in the United States. The country currently has nearly 40 million people, including 33% of households headed by single mothers, who suffer from food insecurity and hunger (Anderson, 2013; Chilton & Rose, 2009; Coleman-Jensen et al., 2019; Ver Ploeg et al., 2015). Studies conducted over the past decade regarding urban food deserts have established definitions, identified affected communities, determined root causes and have proposed national solutions. No consensus exists, though, regarding how to mitigate the problem of food deserts and food insecurity, and little focus has been directed at how affected communities and those who reside in those communities can help mitigate the problem.

This literature review begins with an assessment of research strategies used to aid future researchers in locating articles on the subject. Following the review of research strategies, current articles focusing on suspected root causes of food insecurity as well as correlations between nutrition and academic performance were reviewed. In addition, research involving negative health implications and indirect impacts of lack of access to healthy and nutritious food, including lost productivity, disease, disability, and lowered quality of life were also reviewed. These articles assisted in providing the reader with background information on the issue as well as highlighting sustainable solutions. The literature review also includes a discussion of what is currently being done to find a solution or solutions to the problem. Lastly, I examine the human rights framework as a means for addressing the lack of healthy, nutritious, and affordable foods.

Research Strategy

A number of sources were used to conduct the literature research. Google Scholar was primarily used for the general search. A search was also done of the following Walden University Library databases: Political Science Complete, SAGE Journals, ProQuest Central, and Academic Search Complete. The following key words were used in this study: *community*, *community solutions*, *food insecurity*, *food justice*, *food sovereignty*, *alternative food movement*, *community food projects*, and *food as a right*. Reference lists at the end of related articles were also scanned. Searches resulted in peer-reviewed journal articles, reports from the USDA, US Census Bureau, and other government agencies, books, dissertations, white papers, and reports from nonprofit organizations.

Theoretical Framework

Food deserts and its accompanying food insecurity are a public health issue. The current food system in the United States perpetuates the issue of food insecurity along with negative implications associated with it because it has not been approached from the perspective that food is a right rather than a privilege. The human rights framework was used as the theoretical framework to explore urban food deserts.   The framework is based on the UN's 1948 UDHR, which articulates the right to a minimum standard of living and specifically outlines that people have an inherent right to food. It also emphasizes the need to not only protect the ability to obtain food, but also ensures others do not hinder that ability to obtain food, as well as to enable the creation of both social

and economic environments that guarantee adequate food to those in need (Chilton & Rose, 2009).

The framework was first applied to the study of hunger, food insecurity, and food deserts by Chilton and Rose in 2009, who said, "a human rights framework repositions our understanding of food insecurity to acknowledge and actively address its social and economic determinants" (p.1203). Chilton and Rose (2009) also suggested its use is a natural progression from those researchers already using the framework to guide studies in public health. It has since been used by leading experts in the field to guide studies on hunger, food insecurity, and food deserts. The framework was used to address the lack of access to healthy, nutritious and affordable foods, and is based on the supposition that people have an inherent right to food. The framework is built on four key elements that include encouraging and expanding public participation, creating government accountability, focusing on the most vulnerable, and linking public policy to measurable outcomes. It also involves advocating for developing a system for mitigating problems and bringing about more awareness of connections between food access and health outcomes, then suggested that a socio-economic environment must be created to allow for easy access to food.

The framework's premise was designed to help researchers address social and economic issues at the core of food insecurity. Using a rights-based approach will aid in addressing limitations of both public and private food initiatives, both public and private, and has the potential to encourage participation among those most impacted by food insecurity. Using a rights-based approach can lead to the creation of policies and

beneficial changes to the food system, including creation of local and national food

systems that ensure universal and equitable access to adequate and nutritious food

(Anderson, 2013; Bellows, 2019; Chilton & Rose, 2009 as cited in Ross, 2013c; Chilton

et al., 2009; Knowles et al., 2015; Longo, 2016).

A number of experts studying food insecurity and food deserts have grounded

their studies in the human rights framework. Chilton et al (2009) used the framework to

study the lack of engagement and voice in the development of programs and services

from those most impacted by hunger and food insecurity. Later, Knowles, et al (2015)

used the framework to guide their study on raising awareness of the impact of food

insecurity on public health.

Anderson (2013) for example, applied the framework by illustrating how local

farmers and food producers could be an integral part of creating a rights-based food

system that is local and community-based as well as sustainable. Such a food system

would give residents of the neighborhood oversight of food systems as opposed to more

global systems that often exploit workers with unfair wages and subpar working

conditions, while charging its customers high prices. The framework was also used to

expand upon and further contribute to the field of study on urban food deserts and

provide an approach that is based on social change.

Pollard and Booth (2019) also advocated for using a human rights-based approach

to examine causes of food insecurity. Ending food insecurity is a public health priority

and current programs designed to provide food assistance and reduce food insecurity are

insufficient and ineffective because they do not address the primary causes. They,

instead, proposed food waste mitigation, encouraged action through creating food policies based on food as a human right, which they felt had the most likelihood of making an effective impact.

on the economic cost of food insecurity, they admitted are not usually discussed by developed countries. Further, Pollard and Booth (2019) found a correlation between low public social spending and a greater numbers of food bank users" (p 5) and said inadequacy of developed countries' social protection systems is rendering people vulnerable to food insecurity as demonstrated by increased food insecurity rates in the countries studied. Key actions to reduce food insecurity include potential changes to policies and laws that work to alleviate food insecurity as well as proposed interventions that ensure food is accessible and affordable and public-private partnerships to reduce and eliminate food insecurity.

Research on Contributing Factors to Urban Food Deserts

The USDA started collecting data on food insecurity in 1995. By 2012, approximately 12% of the population or 39 million people in the United States lived in food deserts, which are considered low income and low access areas by the USDA. This number has remained relatively constant, dropping only by a fraction of a percentage between 2012 and 2019 and has since become a policy priority (Coleman-Jensen, 2009; Coleman-Jensen et al., 2019; Ver Ploeg et al., 2015).   The review of the literature provided an understanding of how food deserts impact urban communities and the community-based solutions being identified and studied in order to combat the problem. As evidenced by the sampling of articles presented, the current literature focused on

various aspects of urban food deserts. While many of the articles discussed potential means of solving the problem, the focus of those solutions is nationally based. A gap exists in research examining community-based solutions, and several studies identified the need for further research into such solutions.

An early study by Raja et al. (2008) assessed low-income, minority neighborhoods to determine if unequal access to healthy and nutritious foods in fact existed compared to non-minority neighborhoods both located in Erie County, New York. Using census data on income, population, and location of the neighborhoods, the authors concluded that notable disparities existed with regard to the availability of healthy foods in minority neighborhoods. Urban food deserts are specifically defined as an area with limited access to affordable and nutritious food within a 1-mile radius of the identified neighborhood. Food options in these communities are often limited to convenience stores and fast food restaurants that offer unhealthy choices at higher prices (Ghosh et al., 2017; Ver Ploeg et al., 2009). These neighborhoods are often found in older, urban areas consisting of households that are predominantly populated by people in low income and minority groups and lack access to healthy, nutritious food. Low-income neighborhoods, for example, have 25% fewer chain grocery stores, and communities of color have 50 % fewer of chain grocery stores as compared to largely white neighborhoods.

Similarly, research found four times as many grocery stores in mostly white communities as compared to primarily black neighborhoods (Treuhaft & Karpyn, 2010). Little evidence existed in the literature to definitively pinpoint the origins of urban food

deserts, and among those who have researched the topic, there is little consensus on the origins or the criteria to identify and define urban food deserts. While much of the of urban food desert literature, particularly the early research, focused solely on the aspect of limited access as a result of no grocery stores within a specified distance (Bonanno et al., 2013; Clendenning et al., 2015; Coleman-Jensen, 2010; Giang et al., 2008; Jaskiewicz, et al, 2015; Schaft et al., 2009; Ver Ploeg et al., 2012), emergent literature argued that studies disregarded other variables and identified a number of additional suspected causes including systemic racism, urban sprawl, inequities in the food system, and high rates of poverty and linked causality between poverty, poor health outcomes, insufficient education and food insecurity. (Brinkley et al., 2017; Chilton & Rose, 2009; Crowe et al., 2018; Hamidi, 2020; New York Law School Radical Justice Project, 2012; Silver, et al 2017; Walker, et al., 2010; Zhang & Debarchana, 2016). The research also emphasized the higher-than-average rate of food insecurity among households headed by single mothers along with the impact of improper access to healthy foods on women and children (Anderson, 2013; Chilton & Rose, 2009). Identifying the root cause or causes of food deserts could guide community leaders, policy makers, and food desert residents in developing sustainable, community-based solutions.

The Racial Justice Project (2012) focused on racism and how it was a major contributing factor to both the emergence and continuation of urban food deserts. The project's research suggested that the lack of access to grocery stores in low income, predominantly minority neighborhoods is a result of long-term policies that promoted segregated communities going back nearly a century. Following Corrigan v. Buckley, the

1926 Supreme Court ruling that legalized the use of discriminatory housing practices which allowed communities and neighborhoods to prevent African Americans from purchasing or living in those areas, builders, developers, and even real estate agents began implementing regulations that promoted segregation. Then, in 1933, a federal program, known as the Home Owners Loan Corporation, was created to assist those at risk of losing their homes due to foreclosure through low interest mortgages. However, minority neighborhoods were considered too high risk and were prohibited from accessing the loans.

In the 1940s, major cities across the country saw large numbers of white families relocate to the suburbs as a result of the availability of low interest mortgages provided by President Roosevelt's New Deal. These same benefits, however, were not available to African American families. As a result, African American families were forced to remain in the cities. Grocery stores, however, followed the burgeoning new middle class as they settled in the suburbs. As the tax base in the urban areas declined, so did the neighborhoods thus leading to federally sponsored urban renewal efforts. The efforts saw black neighborhoods torn down and promises of affordable housing that instead forced black and minority families into densely populated, multi-unit buildings while the subsidized programs built a suburban white middle class (New York Law School Radical Justice Project, 2012).

Despite the ruling by the Supreme Court in the landmark case, Shelley v. Kraemer, in 1948, and the passage of the Fair Housing Act in 1964 that reversed discriminatory housing policies, African Americans struggled to purchase homes in the

suburbs. Zoning laws were created that allowed only immediate families to occupy

residences to prevent black and other minorities who would be more likely to have multi-

generational or even non-family members reside in the home. These discriminatory

practices further resulted in shrinking availability of retail stores, including grocery

stores, in urban, low-income neighborhoods. This in turn led to a disparity in the

distribution of food, thus creating a lack of access (Crowe et al., 2018; New York Law

School Radical Justice Project, 2012). Regardless of the illegality of segregation, at

present, it is still not only noticeable, but also a direct result of government policies and is

consistent with the inequities in the availability of basic necessities. As such, the

development of food deserts did not lie in the actions of one section of government or

society, but rather collectively among many over a long period of time. Subsequent

research by Anderson (2013) asserted that the root causes of food insecurity are grounded

in a lack of an enacted living wage. This confirmed previous literature that cited

structural and systemic racism evident in the unequal access to food and poor health

outcomes among minorities as compared to Caucasians, as well as with the cheap, easily

accessible unhealthy foods the food industry supplied to low income, minority

neighborhoods.

Additional research suggested that urban food deserts developed as a direct result

of urban sprawl: unlimited growth in an urban area, characterized by income inequities, a

lack of job opportunities, and an absence of retail and grocery stores.   Studies indicated

that between the early 1960s and the early 2000s, the rate of people living in urban areas

with limited access to grocery store increased by 55 % (Hamidi, 2020). Further literature

linked the emergence of urban food deserts to discriminatory policies and urban development patterns, such as grocery store redlining, in which grocery stores are reluctant to open locations in urban and/or low-income neighborhoods and often close existing stores in those locations in order to relocate to more affluent suburbs (Crowe et al., 2018; Zhang & Debarchana, 2016).

In 2009, a team from the USDA submitted a report to Congress based on a one-year study of urban food deserts. The study looked at specific neighborhoods based on demographics and compared the distance to grocery stores. The report then measured access to food, examined potential health implications resulting from limited food access, compared the lack of access to food to choices made by residents of food deserts, and identified economic factors of grocery store locations. The initial focus was on limited access as a result of proximity to grocery stores, lack of transportation, and unaffordable pricing. Though the study focused heavily on the issue of access based on proximity, it appeared to minimize the severity of the problem and did not appear to recognize the issue as a rising problem (Ver Ploeg et al., 2009).

Two years later, however, based upon 2010 census data, the USDA determined those living in low income neighborhoods designated as food deserts increased by 6.2 million people; an increase of just over 1% of the population (Ver Ploeg et al., 2012). Identified as a persistent and growing concern, the USDA worked not only to identify those neighborhoods designated as urban food deserts, but also to determine the obstacles faced by the residents of those neighborhoods in accessing healthy and nutritious foods.

In turn, policy efforts were prioritized based upon the perceived obstacles faced by residents of urban food deserts.

Finally, one study examined potential core causes of food insecurity in food bank participants that suggested that certain occurrences early in life lead to food insecurity later in life. The study combined the use of interviews and surveys, which then identified a series of consistent themes: no financial education early in life, more important expenses take priority, hardship, and social isolation (Zhang, 2019).

Identifying the root cause or causes of food insecurity could guide community leaders, food desert members, and policy makers in developing sustainable, community-based solutions making the article relevant to the proposed research project.

Detrimental Effects of Urban Food Deserts

One in 5 deaths across the world is the result of a poor diet. The study suggested the need to change the food system and enact policies to help improve access to healthier foods (Forouhi & Unwin, 2019). Urban food deserts often limit food purchases to local convenience stores and fast food restaurants, both of which provide very limited access to healthy foods such as fresh fruits and vegetables. Studies have linked fast food consumption with obesity and found such restaurants are more abundant in low-income neighborhoods (Brinkley et al., 2017; New York Law School Racial Justice Project, 2012; Rosenheck, 2008). Additionally, these same neighborhoods have an increased number of liquor stores and smaller convenience stores compared to those neighborhoods with higher average incomes (New York Law Project, 2012). This inability to access healthy and nutritious food had harmful and disparate effects on the health of the

individual and the community including an increase in obesity, diabetes, heart disease,
anemia, asthma, and other chronic diseases, and mental health issues, as well as other
issues that impact quality of life (Brinkley et al., 2017; Burke, 2011; Chilton et al., 2017;
Schafft et al., 2009).

According to Burke (2011), obesity in adults increased 1.1 % to 26.7 % of the
total population over a three-year period from 2007 to 2009. Considered one of the
leading causes of preventable disease, obesity contributed to five of the 10 leading causes
of death, is estimated to cost Americans more than $147 billion in annual, direct health
care costs, and also accounted for more than half of Medicare/Medicaid expenditures
during the same time period (Burke, 2011). Furthermore, Hispanics and non-Hispanic
blacks have a disproportionate rate of obesity as compared to the rest of the population at
30.7% and 36.8% respectively for every $10,000 rise in income there was a 1 percent
drop in obesity and a .71 percent drop in diabetes. Additionally, these percentages
increased in proportion to the African American population in that community. Fewer
fast food restaurants and convenience stores were associated with lower diabetes rates.
Overall, socio-economic factors played a larger role in grasping the health outcomes
(Burke, 2011; Brinkley, 2017; Chilton et al., 2017).

Overall, obesity was identified as an emergent public health challenge that will
negatively impact the welfare and security of communities (Schaft, et al., 2009).
Indirectly, obesity impacted adults in the workplace through lost productivity, disability,
and even discrimination. A lack of healthy, nutritious foods was also linked to mental
health issues including anxiety, depression, and suicidal ideation (Chilton et al., 2017;

Negata et al., 2018; Weaver et al., 2019). In addition to the numerous serious health

complications identified, the research also highlighted various additional negative effects

related to the lack of nutritious, healthy food including lowered workforce participation

and increased workplace limitations, and an overall lower quality of life (Schaft, Jensen,

& Hinrichs, 2009). Additional research assessed people over the course of their lives and

investigated the indirect impact of food insecurity by looking at variables such as lost

productivity, disease, disability and lowered quality of life. In addition to the numerous

serious health complications identified, the research also highlighted various additional

negative effects related to the lack of nutritious, healthy food including lowered

workforce participation and increased workplace limitations (Schaft, Jensen, & Hinrichs,

2009).

While the studies discussed thus far focused on the connection to limited access to

healthy, nutritious food, with the general issue of obesity in adults, other studies have

more specifically addressed its relationship to a rise in childhood obesity. Research

indicated that 1 in 5 children lived in homes without adequate food. As such, researchers

considered food insecurity a public health crisis (Chilton et al., 2014; Helton, et al.,

2018). In addition to the rise in obesity, research addressed other poor health outcomes

in children that included the connection between poor nutrition and both development

and academic performance among both school-aged children (Schaft, Jensen, & Hinrichs,

2009; Chilton et al., 2016). Studies found that food insecurity was linked to absenteeism,

missed activities, and uncharacteristic behavioral and emotional problems. These studies

also found students did not meet educational goals, were unable to concentrate both

during the school day and while trying to complete homework assignments (Faught, et al., 2017; Shankar, et al., 2017; Wang & Black, 2019). Further, the literature also indicated children who lived in homes without adequate food had poor social skills, and overall emotional and intellectual development issues, as well as lowered reading and math scores, lowered recall and retention, and increased rates of absenteeism. Further, children without adequate food also suffered from increased and behavioral problems along with mental health issues such as depression, anxiety, and suicidal ideation. (Faught, et al., 2017; Jyoti et al., 2005; Shankar, et al., 2017; Wang & Black, 2019). Food insecurity also served as an indicator for delayed development. (Chilton et al., 2017; Jyoti et al., 2005). While still other literature identified poor academic performance among university students who also suffer from food insecurity at alarming rates (Dubik et al., 2016; Martinez, et al., 2018; Philips, et al., 2018; Raskina et al., 2019; Weaver, et al., 2019).

Additional research more deeply examined the impact that the lack of access to healthy and nutritious food had on single mothers. Households headed by women had significantly higher rates of food insecurity compared to the national average (Chilton et al., 2017). Food insecurity was also linked to depression and violence as well as a correlation between the lack of food among single mothers and the potential risk of her involvement in child protective services. Helton et al. (2018) analyzed 129 women, either pregnant or who already had children and who were part of a state-sponsored abuse prevention program. They study concentrated on not just access to and availability of food, but also the quality and safety of the food available. The study also tracked the

participants' involvement in government food assistance, their demographics, and family characteristics, including household income. The results showed a higher than the national average for food insecurity with half of those sampled struggling with food accessibility, and pointed to increased stressors in families already at risk of child abuse, Helton et al. (2018) said "the results also match with multiple previous studies that families participating in child abuse prevention programs are lacking some of the very basic resources needed to parent effectively; in this case food" (p. 266). The authors also identified additional research that suggested that family violence could also be associated with food insecurity.

Research on Initiatives and Programs

The prevalence of urban food deserts and the link to an array of negative implications, including health, academic, and overall poor quality of life, led to a number of research projects on and the development of programs and initiatives to combat the growing problem. Experts, however, disagreed on how to accomplish this task, and just as no definitive answer existed in how urban food deserts initially developed, no unanimous agreement existed in how to address the solution. Because the early research focused so heavily on the lack of grocery stores within a 1-mile radius of the identified food desert neighborhoods, policies and strategies initially focused on bringing grocery stores to those neighborhoods. The research found that low income, minority neighborhoods had few to no grocery stores but instead more convenience and liquor stores than higher income, predominantly white neighborhoods, and that larger food stores specifically avoided these lower income communities. Residents' inability to pay

the prices and theft were among the primary concerns of grocery retailers (Bonanno et al.,

2013; Truehaft & Karpyn, 2010). However, concerns that the underserved

neighborhoods could not support grocery stores contradicted research that showed such

neighborhoods had the capability of supporting grocery stores based upon more than $8

billion that was spent in stores outside of these neighborhoods across the nation.

Research also indicated other benefits that included job creation and an increase in home

values between 4 and 7% on average when a grocery store was built within 1 mile of the

neighborhood (Eckert & Shetty, 2012; Hamidi, 2019; Norton & Reeve, 2018; Truehaft &

Karpyn, 2009). As a result, initiatives were created to bring grocery stores that provided

healthy, nutritious foods at affordable prices into food deserts through capital investment

and tax incentives. Researchers and policy makers further suggested large grocery

companies invest in the low income neighborhoods. However, additional research

indicated this does not necessarily bring in or keep the grocery retailers in the

communities (Hamidi, 2020).

Additionally, because the research primarily focused so heavily on the grocery

store access, the result has been policies largely providing public funding for grocery

stores. Research uncovered 126 new grocery store funding initiatives between 2007 and

2017, which resulted in the creation of new grocery stores, but found little identifiable

changes to actual healthy eating behavior (Brinkley et al., 2017; Ghosh-Dastidar et al.,

2017).

Walker et al. (2010) also identified a number of policy-based solutions designed

to increase access to healthy foods including public-private partnership initiatives that

were undertaken in Pittsburgh, Boston, and New York in which local organizations and local government partnered to develop and maintain grocery stores in their underserved communities. Additionally, The Food Trust, a nonprofit organization that worked with local, state, and federal organizations and policymakers to ensure access to healthy and nutritious foods, partnered with The Reinvestment Fund to support the Healthy Food Financing Initiative. The Healthy Food Financing Initiative, managed by the Reinvestment Fund, was a public-private partnership between the U.S. Department of Treasury, the US Department of Agriculture and the US Department of Health. The partnership helped bring access to nutritious foods to those communities in need through the development of retail grocery stores. At the same time, the Reinvestment Fund created the Limited Supermarket Access, a tool that examined a community's need and helped policymakers and other leaders access federally backed initiatives, including loans and grants, to assist communities with lack of access to grocery stores.

While some studies found better access corresponded with better eating habits, other research disputed those studies that focused so heavily on building grocery stores in food deserts. A growing body of research suggested larger, corporate solutions were not the sustainable answer to urban food deserts. Additional research also found resistance from residents of urban food deserts because of the use of eminent domain for the land to build the grocery stores as well as objection to the use of public funds to finance the grocery store projects (Horst et al., 2016). Instead, the research found, for example, that diet-related health outcomes did not necessarily correlate with access to grocery stores, but are, rather, more connected to income level and race while still other research

indicated there was little improvement on eating from the newly constructed grocery stores (Brinkley et al., 2017; Ghosh et al., 2017; Wright et al., 2016). A 5-yearlong study, for example, was conducted because of the previous research that suggested limited access to grocery stores was the primary cause of lack of healthy foods in food deserts. The study compared two food deserts after new grocery stores opened through the government backed HFFI program, designed to bring grocery stores that provide healthy, nutritious foods at affordable prices into areas with limited or no access. Through surveys, the study then evaluated each community based on the access to and availability of healthy foods, availability of unhealthy/junk food, the distance to the new grocery stores, and price. The outcome concluded, however, that the introduction of the respective grocery stores in the two communities had little impact on the availability of healthy foods within the designated neighborhoods despite the close proximity, and in one case did not increase the availability of healthy food (Ghosh-Dastidar et al., 2017).

Additional community-focused solutions around alternative food movements became the focus of a large number of studies. Alternative food movements encompassed local food movements as well as the concepts of food sovereignty and food justice (Clendenning et al., 2015; Grauerholz & Owens, 2015; Mount et al., 2013) and examined the impact of community gardens and urban agriculture including community supported agriculture (CSAs), farmer's markets, as well as urban chicken raising (Carney et al., 2012; Horst et al., 2016; Eckert & Shetty, 2012; Karpyn, et al., 2012; Krishnan et al., 2016; Longo, 2016; O'Donell, 2016; Raj et al., 2016), alternative food distribution (Wang, 2017), Food Policy Councils (Boden & Hoover, 2018; Schiff, 2008), food

pantries (Longo, 2016; Zhang, 2019; Wetherhill et al., 2018), corner store initiatives

(Larson et al., 2013; Raja et al., 2008; Song et al., 2009), partnerships with non-

government organizations (Anderson, 2013), and even food trucks and community

entrepreneurship (Brinkley, 2013; Caramschi, 2016; Fernhamber et al., 2019; Horst et al.,

2016; Karpyn, et al., 2012; Ramirez et al., 2017). A number of studies suggested that

because poverty had been identified as the underlying cause of food deserts, the most

effective means to eliminating them was through alleviating poverty (Brinkley et al.,

2017; Horst et al., 2016; Pollard & Booth, 2019), which focused efforts on raising the

minimum wage to a living wage, increasing the prevalence of affordable housing, and

exploring Universal Basic Income as the potential solution. Finally, Barriers to these

potential solutions are also discussed throughout the literature (Crowe et al.; 2018; Mount

et al., 2013)

Alternative food movements grew out of both dissatisfaction with the current

system, which critics suggested does little to help local communities but actually

promotes unhealthy eating and the need to find sustainable solutions to urban food

deserts. Food sovereignty, an international social movement focused on the right to food

and advocated for a fair, locally-controlled, environmentally responsible food system

based on the needs of those impacted by the food inequities rather than determined by

corporate suppliers (Anderson, 2013; Bellows, 2019; Clendenning, 2016; Mount et al.,

2013; *The Six Pillars of Food Sovereignty*, 2014). Though substantial overlap exists

between the two concepts and both advocated for food as a right, food justice, in contrast,

is more focused "how food is grown and produced, transported and distributed, accessed

and eaten are shared fairly' (p. 40). local, fair trade; access to healthy food by marginalized groups defined by race, gender and economic status. Family farm, sustainable agriculture advocates, and those seeking quality and authenticity in the food system also fall in this progressive camp" rather than more on radical changes to the corporate food system as a whole; focus is on the "localizing production and improving access to good, healthy food, radicals direct their energy at changing regime structures and creating politically enabling conditions for more equitable and sustainable food systems". Both advocated food as a right.

The role of community gardens and urban agriculture as a sustainable alternative to grocery store initiatives in mitigating the detrimental effects of urban food deserts was widely explored in the literature. Carney et al. (2012) used surveys, interviews and observations with 42 families in a low-income, Hispanic neighborhood to examine the effect of participating in a community garden on overall vegetable consumption, while Longo (2016) documented a 5-year community-based urban farming project in California in which participants along with volunteers planted, grew, and harvested fruits, which were then dispersed among residents of the community. The urban community garden movement has grown substantially to an estimated 18,000 community gardens in the US and Canada and more than 6100 farmer's markets in the US. With just 337 community gardens in one state producing an estimated $1 million in fresh fruits and vegetables, community gardens can offer a significant amount of nutritious, healthy food (Eckert & Shetty, 2012).

The research findings supported a conclusion that involvement in a community garden contributed to the reduction of food insecurity, improved vegetable, as well as other healthy food consumption, and provided benefits of physical activity and reinforced family relationships. Further, urban agriculture programs have the potential of reaching low income, urban youth and encourage earlier development of health eating habits. One study found that youth who were involved in community garden projects ate more fruits and vegetables all of which helped to break the cycle of the poor eating habits associated with residing in an urban food desert (Raj et al., 2016), while additional studies assessed the impact of community gardens specifically on women who reside in urban food deserts. O'Donnell (2016) reported that in addition to increased consumption of healthy fruits and vegetables, women who participated in community garden projects not only felt a sense of empowerment, but also felt an improved sense of self-confidence and enhanced relationships with family and members of the community itself as well as an increased sense of trust, less feeling of seclusion and even unification among differing cultures within the neighborhood. Lastly, O'Donnell (2016) found that community gardens allowed ethnic minorities to grow culturally relevant vegetables that might not otherwise have been available to them.

Tied to community gardens and urban agriculture are local roadside vendors who provide a larger variety of fruits and vegetables at lower prices compared to the convenience stores primarily found in urban food deserts. A study conducted by Brinkley et al. (2013) suggested urban city governments could further develop similar

initiatives through zoning and use of the federal SNAP programs to provide more access to fresh fruits and vegetables.

The concept of Food Policy Councils was also found among the literature on potential initiatives to reduce or eliminate urban food deserts. Often created either through local legislation or even as nonprofit programs, Food Policy Councils are primarily focused on expanding access to healthy foods, as well as other issues involving urban food deserts including zoning and environmental laws to expand urban agriculture. The councils often used a 'democratic participation model' and emphasized participation by those most impacted by the lack of access to healthy foods, though they rarely enact policy and act more as educators and facilitators (Schiff, 2008). Researchers argued that too few residents experiencing food insecurity were participating in the development of solutions and highlighted the necessity of Food Policy Councils partnering with those it will be serving (Boden & Hoover, 2018).

In addition to community gardens, urban agriculture, and Food Policy Councils, researchers have explored other high quality, low cost innovative solutions to bring access to healthy and nutritious foods to underserved areas. Researchers concluded that neighborhood networks of small retail stores, local farms, community-supported agriculture (CSA) groups, bakers and other food producers with the assistance of local governments to create affordable, healthy, readily available foods in neighborhoods designated as food deserts not only provided healthy nutritious foods to those residing in the identified food desert neighborhoods, but also helped to alleviate food insecurity and the stressors identified by the authors in the communities they served. Corner stores,

which tended to have disproportionate availability of unhealthy foods in low-income,

minority neighborhoods and a higher cost of healthy foods, but the research suggested

funding could be used more effectively by providing financial assistance to these smaller,

local and/or ethnic markets rather than offering incentives to large groceries store to

establish themselves in the lower income neighborhoods/food deserts, where the

effectiveness of grocery store initiatives as a means of increasing healthy and nutritious

foods in urban food deserts has been called into question, and of the they often

subsequently do not reinvest in those neighborhoods (Crowe et al., 2018).

Studies by Song et al. (2009) and Jaskiewicz, et al. (2015) investigated corner

store initiatives.   The former examined a trial study of an intervention program for corner

stores owned in East and West Baltimore neighborhoods that replaced unhealthy foods

with more healthy foods and because of their location, had the ability to improve the

situation. The purpose of research was to look at how receptive store owners were to the

program and examine the sustainability of the program. The areas were chosen because

the neighborhoods were considered the poorest in Baltimore with a median annual

income of $17-$18000 as compared to over $30,000 for Baltimore and the population is

predominately African-American. could serve as a successful community-based solution.

The article did not, however, disclose any specific changes in what foods were stocked

during the program, though it mentioned low-fat salad dressing, low-sugar cereals, and

whole wheat bread were added to the store's selections. The article made no mention,

though, of fresh fruits and vegetables and no standard or definition of what was

considered healthy was established. Simply adding a few healthy foods but not removing

most of the junk food nor providing the healthy foods at a cost that is affordable (and comparable to junk food) is identified as part of the overall problem. Though the authors saw only what they considered a modest increase in the sales and availability of healthy foods through this study, the authors concluded that small corner stores in urban neighborhoods could serve as a long-term means for improving the availability, accessibility and cost of healthy foods.

The latter study discussed a year-long collaboration between local organizations and community corner stores in order to increase access of healthy, nutritious foods. Focused on the outskirts of Chicago, IL, an area that saw a marked increase in the number of those living at or below the poverty level that correlated with a discernible increase in both African American and Hispanic residents. Because of the correlation between the lack of healthy food and increased chronic disease and despite numerous programs to address these issue that were unable to effectively tackle the issues, the collaboration was established. This corner store initiative provided training, resources and technical assistance, which helped community organizations and local governments work together with the community stores to provide healthy foods to those communities with limited access. Because it provides a successful model that could be replicated in other communities, this study is important to the research project.

While access to healthy and nutritious foods is different in minority neighborhoods, the research suggested the identified networks of retails stores found in these neighborhoods might serve as a community-based solution to those impacted by the lack of healthy, nutritious and affordable foods in other neighborhoods around the

country. Additionally, researchers found most food deserts have "their own well-adapted systems of street food, small grocery stores, farmers' markets and urban gardens", but also noted that the studies solely focused on the grocery stores, overlooking the other food sources. by not engaging community members living in food deserts, existing, healthy options, such as street vendors, could be overlooked (Brinkley et al., 2017; Karpyn et al., 2012; Raja et al., 2008).

Finally, research explored several alternative yet innovative solutions to providing food to those who are food insecure beginning with several ways in which food surplus can be used to feed those who are food insecure.   One such program, entitled the White Pony Express, gathered excess food from local food establishments and distributed it to local nonprofit organizations such as shelters, food pantries, facilities for the disabled, and to cooking classes for low income students (Longo, 2016). Two additional, similar programs found in the United Kingdom were also examined. The first involved a café that recycled surplus food in order to provide affordable meals locally, while the second looked at a major grocery chain and its partnership with a charity devoted to addressing both food insecurity and food waste. The partnership attempted to reduce food insecurity as well as food waste by redistributing surplus food from food suppliers to charitable organizations. Though the article was written about projects in the UK tackling food insecurity, the unique approach to food insecurity could provide viable and sustainable community-based solutions that food deserts across the United States could replicate (Caplan, 2017). Silver et al. (2017) also discussed two innovative food programs created by a community development organization and its partnerships to combat issues related

to the lack of healthy foods in the community and foster community growth. The study focused on one of the hardest hit neighborhoods in Brooklyn, NY, which had the highest number of children who suffered from lack of food within New York City. The research detailed the two initiatives, *a Farm to Early Care* program, which brought fresh fruits and vegetables to 1500 children in 28 childcare facilities in Brooklyn, and a *food hub,* which was a collaboration with local food suppliers who distributed fresh fruit and vegetables to various locations throughout Brooklyn in order to improve accessibility to those who resided in the community, thereby reducing food inequities that are inherent in urban, impoverished communities.

Though the literature identified several potential causes to urban food deserts along with a myriad of suggested initiatives and programs, researchers recognized poverty as the primary underlying issue of urban food deserts and suggested the best means to improve health, educational, and quality of life outcomes was to concentrate on poverty alleviation in order to sustainably solve the problem of urban food deserts Raising the minimum wage to a living wage and increasing the availability of affordable housing were discussed along with the concept of a universal basic income (UBI) (Brinkley et al., 2017; Eckert & Shetty, 2012; Horst et al., 2016; and Pollard & Booth, 2019). Universal Basic Income was lauded throughout the literature as a viable and sustainable solution to ending poverty (Holder, 2019; Stevens & Simpson, 2017; Tsvirko, 2019) and, thereby, ending food insecurity and food deserts. The best ways to improve health outcomes is to concentrate on poverty alleviation.

The concept of Universal Basic Income has a long history dating back as early as the 18th century and publicized by Thomas Paine. For a short period of time, the idea of a guaranteed minimum income took hold in the US during the Civil Rights Movement.   At the time, a plan for universal income was considered an "alternative to the patchwork of existing social welfare schemes". Economists and experts believed universal or guaranteed basic income was "more generous and less dependency-creating than the existing assistance programs." and would "make it a more efficient and work-friendlier instrument for raising the incomes of the poor.". While some proposed the entire safety net system be replaced, others suggested universal basic income was only to make the current system more effective and efficient. Though variations had previously existed and been explored, it had never been a part of US political dialogue. However, it came close to reality during the Nixon administration as more than 1000 prominent economists of the time endorsed a plan that included a guaranteed basic income for the working poor initially developed by NY Senator Daniel Patrick Moynihan. Despite unanimous approval by the US House of Representatives in 1970, it was tabled, then rejected by the US Senate two years later. A modified version was then part of George McGovern's presidential campaign that same year, but was not dropped after that (*A History | BIEN — Basic Income Earth Network*, n.d.). Most recently, the concept was explored and studied worldwide with pilot programs taking place in Finland, Canada, Scotland, the Netherlands, and the US (*Basic Income Experiment*, n.d.; Hoynes & Rothstein, 2019).

An 18-month universal basic income program was piloted in Stockton, California beginning in February of 2019. Stockton had an average unemployment rate of 7.5%,

more than 3% higher than the state average and nationally, ranks 18th for child poverty. It was the first universal basic income program led by a city in the US. A randomly chosen group of 125 from those residents of Stockton who earned $46,000 per year or less (about $15,000 below the state's median household income) participated in the pilot program, which provided $500 per month. The money was provided without conditions via a prepaid debit card and was provided in addition to not instead of other safety net programs the resident received. 40% of those who participated in the pilot program were employed (Stockton Economic Empowerment Demonstration, 2019; Holder, 2019; Hoynes & Rothstein, 2019).

Summary and Conclusions

The purpose of the literature review was to provide a foundation about and gain a broad understanding of urban food deserts. Additionally, I examined prior research on the topic of urban food deserts as well as research that is relevant to the proposed study involving how community-based solutions affect households headed by single mothers in urban food deserts. The human rights framework was used for reviewing literature and enabled a critical examination of available prior research.

The literature review revealed that research and discussions existed regarding limited access to healthy and nutritious foods in low income and minority neighborhoods. The literature also detailed contributing factors to and suspected root causes of food insecurity and urban food deserts, including lack of access to and limited transportation, urban sprawl, inequities in the current food system, systemic racism, and poverty rates, while also linking the lack of adequate and nutritious food to negative health, education,

productivity, and quality of life outcomes, particularly among children. Additional studies and articles were used to address how food choices are a crucial part of overall health, and lack of healthy foods has far reaching implications, thus emphasizing some of the pressing reasons to seek sustainable solutions.

In addition to contributing factors, suspected root causes, and detrimental effects related to lack of healthy and nutritious foods, other key themes were identified through literature on initiatives and programs, particularly those designed to provide benefits in the form of economic improvement, jobs creation, and improved availability of healthy and affordable food. While much of the literature on potential solutions focused primarily on bringing grocery stores to underserved communities, other studies identified new ways of encouraging access to healthy foods through a variety of alternative programs and initiatives through engaging communities, learning what was already effective, and then looking at additional opportunities. The literature emphasized the importance of seeking out local and community-based solutions versus outside and corporate solutions, and also provided relevant information regarding new ideas for community-based solutions that are worth exploring in more depth.

The literature review was also used to identify disagreements among various researchers, particularly with regard to how food deserts developed and effectiveness of grocery store initiatives. In addition, I also identified gaps, including the need for further studies on the effects urban food deserts have on households headed by single mothers and a proposed project to address how other communities could examine food insecurity and food deserts. Despite vast literature on urban food deserts which identified single

mothers as the largest demographic living in, few studies have focused on the actual impact of initiatives and programs designed to alleviate the problem.

Finally, literature emphasized the enormity of the issue among those who do not have adequate food and underscored the need for finding local and sustainable solutions in order to mitigate the problem of lack of access to healthy foods and alleviate food insecurity. Initiatives could not only be replicated in other communities, but also could influence both policy makers and policies and lead to action in order to mitigate problem of food deserts and food insecurity, which is valuable the goal ofto the proposed research project.

Chapter 3: Research Method

The purpose of this narrative study was to explore the lived experiences of single mothers who reside in an urban food desert. Additionally, my research involved gathering and recounting the experiences of single mothers as they accessed community-based solutions in order to address the gap in literature. This research was intended to increase understanding of food deserts and how community-based solutions impact the lives of single mothers in these underserved areas. Using the narrative method of inquiry, I interviewed single mothers who reside in an underserved community that was identified using the USDA's criteria as an urban food desert located in a mid-sized city on the East Coast.   Finally, I described the research design and rationale for choosing this design, identified my role as the participant-observer, detailed the methodology used for collecting data, identified ethical issues of the study, and closed Chapter 3 with a summary as well as transition to Chapter 4.

Research Design and Rationale

The primary research question and additional subquestions were developed to gain a better understanding of how single mothers described their lived experiences in an urban food desert. In order to fully examine urban food deserts and community-based solutions available as well as their impact on single mothers, I developed the following research question and subquestions:

RQ1: How do single mothers describe their lived experiences involving residing in an urban food desert?

SQ1: How do community-based solutions affect the lives of households headed by single mothers in urban food deserts?

SQ2: What solutions do single mothers perceive as effective?

SQ3: What barriers do single mothers face in urban food deserts?

SQ4: What are community programs doing to promote community-based access to healthy and nutritious food?

Using the human rights framework, which advocates for raising awareness and encouraging participation among those most impacted by food insecurity, I used the narrative approach to address the research questions and explore the stories of single mothers in an urban food desert. Researchers have examined various aspects of urban food deserts at length, including contributing factors to their rise and proliferation, the detrimental effects on those who reside in them, and various potential solutions to mitigate the growing problem. However, limited research exists involving how single mothers, who are the largest demographic in urban food deserts, describe their experiences living in urban food deserts and navigating solutions, particularly in terms of community-based programs and initiatives.

According to Creswell (2009), the narrative approach involves "the lives of individuals and asks one or more individuals to provide stories about their lives" (p. 13). The method is considered a form of "social action" befitting to "representing social phenomena in their full richness and complexity" (McMullen & Braithwaite, 2013, p 92) and is characterized by how it is specifically arranged and organized. Information is gathered through stories, which have an established structure with a beginning, middle,

and end, and then combining perspectives of participants and the researcher to create the narrative.

Narrative inquiry involves revealing a narrative structure via raw observations and data collected via interviews, and "elicit practical and personal knowledge stories that can be used to understand and community subtle aspects of tacit knowledge" (Squire et al., 2017, p 6). This narrative structure consists of a plot-like sequence of orientation, complication, resolution, and closure expressed over people (characters) taking actions (events) over time, with an additional focus on human intention and action and as a part of identity construction. Just as many curves can fit the same data, it is important to note that this narrative structure provides an interpretation of the events from a particular perspective and is in effect co-authored by the narrator and the interview participants (Butina, 2015; Glover, 2003; Glover, 2004; McMullen & Braithwaite, 2013). Narrative inquiry also contributes to the researcher's understanding of the participants' struggles as well as a wider understanding of the community in which they reside (Glover, 2004).

The qualitative method of research design, specifically The narrative method was chosen because it is used to study and recognize experiences of people through stories and can assist in terms of producing and generating a more in-depth understanding of the issue, while creating closeness and confidence with the readers of the study (Caine et al., 2013; Clandinin & Caine, 2008; Connelly & Clandenin, 2006; Glover, 2004). Too often, research is soley focused on results and ignores or discounts effect of experiences themselves. The narrative method not only allows the researcher to fully understand experiences, but also inspires discussion as well as emboldens others to take action (Bell,

2002). Further, the narrative method is instrumental in terms of creating research for and drawing attention to social justice movements, making it an ideal method for addressing the research question and subquestions.

I chose this approach in order to give a voice to and share stories of women who live these experiences every day. Narratives constructed as a result of this process can not only empower participants, but also inspire community members act as well as encourage discussions to lead to positive social change involving a particular issue. Riesssman (2008) said narrative inquiry contributes to social change, and lived experiences can be used to cultivate and advance social justice. By speaking out, participants can affect change and encourage others to do the same. I used the interview process to listen to and learn from those who struggle with access to healthy and nutritious foods and how this impacts their daily lives as well as learn what is happening in their community and who is suffering. The most effective way to convey their stories and elevate their voices is through the narrative method.

Role of the Researcher

Creswell (2013) stated, "Observation is one of the key tools for collecting data in qualitative research" (p. 166). Creswell said the four different categories of observation are the complete participant, participant observer, nonparticipant/observer as participant, and complete observer. In each of these roles, the researcher's level of involvement varies from being fully involved to being completely unseen or noticed. As the researcher conducting a narrative study, my role was as a participant observer. In this role, I sought to understand how single mothers living in an urban food desert described their lived

experiences from an emic or insider viewpoint. My role as participant observer allowed me to establish connections with participants as well as gain insider views and subjective data.

Through the process of the literature review, I discovered articles involving different aspects of urban food deserts, including history and suspected root causes as well as the correlation between nutrition and academic performance and the relationship between negative health implications, lower quality of life, and lack of access to healthy and nutritious foods. I also addressed the higher-than-average rate of food insecurity among households headed by single mothers and the impact this has on those women and their children. I also addressed how urban food deserts impact the lives of single mothers. Next, I wanted to explore from their perspectives how community-based solutions changed their lives, what difficulties they faced, what solutions they saw as potentially effective, and finally what local community and food-based program leaders were doing to promote community-based solutions, thereby increasing access to healthy and nutritious foods, specifically among single mothers. I was the participant observer in order to best understand single mothers and their struggles as well as the impact of limited access to healthy and nutritious foods for both their children and themselves, as well as community leaders who are trying to make positive changes.

Methodology

Participant Selection Logic

Participant sample selection is crucial to and ultimately affects the overall merit of research studies. Sample selection is also "intended to maximize efficiency and validity"

(Coyne, 1997). Purposeful sampling strategies, in which the researcher chooses the

participants because they "purposely inform an understanding of the research problem

and central phenomenon of the study" (Creswell, 2013, p. 156), are not only

recommended for qualitative research, but also are appropriate and will be used for this

study. Purposeful sampling is considered the most effective strategy for achieving in-

depth understanding of the issue being studied and is suggested when seeking participants

who have firsthand knowledge of and/ experience with the subject matter. This strategy

will also provide the researcher with the greatest understanding of the research

question(s) and the overall issue being studied. Further, when considering purposeful

sampling, the researcher must decide on the participants to be used in the sample, the

types of sampling to be used, and the sample size (Coyne, 1997; Etikan et al.,

2016). After carefully reviewing the various sampling strategies available, homogenous

sampling, sampling that selects participants who have the experience or phenomenon in

common (Rudestam & Newton, 2007), was used for this research project in order to

select single mothers who resided in the identified urban food desert. Because of the

participants' shared similar experiences by the participants, this strategy did not require a

large sample size (Creswell, 2013; Guest, 2006). In addition to homogenous sampling, I

used expert sampling, another nonrandom, purposeful sampling strategy used to select

members of a population who are experts on the topic at hand (Etikan, et al., 2015;

Palinkas et al., 2015). For this research project, the expert sampling strategy was used to

select additional participants that included local leaders who represent community-based

food programs and initiatives as well as a participant, a local community leader who

represents the urban food desert neighborhood. These strategies were used to capture various perspectives and ensured adequate representation, data sufficiency, and conceptual depth (Braun & Clarke, 2021; Nelson, 2016; Suri, 2011).

While qualitative research sampling methods are not considered as unyielding as those in quantitative research, they are meant to increase knowledge and bring about greater understanding of the research topic and, as such, the selection of the participants should be those who are particularly well-informed about and are able to thoroughly discuss their experiences related to the topic in order for the researcher to gain an in-depth understanding. There is little consensus, however, on how many participants are required. The emphasis in qualitative studies has long been placed on having enough participants to reach saturation or the point where enough information has been gathered from the participants that no new themes, or codes are gained (Braun & Clark, 2019). However, a number of recent studies indicated a move away from the concept of saturation because it "suggests a completeness of understanding and a determinable, fixed point for stopping data collection" (Braun & Clark, 2021, p. 202). Instead, the emphasis has refocused on conceptual depth, or a point where the researcher can discontinue not because it is no longer possible to gain any new information, but rather because the researcher has reached a point where the data is sufficient and has answered the research questions; continuing to gather information is no longer advantageous or effective and the additional information that is learned does not add anything substantial to the overall study (Braun & Clarke, 2019; Butina, 2015; Fugard & Potts, 2015; Mason, 2010; Nelson, 2016;Palinkas et al., 2015).

When considering the sample size for narrative studies in particular, Creswell (2013) suggested an appropriate sample size for narrative research can be as few as one or two participants, as long as the participants have a narrative to share about their lived experiences, while Sandelowski (1995) suggested the sample size should be small enough that the information gathered is manageable, but sizeable enough that it offers "a new and richly textured understanding of experience" (p. 183). Guest et al. (2006) stated that when the focus of the research is to create understanding and underscore the experiences of the participants, particularly with a largely homogenous group of participants, six interviews is sufficient and added that because of the depth of narrative studies, not as large of a sample size is required. Similarly, Fugard and Potts (2015) suggested that with smaller research projects, such as this project, 6 to 10 participants is a sufficient number.

Based on the criteria suggested by the research, including the focus and small scope of this project, the depth of information the study will collect, and the sampling strategies used, I intended to select a range of 9 to 12 participants; 6 to 8 single mothers who resided in the urban food desert, 3 heads of local food programs and/or initiatives, and 1 local community leader, whose represented the neighborhood where the urban food desert was located. This sample size allowed for themes to be identified and analyzed, and created the necessary conceptual depth and data sufficiency to answer the research questions.

Instrumentation

The interview is the core of a narrative research study, placing the participants at the center of the research process.   Narrative interviews collect the experiences of the participants, which then help the researcher to better understand the topic being studied from the perspective of the participant. Moreover, the participant is in control of the focus as well as the pace of the interview (Anderson & Kirkpatrick, 2015).   Narrative interviews are most often unstructured and, in general, use open-ended questions to encourage the participants to share their stories and lived experiences. The interview process requires the researcher to listen carefully as the participants share their stories, and avoid interrupting, asking questions, or providing feedback until after the narration is complete.

The introduction and explanation of the research, the narrative, the questioning phase, and the conclusion are the four steps of the narrative interview process (Anderson & Kirkpatrick, 2015; Jovchelovitch & Bauer, 2000). The introduction and explanation describe the interview process, including whether the interviews will be recorded, either via video or audio, and specify to the participant that the stories should be told in their own words. The narrative itself is the participant actually verbalizing the experiences and should not be interrupted by the researcher. Following the narrative section, the researcher has the opportunity to ask questions in order to clarify or check for understanding using questions such as, "What happened then/before/after" or "Can you say a bit more about…". These questions should not ask why or for opinions. Finally, the researcher completes the interview with an explanation of the next steps in the

process, which involve transcribing the interview and follow up to ensure the participants do not have additional information to add.

The interview process in a narrative inquiry, though generally unstructured, is marked by some rules that guide it. The interview process starts with inviting the participant to define, describe, or characterize the issue as she understands it (Anderson &Kirkpatrick, 2015; Jovchelovitch & Bauer, 2000; Mueller, 2019), followed by the narration portion of the interview in which the participant tells her story, uninterrupted with non-verbal cues only. The participant continues to tell her story until she reaches a natural ending. At that point, the researcher can move on to the third stage of the interview process. In this phase, the researcher can ask questions limited to what happened then, but may not provide opinions, ask why-questions, or point out contradictions in the story. Finally, the recorded portion of the interview ends, and only then can the researcher clarify with why-questions. I followed this interview protocol beginning with a detailed explanation of the research project followed a brief description of the interview procedures and then by the initial questions that encouraged the participants to share their stories:

- What does food mean to you?
- Do you know what a food desert is? How would you define a food desert?
- Do you think you live in a food desert?
- Do you know of community-based food programs available to you?
- Describe your experience living in a food desert.
- Describe your experience accessing local and/or online food programs.

The questions I used to specifically encourage local community and food program/initiative leaders to share their stories included:

- What does food mean to you?

- Do you know what a food desert is? How would you define a food desert?

- Describe your program

- Do you feel you are receiving adequate support from local, city, and state resources?

Once the storytelling or main narration portion was completed, I followed up with the questioning phase. During this portion of the process, I asked limited questions to expand on the narration, such as "what happened then?". However, at this point, I did not ask why or opinion questions, or call attention to any inconsistencies. Once all recording stopped, I asked why or opinion questions as well as clarified any inconsistencies.

Procedures for Recruitment, Participation, and Data Collection

In the summer of 2020, I connected with a local city council woman whose constituents live in the identified neighborhood planned for this study. She, subsequently, hosted a virtual town hall meeting that focused on the neighborhood's food desert status and invited me to participate in the meeting. As a local leader familiar with the neighborhood and the residents, I extended an invitation to the city council woman to participate in the interview process. Additionally, I identified potential participants, with the assistance of the city council woman, then sent invitations to those identified as potential participants. Finally, I extended invitations to leaders of local food programs and initiatives requesting their participation as well.

Once the participants agreed to take part in the study, each signed an informed consent form prior to being interviewed. I, then, collect primary data, in the form of stories, through in-depth, open-ended interviews. The interviews took place at convenient places for participants either in person, over the phone, or via the online meeting platforms such as Zoom or Google Meet. A data collection log, which is used to track items like recruitment and data collection, was used during the process.

Once the interviews were concluded, they were transcribed. During the transcription process, any casual conversation was deleted and at that point, each participant was assigned a pseudonym. Additionally, any other items that might identify a participant, such as location, were removed or replaced (Butina, 2014).

Data Analysis Plan

The literature reviewed provided the background for the topic of the study. This background also aided readers in understanding the circumstances of the participants' narratives and experiences as related to residing in an urban food desert. However, after the collection and transcription of the recorded interviews, it was critical to analyze the narratives. Narratives are usually analyzed using one of four methods, the most common of which is known as the narrative thematic analysis. This method of analysis focuses on the actual substance of what the participants say in the interviews. Narrative thematic analysis involves organizing and preparing the data, followed by identifying common themes, known as coding the data, organizing those themes, and, finally, interpreting the data (Butina, 2015). While some researchers code manually by identifying any noticeable patterns while reading the transcribed interviews, qualitative analysis software,

such as Atlas.ti, NVivo, or HyperRESEARCH, are more commonly used to organize the content and look for emerging themes. I utilized, Nvivo, one of these qualitative software options to complete my analysis rather than code manually. The analysis of the data also incorporated the effect of me, as the researcher, and on the participants' telling of their stories as a means of addressing potential bias and connecting the researcher's role in not only gathering the stories, but also in presenting them (Dibley, 2011). Interpreting, or making sense of the data took place at the same time as the coding. The codes was organized into larger categories then studied to establish what insights and in-depth understanding about the topic was gained.

As the researcher leading the narrative study, I was the research instrument and subject to bias. It was imperative, though, to avoid such bias. (Cope, 2014). To do this, steps were taken using the identified methods below to ensure trustworthiness and credibility.

Issues of Trustworthiness

Qualitative research involves using criteria to evaluate and ensure trustworthiness within the studies themselves, including credibility, dependability, confirmability, and transferability (Amankwaa, 2016; Guba & Lincoln, 1994 as cited in Cope, 2014). Credibility assures the data is truthful, dependability ensures the data remains consistent and is replicable, confirmability demonstrates the data is without bias, and transferability illustrates the data is applicable in other circumstances. Each of the criteria then has a specific set of methods used to ensure trustworthiness is achieved in the research.

Disagreement among researchers exists, however, regarding issues of trustworthiness in narrative research. McMullan & Braithwaite (2013) suggested not all traditional research concepts of trustworthiness are considered as applicable when analyzing narrative research compared to other forms of qualitative research, while others suggested that despite more than two decades of researchers using the narrative method of research, the issue of trustworthiness in narrative research has not been addressed fully and directly (Loh, 2013, p. 3) and attention to rigor and quality is often questioned. Still other researchers contend, however, that this does not mean narrative inquiry is not a credible or trustworthy method of research, but instead requires a different approach compared to other methods of qualitative research (McMullan & Braithwaite, 2013).

Traditionally, for example, reliability assesses "consistency across repeated investigations in different circumstances and with different investigators" (McMullan & Braithwaite, 2013, p. 95), yet different stories will develop depending on both the participant and the circumstances under which the interview is taking place. Further, it is the narrative's lack of replicability that lends to the method's strength as "it cannot be expected that answers on one occasion will replicate those on another because they emerge from different circumstances of production" (McMullen & Braithewaite, 2013, p. 95). Instead, narrative experts have developed a set of principles used to guide the standards of evaluating the narrative method and its analysis. Butina (2015) emphasized narrative researchers should use at least two methods to ensure credibility and trustworthiness, while Amankwaa (2016) outlined a detailed plan for qualitative

researchers to establish trustworthiness using the recognized techniques to establish credibility, transferability, dependability, and confirmability. I adopted this plan as described below.

Credibility

Credibility is a means of assuring the data used in qualitative studies is truthful. It can be established by the researcher through the use of any one of several different methods including peer debriefing, prolonged engagement, persistent observation, journaling, triangulation, and member checks (Amankwaa, 2016; Cope, 2014; Loh, 2013; Pandey & Patnaik, 2014). To establish credibility, I used member checks. Considered the most significant and substantial method of establishing credibility (Lincoln and Guba, 1985 in Pandey & Patnaik, 2014), member checks involve the researcher sharing themes that are identified during the analysis phase with participants or asking the participants to read the transcript of their interviews. Participants then provide feedback to the researcher in order to clarify if the researcher has accurately understood the information as the participants intended (Cope, 2014).

Within two weeks of completing the interviews, I followed up to ask each participant to read the transcript of his/her interview. Then, I gathered feedback to determine if the transcript of the interviews effectively represented the meaning the participants intended. Additionally, each participant received a copy of the final themes within two weeks of the completion of the data analysis for review. Each participant was asked if the transcript reflected their words. The member checks and any accompanying

records were kept on my password-protected computer so that the information could be used as part of the data analysis.

Transferability

Transferability ensures the research outcomes are applicable in other situations or circumstances. Though some researchers argue transferability is difficult in narrative research, others suggest the lack of transferability is, in fact, part of the narrative method's strength (Cope, 2014; McMullen & Braithewaite, 2013). Pandey and Patnaik (2014) said, "similar projects employing the same methods but conducted in different environments could well be of great value" (p 5750). However, thick description has been used with the narrative method to establish transferability. Thick description, considered the most common method for facilitating transferability, involves providing an adequate description of the issue so the researcher can determine if and to what extent the outcomes of the study would be applicable in other situations, under different circumstances, or with different participants (Mueller, 2019).

I used thick description as the strategy to establish transferability. During the data collection process, I recorded specifics such as the location and setting, information about the interviewee who was present, specific reactions of the interviewees/participants had, the physical environment where the interviews took place, any relationship between the participants as well as recording my personal feelings as the researcher using enough detail to provide a thorough description to those reading the research.

Dependability

Dependability is yet another strategy for establishing trustworthiness in qualitative research and refers to demonstrating the research findings are both constant and replicable. Journaling is a common method used to establish dependability along with inquiry audit or audit trail, which takes place at each step during the research and occurs when a researcher not a part of the study looks at both the procedure and the outcome of the study in order to assess the accuracy of and determine if the data supports the same outcomes (Amankwaa, 2016; Cope, 2014). For this project, I used journaling, specifically reflexive journaling, to establish dependability and follow the protocol suggested by Lincoln and Guba (1985) as detailed in Amankwaa (2016). Reflexivity is "the awareness that the researcher's values, background, and previous experience with the phenomenon can affect the research process" (Cope, 2014, p. 90). Journaling took place after each interview as well as after each major milestone that occurred during the study, such as recruiting participants or analyzing the data, and included the dates of each. Additionally, journal entries were discussed and reviewed with a peer to ensure my thoughts and ideas connected with the experiences of the participants and ensured consistency. The journal was kept electronically on my password-protected computer.

Confirmability

Confirmability is used to establish neutrality and objectivity as well as minimize researcher bias in the research project, and several methods can be used to achieve this. To establish confirmability, I used reflexive journaling. Reflexivity involves being aware that my own views, beliefs, and opinions can impact the research process. (Cope,

2014, p. 90). Just as with journaling to ensure dependability, the journaling process to ensure confirmability consisted of making consistent entries throughout the entire course of the study (Pandey & Patnaik, 2014; Amankwaa, 2016). During the journaling process, I recorded decisions related to methodology and the reasoning behind those decisions along with reflecting on potential biases during the (Amankwaa, 2016, p 122). Further, following each interview, I also identified any views, beliefs, or opinions in order to be aware of any indications of bias (Cope, 2014). Reflexive journaling also took place once a week during the data analysis phase. Each journal entry was stored on my password-protected computer and included dates and times.

Ethical Procedures

Ethical concerns can arise during a qualitative study (Creswell, 2013), and as a researcher, I developed a plan to address those potential issues and ensured that I followed ethical standards that protected the rights of the study participants. The seventh edition of the APA Manual established ethical guides and code of conduct standards for research studies involving human participants. In order to begin the interview and data collection process, I obtained all institutional permissions and relevant IRB approvals. Additionally, I obtained written consent from each participant. The National Institutes for Health (NIH) also provided support with regard to the ethical treatment of human research participants. To prepare for and approach ethical concerns that may arise during the interview and data collection process with human participants, I successfully completed the NIH web-based training entitled Protecting Human Research Participants on June 26, 2011.

Once the University Research Review (URR) phase began, I completed Form A located on the Walden University website to gain ethics approval. Based on the feedback received from the Institutional Review Board's (IRB) Research Ethics Support Specialist, I completed the required forms and acquired the necessary documentation for my study.

In order to recruit participants, I worked with a local city council member, whose constituency resides within the identified food desert and local program leaders. I intended to recruit 6 to 10 participants who resided in the neighborhood to share their lived experiences. Additionally, I intended to interview the city council member as well as three leaders of local food programs or initiatives. A written consent form was signed by each participant before the interview process begins. To ensure the privacy of each participant, I assigned each participant a pseudonym. A record of these pseudonyms was stored on my password-protected computer with a password-protected external drive backup. An additional paper copy was kept in a locked file cabinet. Throughout the study, only I had access to the data collected and the transcribed interviews.

Once I had permission to begin collecting data and before I began each interview, I reviewed the consent form with each participant, which included permission to conduct audio-recorded interviews and the use of quotes. I also reminded each participant that their involvement was completely voluntary, and they were free to leave the study at any time without providing a reason and without any consequence. I utilized a data collection log, similar to that recommended by Walden University, to fulfill the requirements of keeping careful records of all recruitment, data collection, and data management steps. Following the completion of the study, the data will be stored for 5 years.

Summary

Chapter 3 included a discussion of the narrative research method, the research question and four subquestions, as well as the research design and rationale for choosing the narrative method. In addition, Chapter 3 included an outline of my role as a participant-observer, which allowed me to understand participants, their community, and their lived experiences.

In addition, Chapter 3 included the participant sampling strategy that was used and interview questions along with a description of procedures for recruiting participants and data collection, as well as an overview of the data analysis plan. This chapter also included issues of trustworthiness, including credibility, transferability, dependability, and confirmability. Finally, the chapter concludes with ethical procedures and concerns regarding both participant recruitment and data collection.

Chapter 4: Results

The purpose of this narrative study was to explore the lived experiences of single mothers residing in a local urban food desert in a mid-sized city on the East Coast. The narratives shared in this study included insights of women who lived these experiences every day and explored the barriers and obstacles they faced accessing food as well as what local program and community leaders are doing to promote solutions. Further, the narratives gathered as part of this research project have the potential to empower those whose lived experiences are shared and inspire members of the community to act on issues in order to lead to positive social change.

Research Questions

The primary research question was focused on experiences of single mothers as they navigated their lives in an urban food desert while the subquestions addressed their experiences as they accessed community-based solutions that were available to gain, learn from, and better understand their experiences. Subquestions also explored the obstacles single mothers faced when accessing food in their community as well as limited access to healthy and nutritious foods, what they were doing to overcome those barriers, and solutions they found to be effective as well as what community programs were doing to better promote these programs and access to healthy and nutritious foods.

RQ1: How do single mothers describe their lived experiences involving residing in an urban food desert?

SQ1: How do community-based solutions affect the lives of households headed by single mothers in urban food deserts?

SQ2: What solutions do single mothers perceive as effective?

SQ3: What barriers do single mothers face in urban food deserts?

SQ4: What are community programs doing to promote community-based access to healthy and nutritious food?

Chapter 4 begins by describing the research setting as well as the demographics of the interview participants and the data collection process. Then, I describe data analysis procedures, including the coding strategy as well as model of thematic analysis used. Finally, I provide a description of evidence of trustworthiness, share results, and conclude with a summary of Chapter 4.

Research Setting

As part of this narrative study, I collected primary data through audio-recorded personal interviews. In order to maintain confidentiality and protect the privacy of study participants, I used pseudonyms rather than real names.

Seven participants were contacted by email to arrange the interviews. I then conducted interviews via Zoom. The Zoom interviews were conducted from participants' homes or private offices at their work locations, and I ensured each participant had privacy during the interviews in order to maintain confidentiality. The remaining 12 interviews were conducted in person. These interviews were conducted at a church in the community, which provided me with a private room to conduct each interview.

Prior to the start of each interview, I reviewed the informed consent forms with each participant and reiterated their information would be kept confidential. Then, I reminded each participant that should she feel uncomfortable at any time, we would stop

the interview and she could leave the study. Each participant signed the informed consent form, and interviews were conducted without any participants reporting having experiences that were uncomfortable or traumatic, though one participant became emotional while describing her experiences of ensuring she had enough food for her children each month.

Demographics

Three separate populations were used for this study. Participants included 12 single mothers who resided in a local urban food desert, six program leaders whose programs provided support to the neighborhood where the single mother participants resided, and one local community leader whose constituency resides in the identified neighborhood.

Each population had its own required criteria for inclusion in the interviews. Each single mother participant had to be over the age of 18 and reside in the identified food desert neighborhood. The local programs leaders had to work for programs that provided services to those living in the identified food desert neighborhood. Finally, the third population, a local community leader, whose constituency had to reside in the food desert neighborhood.

Data Collection

For this narrative study, to collect participants' narratives, I conducted 19 separate interviews. I used four to six in-depth open-ended questions, depending on the population being interviewed, that were related to their lived experiences with food insecurity and urban food deserts. While I followed interview questions exactly and allowed each

participant to tell her story, I did use clarifying questions during participant interviews to minimize bias and ensure trustworthiness.

I began interviewing participants one week after receiving IRB approval, though I did not conclude the interviews until five months after starting the initial interview collection process. I had originally intended to collect the narratives of nine to 12 participants, including six to eight single mothers who were residents of the neighborhood identified as an urban food desert, three leaders of local food programs and initiatives who serve the identified neighborhood, and one local community leader whose constituency resides in the identified neighborhood. However, in addition to the one community leader, I ended up with six program leaders and 12 single mothers volunteering to be a part of the study, for a total of 19 participant interviews. One of the single mother participants was ultimately disqualified, however, because she was not an actual resident of the neighborhood.

I had planned to start the data collection process by contacting a local city council member whose constituency resided in the neighborhood and with whom I had connected in the summer of 2020 as part of a virtual town hall meeting exploring the food desert status of the identified neighborhood. I intended to not only interview her, but also to use her help in identifying potential single mother participants, two of whom had also participated in the virtual town hall meeting. Once I reached out to her, I discovered she was no longer serving on the city council, but instead had been elected earlier in the year to the state House of Delegates. She still represented the residents of the identified neighborhood, though, and volunteered to be interviewed for the study. Next, at her

recommendation, I reached out to the member of the city council who had replaced her when she vacated the position for the state delegate position. I followed this by contacting two different leaders of food programs that serve the identified food desert neighborhood and had also been a part of the virtual town hall meeting, as well as two additional program leaders I had discovered while doing an online search.

The state delegate and four program leaders expressed interest in participating in an interview. I was immediately able to set and conduct the interviews with the state delegate and two of the program leaders. While these first three participants were easy to reach as well as schedule and conduct their interviews, I ran in to issues with the other prospective participants. The city council member and two local program leaders agreed to participate but did not respond to the emails with the informed consent and interview information nor did they return the follow up phone calls and emails to schedule their respective interviews.

Further, I also initially struggled with locating the single mother participants. The first two program leaders I interviewed attempted to but were unable to connect me with local residents and the state delegate was unable to locate current contact information for the two single mothers who had participated in the virtual town hall meeting. In an effort to help, the state delegate, instead, connected me with a city employee who oversees public housing in the identified neighborhood in hopes she could connect me with single mother participants. The city employee displayed the recruitment flyer at an event she was hosting. However, it also failed to yield any participants. Next, a local friend involved in state government was able to connect me with yet another program leader.

That program leader was, then, able to connect me with two single mothers. Two months after beginning the interview process, I was able to interview those two single mother participants.

Following three more months of searching and failing to secure interviews with the remaining single mother participants using contacts and referrals, I decided to reach out to churches located in the neighborhood who might be able to assist me in connecting with the single mother participants. During the interview with one of the program leaders, I learned many of the local programs are church-based. I had no contacts with any of the neighborhood churches and, instead, decided to drive the neighborhood in search of an open church. I accidentally stumbled upon a church located in the neighborhood that just happened to organize a food distribution program monthly to anyone in need. I had missed their program by 15 minutes, but the program director invited me to visit during their distribution day the following month. I attended and was able to connect with 10 single moms and conduct the remaining interviews, giving me a total of 12 interviews with single moms. I, subsequently, had to disqualify one participant from the single mothers category, though, who it turned out, did not reside in the neighborhood.

Prior to each interview, the participants signed an informed consent document. I recorded the narratives of eight of the participants using Zoom, which recorded their answers exactly. The remaining 10 interviews were done in person using a digital recording device. Each participant was interviewed one time and the interviews varied in length from 30 minutes to one hour. Following each interview, I transcribed the participant's interview. The transcripts were, then, saved securely in a file on my

password-protected laptop. To maintain confidentiality and to protect the privacy, each participant was assigned a pseudonym. Each of the single mother participants received a $25 gift card, while each of the program leaders' organizations received a $25 dollar donation for their time.

Data Analysis

The thematic analysis of narratives encompassed organizing and preparing the data, identifying common themes, also known as coding the data, then finally organizing and interpreting the data using a systematic approach (Butina, 2015). To accomplish this, using Braun and Clark's six stages of thematic analysis, I began the process by immersing and familiarizing myself with the data. I listened to each of the recorded interviews to create the transcripts, then played the recordings again as I re-read each transcript to ensure it had been transcribed accurately as the transcripts of the narratives provided the main source of data. Transcribing each interview also provided me with the opportunity to carefully listen to each interview several times, clearly understand what each participant said, study the data, and better articulate the results. Next, to code and analyze the narratives, I used NVivo, a qualitative software, rather than code by hand. I entered the transcripts into NVivo and again re-read each of the transcripts to continue to familiarize myself with the data. As I re-read each transcript, I began to code the data to filter categories and identify emerging themes.

Coding Procedures

During the initial coding cycle, I identified food, family, neighbors/neighborhood, churches, and togetherness. I, then, reviewed the primary research question and the

subquestions, adding the codes to the corresponding parts of each transcript in NVivo.

From there, I noticed a number of additional emerging themes, including community,

awareness, barriers, and solutions, along with subthemes including hunger, nutrition, and

lack of resources that corresponded with the research questions. I continued this process

until I found no new categories or themes (see Table 1).

Table 1

Themes and Subthemes from Data Analysis

Themes	Subthemes
Theme 1: Community and Family	Subtheme 1: hunger and nutrition
Theme 2: Awareness	
Theme 3: Barriers	Subtheme 1: lack of resources
Theme 4: Solutions	

Evidence of Trustworthiness

I adopted a plan created by Amankwaa (2016) to establish trustworthiness using

several accepted techniques to ensure credibility, transferability, dependability, and

confirmability.   Throughout the process, I focused on the stories told by each interview

participant. I listened to the narratives without being influenced by my own experiences,

used probing questions, or restated or rephrased the questions to ensure the meaning was

understood, and used a variety of established techniques to ensure the trustworthiness of

the study.

Credibility

Member checks were used to confirm credibility. Member checks, which gain participant feedback, not only helped to ensure the information shared by participants was accurately understood, but also assured the data was authentic, truthful, and valid. This feedback protected against any possible researcher bias.

Transferability

Transferability was used to ensure the research outcomes are applicable in other situations or circumstances, though it is often argued that transferability is difficult to achieve in narrative research because replicating similar projects with different participants will likely result in different outcomes. However, thick description, a common method used to establish transferability (Cope, 2014; McMullen & Braithewaite, 2013; Pandey & Patnaik, 2014), was used. This method allowed me to provide an in-depth description of the issue so the significance and complexity of the issue was easily understood and also to then determine if and to what extent the outcomes of this study might be applied to other situations, under different circumstances, or with different participants. To accomplish this, I detailed background information on the issue being studied and included specifics like the location and setting in which the interviews were conducted. I was impartial and allowed the participants narratives to take shape organically. I also noted specific thoughts and emotions expressed by the participants during the interview process. Including these details gave each narrative credibility.

Dependability

Reflexive journaling and peer-debriefs, or discussing the entries with a peer, were used to establish dependability. Journaling took place during the participant recruitment phase. This, coupled with the peer discussion following the journaling proved to be beneficial when struggling to find interview participants. Journaling also took place after each interview and this, along with the coding and analysis of the data confirmed consistency and acted as a catalyst for understanding the outcomes.

Confirmability

Journaling was also used to establish neutrality and objectivity and minimize researcher bias during the different aspects of the research process including participant recruitment, the interview process, and data analysis and interpretation. Journal entries were recorded following each interview so I could reflect on any personal views or opinions I held and note any potential biases that might have occurred during the participants' interviews.

<div align="center">

Study Results

</div>

Knowles et al. (2015) said households headed by female caregivers are among those most impacted by limited access to food, yet their stories are the least shared. The objective of this narrative study was to explore the lived experiences of single mothers residing in an urban food desert, and the research questions focused on their experiences navigating access to food in such a neighborhood. When analyzing the interviews conducted with the single mother participants as well as those of the heads of local food programs and the local community leaders who represent those living in the identified

neighborhood, several themes emerged. Themes related to family, neighbors/neighborhood, churches, togetherness, public assistance, and employment emerged as well as themes related to barriers including accessing food as well as subthemes of unemployment, childcare issues, and disabilities. Solutions and awareness of both food deserts themselves and available programs also became emerging themes.

One of the first of those themes to emerge revolved around the relationship between food and its connection to family and community. While the stories varied greatly from participant to participant, as they shared their lived experiences, it was evident the relationship between food and family/community was strikingly similar.

Theme 1: Community and Family

The research questions concentrated on eliciting the lived experiences of single mothers accessing food in the affected neighborhood. Their stories included sharing their interaction with and usage of local food programs, which of those programs they thought were effective, as well as sharing the barriers they face in accessing food. The narratives also included the experiences and perspectives of those trying to combat the problem.

In each interview, participants from all three demographics were first asked to discuss what food meant to them. Three of the 17 participants focused on the necessity of food with statements. Clara said, "It's nutrition. Food is something you need to survive." Julia said, "Food is nourishment for our bodies." Mary Anne said, "Food is important. That's how people's brains grow; it makes people stronger." The remainder of the participants from all three participant populations, however, related food to gathering with friends and family, celebrating holidays, special occasions, or milestones,

commemorating the passing of a loved one, or simply as a means of socializing. Even among those who struggle with access and the ability to provide enough food for their families, food is still central to their sense of family and community. Sara, a young single mother of four said, "Food means, to me, family."

This sense of family and community is also evident in statements from participants who expressed the need to help those around them who have even less than they do. Among the single mother participants, I observed how women who consistently struggle to put food on their own tables were just as concerned about ensuring their friends and neighbors did not go hungry. Their definition of family and community encompasses more than those who reside under their roof and much more than the traditional nuclear family.

Izara, a grandmother residing in the neighborhood, who cares for her two teenage grandchildren in her multigenerational home, said ensuring her biological family is fed is as important as feeding those around her:

> My mother, she loves to cook, and she loves to feed her neighbors. So whenever she cooks; she cooks big on Sunday because she works during the weekdays. So on Sunday, she cooks. And like our neighbors, like any older or elderly people, she feeds, like every Sunday, because she cooks big on Sundays.

Asha, also a single mother, stated:

> It means family over on Sundays. I also like to share just in case other people don't have. What I get, I share. I cook and I share. It helps me be able to cook a lot

more than what I can't get or buy. So it just adds to my menu. Then, I also feed

the people on the job that I work at the cleaning buildings.

Food was also described as catalyst to bring people together among several of the

participants. Kali, a single mother of four, who relates food to spending time with family,

said:

In my family, food is the same thing, "togetherness", because I do have a pretty

large family. My mother was one of 13 children. So, I have a pretty large family,

and when we gather (since COVID, we haven't been able to gather so much), but

when we do gather, it's always food related. When we come together, we cook a

dish and we all come together, laugh, have a good time. So, food has always been

something special for us.

Similarly, Camille, also a single mother, stated, "Food is an integral part of socialization

for me. It means family over on Sundays."

Chandra another single mother, who is raising her grandchildren, said:

I cook a lot, and I cook for the whole family. I'm the only one who cooks; that's in

the kitchen at all times - breakfast, lunch, and dinner, and so my days are really

full. So the extra food really helps, especially receiving food, stuff and stuff.

Kali, one of the single mothers, stated, "Food is the time that we spend together. so that's

our together time at home."

While Lillian, a program leader who works in a policy leadership capacity at a large

locally-based food program, shared:

For me, food means a lot of things. I'm from the south and from a family that

fellowships around food. Sunday dinners were a big thing in my family, so food is

to me family, fellowship, and comfort and warmth.

Charles is a team leader with a small, local nonprofit that not only serves the community,

but also is based in the community. The organization developed and maintained a

community garden program located in the center of food desert community. He stated:

[Food] It is a door opener. It's a way to introduce community and also introduce

culture. For me, when I think of food, I think of my mother's chicken curry when I

was a kid. I remember just one Sunday her making it, me falling in love with it

with some cabbage on the side. And yeah, it's been a real go to meal for me.

Kamila, the head of one of the smaller community-based non-profit programs stated:

In my family, food is a centerpiece. Whenever we decide to get together for

whatever reason, it could be, say, someone graduated from high school or my dad

bought a new car, or some sort of celebration of any kind. Or, if something's

happened - maybe a death in the family - food is a given and expected. Typically,

whether it's a good time celebration or a bad time commemoration, if we get

together, there will be a discussion about who's going to bring what.

Cecelia, a community leader whose constituency resides in the identified food desert,

stated:

For me personally, I love I mean, like, I love good food. I love to eat. It's a source

of gathering, you know, like with girlfriends it's always, "hey, let's go have

brunch", "hey, let's go have dinner". And so the gatherings with my friends are

always in general centered around food or some kind of, you know, eating event,

if you will. So I really I just I mean, I never really thought about it as a necessity,

but it is a necessity. But it's kind of for me and to just have the ability to eat what I

want when I want. It's a luxury. But I'm a foodie and I enjoy I just enjoy food.

Subtheme 1: Hunger and Nutrition

In discussing their lived experiences, participants often discussed hunger and

nutrition as when discussing what food meant to them. Though most participants related

the meaning of food to a connection with family, several also focused on hunger, its

necessity, and its connection to better health. For example, Jasmine, a single mother,

discussed the necessity of food, but also touched on the issue of hunger and not having

enough food:

> Food means a lot to me, but I don't overindulge. We get food stamps, but it's not
>
> enough. You get it [public assistance] at the beginning of the month. So, you
>
> know, the first two weeks are good, but by the third week, you're running low.

Camille, also a single mother, related food to its connection to health and stated:

> Food is nourishment. I like to be aware of what I eat. I try to make sure it is
>
> nourishing to my body because I believe that food is healing.

Similarly, Darla, another of the single mother participants, stated, "I think food is

important. That's how people's brains grow and it makes people stronger." Clara, a single

mother, also stated, "Food means to me means nutrition. Food is something you need to

survive." Izara, yet another of the single mother participants, stated, "You needed to

survive, of course, and you need it to live." Julia, the head of a local food program

recognized its necessity and stated, "Food is nourishment for our bodies, for our minds and also for our souls. Obviously, we need food in order to live an active life." Lillian, who works for a local food program, stated, "It's [food] also fuel and nourishment."

Theme 2: Effective Solutions

During their interviews, the single mother participants were encouraged to discuss what solutions they felt were effective. The narratives uncovered that each participant was only familiar with one or two local programs. However, they did feel those programs were beneficial.

Clara discussed a monthly church-based program that allows the neighborhood residents to choose from a variety of foods and take what they need:

This program is a must. A lot of people don't know about it. And, you shouldn't be ashamed of it, because these people are here to help. Everything is getting to the point where it's getting difficult. So it's not just me. It's society. It's getting difficult all the way around, so every little bit helps. As long as I'm able to feed my grandchildren a healthy meal, and a different variety of food, not the same thing all the time. I don't want to say to them I can't give them something different because I had to pay this or that bill.

Jasmine shared information about a program through her children's elementary school:

My kids go to summer school and during school last year and this year, they offered vegetables. They also gave away food during Christmas last year. They had turkey; they had ham and other sandwiches meats.

Lela stated:

> I use the food bank and another church program because that way, in between pay
>
> periods, I can rest assure that I have something in the house for me to eat and for
>
> my kids to eat.

In addition to discussing programs they felt were effect, some participants made

suggestions they thought would be helpful in alleviating their food insecurity. For

example, one single mother, Izara said, "I think we need more grocery stores." While

Camille, another single mother, added:

> Giving people information on perhaps educational opportunities or job-related
>
> opportunities as well. We're in a climate where there is a lot of employment
>
> available, but sometimes if you put it at the source where something else is, so I'm
>
> coming to get food, but I'm seeing something where, Okay, so and so is hiring, so
>
> I pick up that flyer and take it with me. So putting other opportunities or
>
> education information, where you may get paid to go to school or may be able to
>
> get a grant to go to school; putting other opportunities there that will help with
>
> that issue of hunger or being food deprived.

Theme 3: Barriers

Single mother participants interviewed often described the barriers they faced

living in a food dessert and accessing food. Participants identified barriers commonly

identified in the literature, such as lack of grocery stores and transportation as well as the

high cost of food.

Lela said, "The only thing we have were like Family Dollars and things like that. We have no grocery store, and we found ourselves eating things that wasn't [sic] so healthy." Izara stated:

The parking lot is like, empty, where they had the grocery store. It's been gone over a year, so it's very hard. I don't have transportation. That store came very handy for me and my children and my family. Food is so expensive everywhere else.

Amara, Asha, Maria, and Chandra similarly shared that there is no grocery store nearby, and adding that it had just recently closed.

Clara stated:

They're food pantries, and I found out about them through the food bank. When I first got disability prior to getting disability, I wasn't working, and the food stamps weren't enough, so my caseworker told me about food bank. I went there and got educated on their pantries throughout the area. All you basically needed was a car, but I didn't have a car and it was kind of difficult.

Subtheme 1: Lack of Resources

Other barriers to accessing food mentioned by participants included lack of resources to purchase food, issues surrounding childcare, and unemployment as barriers to accessing adequate nutritious food. Jasmine stated, "We get food stamps, but it's not enough. You get at the beginning of the month, but by the third week, you're running low." Likewise, Chandra stated, "Sometimes that income just barely pays the bills, and your food is getting low by the end of the month."

Kali stated:

> So I have four children. Basically, you get paid and you pay the bills and you
>
> have to make sure the essential bills are covered. Sometimes food is the last thing
>
> that you can kind of make sure that it's covered. So sometimes it's just not enough
>
> to cover that part of it. But then when you get down to paying your bills and
>
> making sure the kids have their stuff, food is the last thing that sometimes you
>
> don't have enough of.

Clara stated:

> I utilize different programs on a monthly basis, mainly because the food stamps,
>
> they're not enough. I will utilize the food stamps for the meats and the pantries for
>
> the staples.

Lela stated:

> I can't work as much because my daughter. She returned to school. She's not
>
> virtual anymore, and I don't have childcare. So that affected me a whole lot.

Theme 4: Awareness of Community Based Access

SQ4 was about program and community leaders are doing to promote community-based access to healthy and nutritious foods in order to identify community-based solutions. First, to gain perspective on how aware participants were of local food programs available to them to help with food insecurity, participants were asked the question: "How did you find food programs?" Then, the program and community leaders were asked not only what they were doing to promote access to healthy and nutritious foods, but also what they felt the community can do in terms of support. Eight of the

single mother participants found various programs through word of mouth or accidentally. Chandra stated, "Just word of mouth. We seen [sic] this [church program] as we were driving by early this morning."

Kali also similarly said:

I actually am not aware of a lot of them [programs]. Just through word of mouth, and I only know of this one church program because my aunt rode past it, and she was just like, "hey, I see that they're giving away food at the Church". So I was like, okay, we can really use some.

Lela and Sheri both had similar experiences and stated, "I just happened to drive by." Amara also shared, "I just rode past, so then I was calling people to let them know." Izara and Maria both stated they heard about a specific program "Through a friend." Jasmine added:

Actually, a relative was riding past and it was stating that they were giving out food around 12. She left and came back, and then she called me and let me know to come up here if I needed some items and to bring a bag or if I didn't have a bag, they had a bag to give me, so I came with my kids.

One single mother participant, Clara, found out about one church-based program through social media and discovered a few additional programs through the food bank, "They're food pantries, and I found out about them through the food bank."

When interviewing local program leaders to learn what they were doing to promote access to healthy and nutritious foods, each described their respective programs. Each program leader acknowledged the need for the programs, that disparity exists

necessitating their programs and the reasons for those disparities. Each also recognized the community can do more to support their respective programs and discussed specifically, what they feel the community can do in terms of support. Julia, the head of a large local food bank, said:

> We are the region's largest hunger relief organization, working to ensure that individuals have consistent access to nutritious, affordable food each and every day. We have a robust network of programs and partners that really work to provide healthy, nutritious food to individuals who struggle to put food on their tables. Our partners also include nontraditional entities that are really looking at addressing the root causes of hunger and food insecurity so that traditional partners are typically food pantries, soup kitchens, emergency shelters are a direct distribution programs that are traditional in nature include our mobile pantry program, our backpack program, our kids cafe program. The nontraditional partners include higher education institutions and workforce development providers. In partnership with those entities, we basically combine food with other resources that will help individuals experience food security if in fact they are able to move toward having access to living wage careers or family sustaining family sustaining wages.

Kamila heads a very small and informal program. She said:

> With the help of a neighbor, we got people to donate a bag of food of cans and also fresh fruit and vegetables. We were able to gather enough food to feed, I think at the time we were able to feed about one hundred people with bags of

fresh fruit, vegetables, canned staples. We've been doing it every for over a year and some change.

When asked what more could be done to help those struggling with food insecurity, Julia stated:

Advocating for stronger federal nutrition programs is certainly one thing that the community can do. I think in addition to that, the community could help us to raise awareness about some of the disparities that exist in food insecurity. Sometimes when we talk about our people automatically assume that food insecurity impacts just certain groups of people, and the reality is that it impacts just about every group you can think of. But even with that being said, there are some disparities by race and ethnicity as well as geography, and certainly when it comes to gender, women are disproportionately impacted. If you add race and gender and geography together, you almost have this perfect storm of folks who are more likely to experience food insecurity as compared to everyone else. So just letting folks know about those disparities would be helpful, because knowledge is power and it helps to inform the development of effective strategies that can be scalable, sustainable and measurably effective. I think at the end of the day, all of us want to move beyond the transaction of simply giving people food. We want to make sure our work together is transformational. And people who need the food bank today or federal nutrition programs today will not need them tomorrow. So just raising awareness about where the disparities exist could all by itself be a game changer.

Lillian, who focuses on policy and working with lawmakers to help address the root causes of hunger for the local foodbank said:

> From my perspective, the biggest thing the community can do to help us is to use their voices because the elected and appointed officials listen to the citizens. We have on our website, for example, and an advocacy page where you can take action and there is typically a campaign running where you enter your information and there's a message that you can send to your local, state or federal lawmaker, and you can tailor it to you so you don't have to commit yourself to what's already in there. You can change what's in there. But I don't know if, you know, many of the citizens realize how strong their voices are as a collective. A lot of folks feel ignored because one voice is not always strong enough.

Kate, the head of a small nonprofit mobile fresh produce stand, said, "There are opportunities for people to assist. We have a list of position descriptions where we allow people to look over and see what speaks to them."

Kamila, who runs a church-based program that provides food to those in need also said,

> I'm not one of those people that believes government can solve all of our problems nor should they, but I think that when government sees that people are solving their own problems, stepping in long enough to provide the resources, but maybe if they can take a step back and say, "OK, well, we're state or we're city government, what can we do to support the community in developing a structure so that they can thrive, not just survive?"

Kamila shared a program run by a local woman who has a van outfitted to carry fresh vegetables into local low-income neighborhoods including the identified food desert. Kamila said:

> I've met quite a few people who are committed to feeding others in general. One woman I met got a grant to basically create almost like a food truck to take fresh fruits and vegetables into the public housing communities. She was committed to getting fresh fruits and vegetables to those same communities.

Summary

My goal for this research project was to explore the lived experiences of single mothers who reside in an urban food desert and gain insight regarding accessing nutritious and healthy foods through locally based programs and how this impacted their day-to-day lives, solutions they found effective, and barriers they faced. The intended outcome was to learn what local program and community leaders are doing to promote access to health and nutritious foods. To accomplish this, I presented research questions, discussed the research setting, shared demographics of interview participants, and reviewed details of the interviews.

 I sought interviews from participants and used open-ended questions to gather their narratives. Chapter 4 included data analysis, how data were coded, and identified the resulting four themes and three subthemes that were derived from the coding process. The chapter also included evidence of credibility, transferability, dependability, and confirmability to ensure trustworthiness. Finally, the chapter concluded with a discussion of results via themes and subthemes with relevant quotations from participants. Chapter 5

provides interpretations of the research findings and results as well as limitations of the study, recommendations, and implications for social change.

Chapter 5: Discussion, Conclusions, and Recommendations

The purpose of this narrative study was to explore the lived experiences of single mothers residing in a local urban food desert to give insight into the stories of the women who live the experience every day, in order to explore obstacles they face accessing food and share what local program and community leaders are doing to promote solutions. Additionally, this research project's purpose was to empower those whose lived experiences are being shared through thorough, detailed accounts, and inspire people to act on the issue in order to achieve positive social change. This study involved using the following research question and subquestions:

RQ1: How do single mothers describe their lived experiences involving residing in an urban food desert?

SQ1: How do community-based solutions affect the lives of households headed by single mothers in urban food deserts?

SQ2: What solutions do single mothers perceive as effective?

SQ3: What barriers do single mothers face in urban food deserts?

SQ4: What are community programs doing to promote community-based access to healthy and nutritious food?

Interpretation of Findings

The findings gave me valuable insights regarding how single mothers navigate their lives in urban food deserts. I sought to understand how community-based programs impact their lives, barriers they faced, and programs they found most effective while also gaining perspectives regarding what local community and program leaders are doing to

promote access to healthy and nutritious foods. Key findings from the single mothers as well as local program and community leaders not only confirmed difficulties faced in terms of accessing healthy and nutritious food in underserved neighborhoods, but also added to current literature via stories of single mothers who are underrepresented in literature, emphasizing the necessity of services provided by community-based programs, and underscoring how those programs affect those struggling with the issue of food insecurity.

Narratives were collected during the interview process from single mother participants indicated local programs were beneficial to them in terms of providing healthy and nutritious foods, particularly when food stamps were running low or in between pay periods.

Barriers include lack of access to grocery stores and associated higher prices of food, as well as lack of awareness of available programs by residents of food deserts (Crowe et al., 2018; Mount et al., 2013). Low-income neighborhoods have 25% fewer chain grocery stores, and more specifically, communities of color have 50% fewer chain grocery stores as compared to largely White neighborhoods. Similarly, four times as many grocery stores exist in mostly White communities as compared to primarily Black neighborhoods (Treuhaft & Karpyn, 2010). Single mother participants said there were no grocery stores within a one-mile radius of their neighborhood. Additionally, despite the usefulness of community-based food programs, it was apparent that single mother participants were not familiar with many of these programs. Of the 11 participants I interviewed, each was only familiar with one or two local programs.

When interviewing local program leaders to learn what they were doing to promote access to healthy and nutritious foods, each described their respective programs. Each program leader acknowledged the need for programs as well as disparities that exist necessitating programs and reasons for those disparities. Program leaders also recognized the local community can do more to support their respective programs and discussed specifically what they felt members of the community can do in terms of support. However, none of the program leaders recognized an issue with those in need of their programs struggling to find their services. Program leaders provided no indication that those most in need did not know about nor know how to access community-based programs that were available. During my search for interview participants, I used online searches and social media and asked friends and friends of friends to share programs they were aware of that provided services to local neighborhoods identified as food deserts. Finding programs proved difficult for me, despite my access to technology and contacts as well as time, resources, and ability to search for such programs. It quickly became apparent that no central hub for such local information exists.

Some of the literature discussed in Chapter 2 also focused on alternative food movements and the impact of community gardens and urban agriculture including CSAs, farmer's markets, urban chicken raising, alternative food distribution, Food Policy Councils, food pantries, corner store initiatives, partnerships with nongovernment organizations, food trucks, and community entrepreneurship. However, when participants were asked about their familiarity with local programs, community gardens and food pantries were the only programs shared in their narratives.

Finally, because poverty had been identified as the underlying cause of food deserts, the most effective means to eliminate them was through alleviating poverty, via raising the minimum wage to a living wage, increasing the prevalence of affordable housing, and exploring universal basic income as a potential solution (Brinkley et al., 2017; Horst et al., 2016; Pollard & Booth, 2019). Two of the six program leader interview participants shared that their respective programs were working on initiatives with local and state lawmakers to address increasing the minimum wage in the state to a living wage and increasing access to affordable housing. These initiatives were in the planning stages, though, and had not yet been implemented.

The theoretical framework used for this narrative study was the human rights framework. This framework was chosen for this project because of its four key components, particularly raising awareness and encouraging and expanding public participation. This study provided voices to those who were most affected by limited access to nutritious and health foods, gave them the ability to participate and be heard, and raised further awareness of the issue, thereby directly addressing how the issue should be studied and approached. Single mother participants openly shared their lived experiences involving navigating their lives in a food desert, and in doing so gave them the opportunity to be heard and raised awareness about issues that were specific to their neighborhood.

Limitations of the Study

The study was limited to single mothers who reside in a specific neighborhood, identified as an urban food desert located in a mid-sized city on the east coast, as well as

program and community leaders who serve the neighborhood. A known limitation of the narrative method included possible difficulty recruiting and accessing participants for interviews within the targeted community. I found this to be the case and struggled specifically with connecting with single mother participants.

Despite working closely with local community and program leaders to identify, recruit, and access participants willing to be interviewed, I was unable to find single mother participants who resided in the identified neighborhood. Each recommendation by the community and program leaders did not result in single mother participants to interview. The food bank, which is widely known, was an easy choice for requesting an interview. However, finding single mothers through the food bank did not result in any interview participants. A year prior to beginning my search for participants, I had taken part in a virtual townhall meeting organized by the then-city council person whose constituency resided in the targeted community. Once I gained IRB approval, I reached out to her for an interview. Though she had been elected to the House of Delegates 6 months earlier, her district still included the identified neighborhood and she readily agreed to participate. However, as with the food bank, she was unable to help connect me with any single mother participants. I then reached out to the delegate's replacement on City Council, who I spoke to once, but never returned my subsequent calls and texts requesting the interview. Next, at the suggestion of the delegate, I reached out to the Department of Housing and Community Development with the city government offices. These emails also did not result in any participants to interview.

After nearly five months of trying and failing to connect with single mother participants, based on the realization that many community-based food programs are church-based, one Saturday morning, last fall, I drove the neighborhood to try to connect with churches located in the targeted community that might be willing to help me identify single mothers, over the age of 18. The second church I reached out to had such a program, a monthly program, and the church staff member in charge of the program helped connect me with 11 participants.

Recommendations

Despite the awareness raised and usefulness indicated in the narratives collected during the interview process from the single mother participants and the subsequent contribution to the literature, it was apparent that the single mother participants were not familiar with many community-based programs. Of the 11 participants I interviewed, each was only familiar with one or two local programs. Early in my search for interview participants, I used online searches and social media, as well as asked friends and friends of friends to share any programs they were aware of that provided services to local neighborhoods identified as food deserts. Finding the programs proved difficult for me, despite my access to technology and contacts as well as the time, resources, and ability to search for such programs. It quickly became apparent that no central gathering point for such local information exists.

As I eventually gathered participants and concluded my interviews, each participant easily talked about their lived experiences of navigating life in an urban food desert, but few of the single mothers had knowledge of the various community solutions

available to them. Those who utilized programs had found them through word of mouth or by happenstance and not directly through any local government or social service agency and few directly through the programs themselves. The program and community leaders discussed their programs at length and shared their suggestions on what the community at large could do to better support their individual programs, but none raised the issue of feeling those in need struggled to find their respective programs.

However, as shared in Chapter 4, the single mother participants did not know the names of the programs nor could recall specifically where the programs were located. In fact, 9 of the 11 single mothers interviewed found the programs they did utilize by accident or through word of mouth. Only two had learned of a specific program through the program itself.

As a result, my first recommendation would be a requirement that all local programs register with the Department of Housing and Community Development or another of the city's social service agencies. In conjunction with this first recommendation, a second recommendation would be the creation of a central, easily accessible guide and/or database with all available local, community-based food programs. Access either to the database or a written version could be shared with residents of the identified food desert neighborhood through churches, schools, and community centers to make them aware of all local, available programs. In turn, the database could be accessed by local government agencies, social workers, churches, and food programs themselves to share with those utilizing their services.

In addition to the above recommendations, opportunities for further research exist by expanding the narratives to encompass single mothers in other neighborhoods locally and, even, regionally. Moreover, based on the interviews with the leaders of the various community-based programs, opportunities exist to study how effective the programs are in combatting food insecurity as well as the underlying causes related to food insecurity, which in turn, would further contribute to the literature. Likewise, because initiatives are in the process of being create, but not yet implemented, to address increasing minimum wage in the state to a living wage and increasing access to affordable housing. These prospective initiatives provide an opportunity for further research into their effectiveness and could guide community leaders, policy makers, and food desert residents in developing sustainable, community-based solutions.

Finally, the literature highlighted a variety of alternative food initiatives that have not been used in this neighborhood. Numerous opportunities exist for implementing programs and studying programs such as urban chicken raising, corner store initiatives, and even food truck/community entrepreneurship an opportunity for further research.

Implications for Positive Social Change

I chose the narrative approach with the purpose of giving a voice to and sharing the lived experiences of single mothers who reside in an urban food dessert. The goal was that the narratives would not only empower those whose lived experiences are being shared, but also to inspire others to act as well as to encourage discussion in order to achieve positive social change around a particular issue; in this case food insecurity. Narrative inquiry contributes positively to social change and the telling of lived

experiences cultivates and advances social justice (Riessman, 2008). By speaking out, the participants affect change and encourage others to do the same.

I used the interviews with the single mothers who reside in an urban food desert to listen to and learn from those who struggle with access to healthy and nutritious foods and how it impacts their daily lives. The most effective way to convey their stories and elevate their voices was through the narratives. I also used the interviews with local program and community leaders to learn what about a sampling of the programs available in the community as well as what is being done to mitigate the problem of limited access to healthy and nutritious foods in certain neighborhoods. The study not only shared the participants' experiences and their needs, but also identified barriers the participants face as well the community-based solutions available and their effectiveness. The narratives specifically highlighted the need for better, more easily accessible awareness of the community programs available and the subsequent recommendation of creating a comprehensive database of all local, community-based program would connect participants to much needed services, thus providing positive social change.

Conclusions

In the more than 25 years since food deserts were first recognized and studied, causes for disparity have been identified and studied and a wide range programs and initiative developed to assist those in need, but little headway has actually been made in eliminating the problem. The stories from the single mother participants often indicated generational food insecurity as with Izara and Chandra, who are raising their grandchildren, or Jasmine, Amara, Maria who all indicated food insecurity also as

children.   Six of the mothers, Kia, Chandra, Kali Asha, Lela, and Amara held full time jobs but other barriers, such as the high cost of childcare, low paying wages, or missing the threshold for public assistance, prevent them from having the resources to pay for housing, utilities, childcare, and adequate food, and food is often last to be purchased after the other expenses are paid, leaving little for food. Organizations are working actively to improve resources, reduce the disparity, help move the under-served closer to self-sufficiency, and eliminated food insecurity in the underserved neighborhoods they serve. Yet, despite decades of this work, it still falls short in helping single mothers in low-income neighborhoods put food on their tables without consistent help as shared by each of the single mother participants who shared her story.

One of the most significant discoveries resulting from this study is the lack awareness of programs by those needing access to food. I discovered six separate programs because I have the means to research. I am uncertain, though, how many other programs are available in the areas. The majority of the single mother participants I interviewed found the programs by word of mouth. There is no central collection of all programs available nor or the programs actively promoted. When I contacted local government, they could not provide a comprehensive list. This is an opportunity, though, and not only created the basis for one of the primary recommendations, but also provided strong implications for positive social change.

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